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IV

THE MUSEUM OF MODERN ART

Date June 23, 1943

To:

From:

Re: Maps for Section V
WHERE THE WAR IS WAGED

1	Atlantic Arena	Orthographic	22½ by 28 3/8 inches		Horizontal
2	Not So Soft	Original	26 " 39	"	"
3	Southeast toward Armageddon	Original	26 by 39 inches		"
4	World Island	Orthographic	22½ by 28 3/8 inches		"
5	China	Original	26 by 39 inches		"
6	U.S.S.R.	"	" " " "		"
7	Pacific Arena	Orthographic	22½ by 28 3/8 inches		"

Hagstrom

HAMPTON

PG 8-9-43

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MW 51

MAPS WITH SPOTLIGHT CHANGES

STRATEGIC AREA MAPS

I Geo-politic map of world before 1936 compared with same today.

A. Show national territories and terrain

B. Show comparative sizes of land areas (chart)

(Greenalnd, Australia, Iceland, United States on Russia)

II Hanshofer Axis strategy of World Conquest

Land power vs. sea power

Heartland concept

Japanese Pacific strategy

III Allied strategy based on: British control of seas

Strategical land positions

Routes of supply to fighting zones

American Pacific strategy

IV Strategic orientation based on Air power

Aerial and naval collaboration

Aerial and land force collaboration

Land accessibility by air

V Key spots in World strategy

Belgian low-lands

Stalingrad, etc.

Berlin

Sea lanes and bottlenecks (Suez, Gibraltar, etc.)

IV Climatic adaptations

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MAPS WITH SPOTLIGHT CHANGES

I Map of World before 1936 (in outline, cities marked)

II Political territories

Britain	Europe and Atlantic
United States	Mediterranean Area
U.S.S.R.	Eastern Europe and U.S.S.R.
Japan	Pacific and Far East
France	
Germany	
Italy	

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RENNER MAP SERIES

I Ocean Basin Chart

Shows relative importance of trade routes and shipping lanes.

(Goode) The importance of the 12 blockade (bottleneck) points under Britain

II Strategic Position of Belgium

Highlands (brown), lowlands (green) indicate land passages and fortification points. Demonstrates the geopolitical importance of the Netherland area, (the continental gateway).

III MacKinder's Land Area Classifications

Heartland (yellow)
Fringeland (green)
Outland (white)
American Island
African Promontory
Austral. Island

British "lifeline" marked in red

IV Geographical position in Europe

Heartland (Asia and Middle East)
Fennoscandic Peninsula (Scandinavia)
Atlantic Islands (England)
Latin Peninsula (Middle Europe, West Europe, Italy and Spain)
Greek Peninsula

V Axis Strategy for World Conquest

Purple shows primary concentration
Green shows central area, the path for juncture and contental strangulation and cutting off of British lifeline (secondary concentration)
Yellow shows third zone of concentration
Red arrows shows fourth zone of concentration (American)

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IV (Alternate)

Pacific Strategy of U.S. based on Mercator Projection (Naval action)

American conception of Japanese defense lines

Quadrilateral coverage of Pacific and waterway supply to Philippines

Naval duels to destroy Japanese naval rings of defense.

V (Alternate)

Pacific Strategy of Japan

Naval pathway between coast and coastal islands

Land based plane protection

Encirclement of Pacific

Burma and India juncture with Germany

VI Polar Projection

With the development of air travel it is essential that we view the world with the north pole as the center, thereby giving a more accurate picture of our monospheric globe and dispelling the hemisphere concept. Thus, new light is thrown on fortification points and relations between neighboring nations. The idea of East and West is dispelled.

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When the war is forgot.

1 Battle of the Atlantic 1000 miles without air convoy

The Mediterranean

2 ~~North African~~

3 Russia - the We

4 The Near East

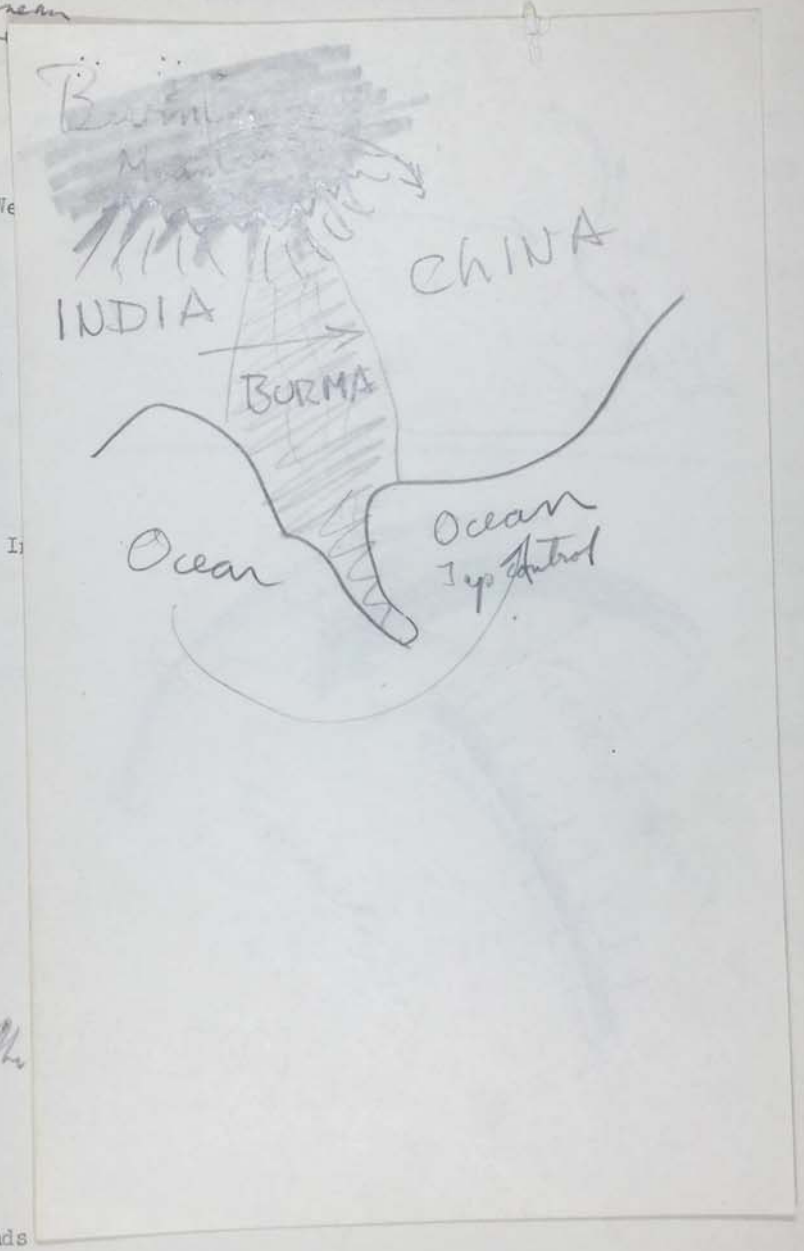
5 Burma and the I

6 China

7 Japan

8 Coral Sea

9 Aleutian Islands and Alsaka



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When the war in June 41.

1 Battle of the Atlantic 1000 miles without air cover

The Mediterranean

2 ~~North African~~

3 Russia - the We

4 The Near East

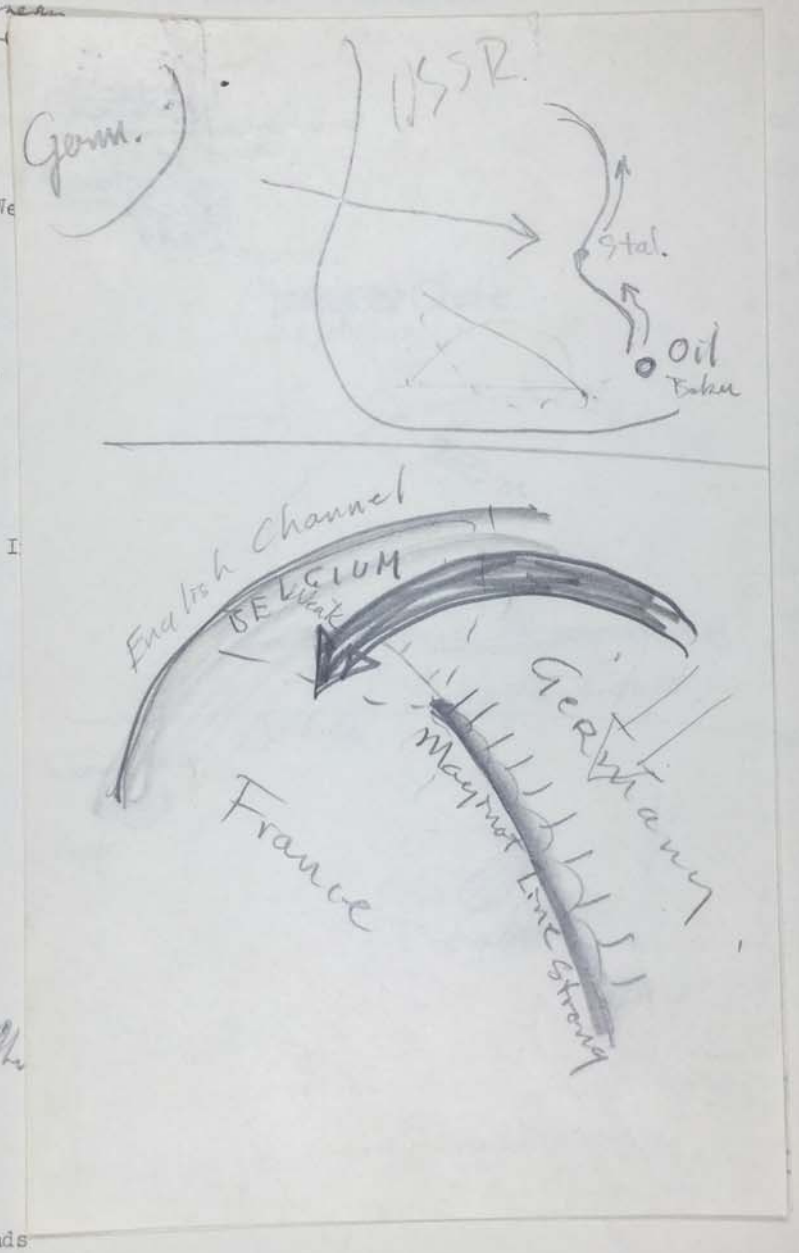
5 Burma and the I

6 China

7 Japan

8 Coral Sea

9 Aleutian Islands and Alsaka



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	MoMA Exhs.	236.4

When the war is fought.

1 Battle of the Atlantic 1000 miles without air cover.

The Mediterranean

2 ~~North African Ca~~

3 Russia - the Wes

4 The Near East

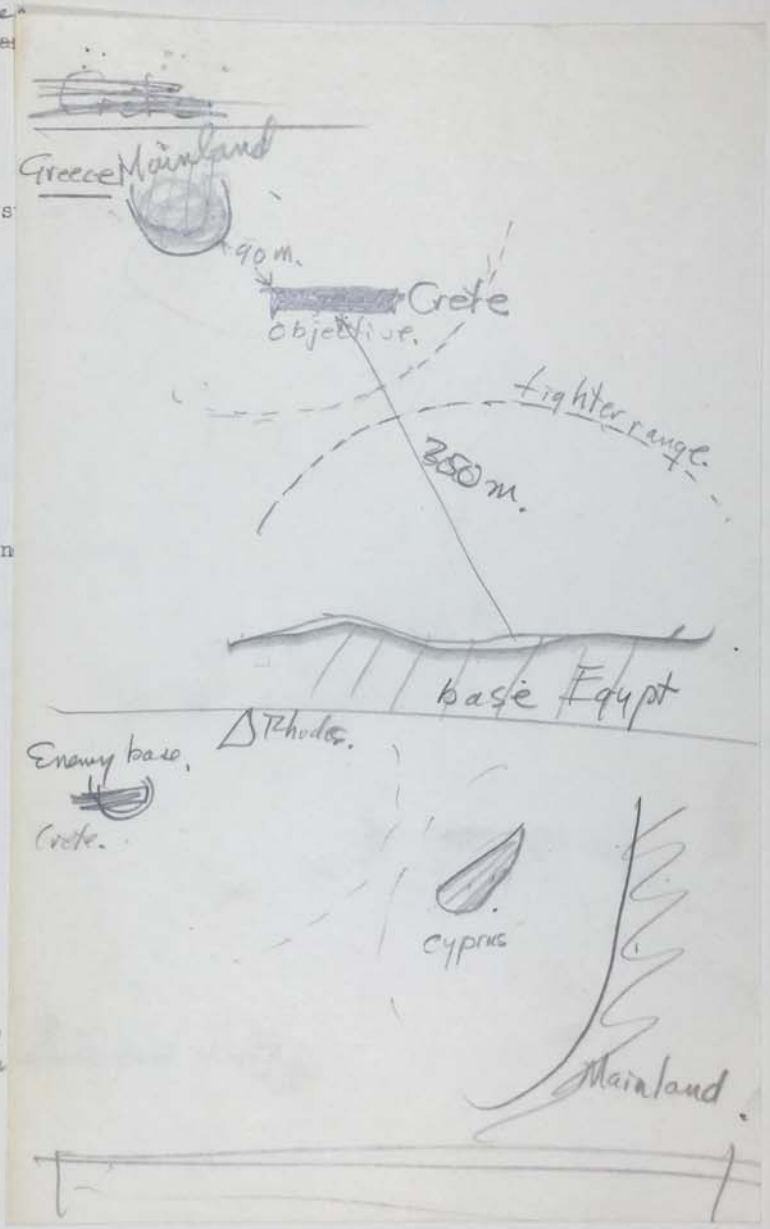
5 Burma and the In

6 China

7 Japan

8 Coral Sea

9 Aleutian Islands and Alsaka



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When the war is fought.

1 Battle of the Atlantic 1000 miles without air umbrella

2 ~~North African Campaign~~ The Mediterranean over

3 Russia - the Western Front

4 The Near East

5 Burma and the Indian Ocean

6 China

7 Japan

8 Coral Sea The South East Pacific

9 Aleutian Islands
and Alsaka

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(1)

MACKINDER'S FAMOUS MAP

Although made by an Englishman in 1904, this is the most important map of German geo-politics. It demonstrated that Eurasia and its Heartland were all-important in their scheme of world domination, and speciously proved to them that North America was not important.

In spite of its oval frame this map is on a Mercator projection, with North America relegated to the "outer crescent."

If the geo-politicians had studied the globe or a good series of global maps, they would have seen at a glance the strategic position of North America, across the Polar Sea from the Heartland. The most important geographical links between the old world and the new are Iceland in the Atlantic, Alaska in the Pacific. In the beginning, during the years of our unpreparedness, the Axis had a certain superiority in tactics. Their neglect to seize these two keystones demonstrated their weakness in global strategy.

~~From~~

~~Acknolwedgement to ??????~~

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(3)

white 10"

DO THE GERMANS UNDERSTAND GLOBAL STRATEGY?

(The Use of Maps in German Propaganda)

These pages from a German propaganda book widely distributed in this country in 1940 show that the Germans understood how to make maps clear and convincing to the layman. They are good cartographic propaganda but they are not modern cartographic science. The German strategists ~~never emancipated~~ have never emancipated themselves ~~The minds of the German strategists have never been emancipated~~ from Mercator; ~~they have eighteenth-century minds.~~ in this respect they have eighteenth-century minds. ~~If they had stu~~ However, their ~~Their~~ technique of simplification and dramatic use of symbols to confuse ~~the popular mind~~ public opinion and to lead the masses to their goal of ~~war~~ world-war has been a {masterwork / masterpiece} of twentieth-century propaganda technique.

acknoledgement to ???
none!

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White 10" (3A)

POLAR ORTHOGRAPHIC PROJECTION

If General Haushofer and his staff of geo-politicians had studied this polar orthographic projection, they might not have relegated North America to an inconsequential position in their plan of world-conquest.

Map by R.E.Harrison, courtesy Time, Inc.

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(27) √ white 10"

"THE WORLD DIVIDED"

This North Polar Azimuthal Equidistant projection was designed by Huguet in 1941. It is believed to have been the first application of Glareanus' projection to the problem of modern map-making. Note how the chief belligerent nations appear on it, clustered close around the North Pole.

A Fortune map by R.E.Harrison, courtesy Time, Inc.

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captions by Harrison

Japanese Orthographics

Although the Pacific is such a large portion of the earth surface that it is impossible to map without considerable distortion, it is possible on orthographic maps like these to give a correct visual impression of the Pacific War. The first maps show the possible Japanese threat against the terrifically extended supply lines of USA to Chungking by sea and air which is more than half way around the world. (But the politically impossible air route would cut this in half.) The record shows possible Allied attacks on the shorter interior lines of the Japanese

3 Consol. In spite of the distortion present in all maps (see Section I) It is possible to construct a map which can give correct answers to a specific problem. If one wants to know, for example, what is the precise distance and route from Washington D.C. to any other place in the world, the perfect map is an azimuthal equidistant projection centered on Wash. D.C. On any other map these routes and distances can not be obtained directly. The two lower maps these same routes would appear on two common projections Mollweide and Nor

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shown on the two lower maps as straight lines would almost all be curved lines on the Washington-centered map.

Hemisphere with 600 mi. radii

This northern hemisphere shows the salient difference between possibilities of air warfare against Germany and Japan. The smaller circles of 600 mile radius cover the areas which it is possible to bomb to saturation point. From this distance on the load of gasoline required increases at the expense of bomb load until the present limit is reached at 1200 miles. It is obvious from this model that our position against Germany is far better for the finishing blows than against Japan

Add. Formosa Hainan (China)

Color red sectors

Color Japan Korea Manchuria Formosa its show objective of bombing.

1200 mi.

600 mi radius

radii

sector

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if some engineering principle had been applied to sailing vessels they would still be practical. 38 knots scientific design Cantilever steel frame aluminum hull 25 knots.

Kaufman ~~device~~
Roadable helicop.

Russia MIG-3A. Fighter 5.20 mm. Canon 425 m.p.h.
entirely made of spruce & birch engine.

Eric Sloan 70 ft. Laurence Bachman
Henry Holt Co. Aero-Med-
meteorol. book on Airplane & its
effect on Geog.

Man can intrude over 25000 ft
sonic boom through
aero-evolution

Metric speed calculator - 12 year-old
constant speed propeller

fixed wing plane - cannot make mistake instead
killing yourself.

more losses now than 50 years ago. Plane will not displace
anything.

16 lb. helicopter 12-17 miles per gallon.

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Top Buttons

1 wrong

2 wrong

3 right

4 wrong

5 right

6 wrong

7 "

8 right

9 wrong

10 wrong

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Letter to:

Dr. Robt. Lovelace
Aero Med. Lab
[illegible] Field

mention dates of exhib

IV

Charge to the account of _____ $ _____

CLASS OF SERVICE DESIRED			
DOMESTIC		CABLE	
TELEGRAM		ORDINARY	
DAY LETTER		URGENT RATE	
SERIAL		DEFERRED	
OVERNIGHT TELEGRAM		NIGHT LETTER	
SPECIAL SERVICE		SHIP RADIOGRAM	

Patrons should check class of service desired; otherwise the message will be transmitted as a telegram or ordinary cablegram.

WESTERN UNION

1206

A. N. WILLIAMS, PRESIDENT
NEWCOMB CARLTON, CHAIRMAN OF THE BOARD
J. C. WILLEVER, FIRST VICE-PRESIDENT

CHECK
ACCOUNTING INFORMATION
TIME FILED

Send the following telegram, subject to the terms on back hereof, which are hereby agreed to

WANT A REPLY?
"Answer by WESTERN UNION" or similar phrases may be included without charge.

JUNE 8, 1943

MR. HARRY HOPKINS
THE WHITE XXXX HOUSE
WASHINGTON, D.C.

IN ACCORDANCE WITH YESTERDAY'S LETTER, DO NOT NEED GLOBE

UNTIL JUNE 25, BUT WILL GLADLY COLLECT IT THIS SATURDAY

IF MORE CONVENIENT TO YOU.

MONROE WHEELER
MUSEUM MODERN ART

demonstr. material on high altitude protective devices. Obviously, our exhib cannot be detailed or comprehensive but is designed to introduce to the layman the significant aspects of global war & the post-war outlook.

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	MoMA Exhs.	236.4

Letter to:

Dr. Robt. Lovelace
Aero Med. Lab
Wright Field
Dayton, O

mention dates of exhib

We are writing at sug. of ~~dorsey~~ Mr Wm Friedman of Air News - who thought that you would be interes in our ~~Dept~~ Project & in a posit. to supply us with some mat. for the sec. on Hist. of the Air. Informed officer of the Air Forces

The encl prospectus will give some idea of scope etc.

We are anxious to obtain demonstr. material on ~~the~~ high altitude protective devices. Obviously, our exhib cannot be detailed or comprehensive but is designed to introduce to the layman the significant aspects of global war & the post-war outlook.

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~~We must stick to our emphases, therefore, will be as the most dramatic & understandable aspects &~~

We must therefore select our material for its dramatic & ~~the most dramatic~~ understandable qualities & feel ~~that~~ your department can make a valuable contrib. toward this end -

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This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable symbol above or preceding the address.

WESTERN UNION

1201

SYMBOLS

DL=Day Letter
NT=Overnight Telegram
LC=Deferred Cable
NLT=Cable Night Letter
Ship Radiogram

A. N. WILLIAMS, PRESIDENT
NEWCOMB CARLTON, CHAIRMAN OF THE BOARD
J. C. WILLEVER, FIRST VICE-PRESIDENT

(42)

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NBD340 24 GOVT=WASHINGTON DC 25 904P

MONROE WHEELER, THE MUSEUM OF MODERN ART= 1943 JUN 25 PM 9 44

11 WEST 53 ST=

SUGGEST YOU SEND COPY OF YOUR LETTER T GIRDLER TO HUGH FENWICK VICE PRESIDENT VEGA AIRCRAFT CORPORATION 2555 NORTH HOLLYWOOD WAY BURBANK CALIFORNIA WRITING=

WILLIAM A M BURDEN.

2555.

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

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WESTERN UNION

1201

15)

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A. N. WILLIAMS, PRESIDENT
NEWCOMB CARLTON, CHAIRMAN OF THE BOARD
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=XVNBD247 13 GOVT=DC WASHINGTON :DC 10 545P

RAPID MONROE WHEELER, MUSEUM OF MODERN ART=

:11 WEST 53 ST=

=AIR SERVICE COMMAND HANDLES ALL AVIATION MAINTENANCE

AND DISTRIBUTION FOR THE AIR FORCES=

:FRED HAMLIN.

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

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EXCERPT FROM LETTER OF
EDWARD H. DODD, JR.

THE PRESIDENT'S FIFTY-INCH GLOBE

The making of the so-called Fifty Inch Globe (which measures approximately ~~but not exactly~~ 50 inches) was started shortly before Pearl Harbor in Colonel Donovan's Office of Strategic Services (then Coordinator of Information) in Washington. The largest printed globe then in existence was an English ~~30~~ thirty-inch globe ~~which was~~ badly out of date; nothing was manufactured in this country except small globes for schools. Anything larger was individually hand painted. ~~From a practical point of view~~ Globe maps which are printed on paper gores and then mounted on a ball can be made more accurate than hand painting on a curved surface; they can contain a great many more place names; and of course possess the ~~other~~ reproductive advantages of printing. ~~Now~~ At present the Fifty-Inch-Globe is the largest of its kind in the world, and probably the most accurate and complete.

The size, 1.275 meters equatorial diameter, was chosen because it is a scale of 1/10,000,000th of the size of the earth and because it is as large a globe as can be used by a normal sized person without ladders or a sunken pit. Few people realize how large a map is spread on this size globe. The map of the Fifty-Inch is roughly the equivalent of a Mercator wall map 13 feet wide and 6 1/2 feet high.

The Ball on which the map gores are mounted is made of cherry wood, laminated, dowelled, and machined to a shell 7/8 inch thick which is accurate to one milimeter. It is not a sphere but an ellipsoid with the poles flattened in accord with the shape of the earth.

The stand was devised to permit the surface to be measured and examined without the interference of ~~the traditional furniture~~ which makes up the conventional mounting. The Globe rests upon one main and three subsidiary universal rubber

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bearings, invented for this purpose after the failure of many experiments with all sorts of bearings including air blasts and mercury baths. One of the main considerations in designing the bearing was to permit drawing and plotting with grease pencil on the acetate surface.

The chief feature of the globe is, of course, the editorial compilation of the map. It contains over 17,000 names which is about ten times as many as might ordinarily be placed on a school globe of like size. Each one entailed purposeful selection from ancient sources as well as last minute teletype reports. Some fifty geographers, cartographers and draughtsmen worked for several months compiling, plotting and checking the place names, and undertaking comparable to the building of a dictionary and all done under the greatest pressure.

The map was designed as a tool for strategic military purposes and hence many of the semi-scientific and folk-lore features of the ordinary globe are omitted. The cartography comprises much new data especially in Alaska, Antartica and the northern coasts of Siberia. Special studies and treatment of ice conditions are shown. The topographical coloration follows the system of "surface configuration" because, on a map of this scale, the showing of the character of terrain (1. Smooth, 2. Rough, 3. Mountainous) was deemed more useful than simplified conventional contours. The 5° grid permits more rapid and accurate plotting. This is further facilitated by the lucite measuring arc which shows statute miles, nautical miles and kilometers.

This particular globe belongs to President Roosevelt. It was given to him by the War Department at Christmas time 1942, and customarily stands behind the chair of his desk in the White House. A similar globe was presented at the same time to Winston Churchill. Several others are in use in Washington and still more are being made. The globes all come through the Office of Strategic Services. That Agency's Geography Division, under Dr. Richard Hartshorne and Dr. Arthur Robinson are mainly responsible for the globe map. The chief outside consultants were Mr. William Briesemeister of the American

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Geographic Society; Mr. Samuel W. Boggs, Geographer of the State Department of State; and Mr. Richard Edes Harrison. It was executed by the Weber Costello Company of Chicago Heights, Illinois. The ball was made by Cummings and Engbert, New York City. The stand was designed by Henry Dreyfuss and executed by L. L. Schacht of New York. The fellow who kept worrying everyone concerned from start to finish was The entire construction was supervised by Edward H. Dodd, Jr. of the Office of Strategic Services & who was responsible for the above description.

Yours sincerely

(Signed) Edward H. Dodd, Jr.

West Cornwall, Conn.

June eighth

P. S. The whole business is heavy, six or seven hundred pounds so you had better send several strong men to do the moving.

EHD, Jr.

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Labels for the Meteorology section.

1.

THE NATURE OF THE AIR

Meteorology is the exact science of the atmosphere: its nature and its laws, its changing conditions and what causes them.

~~In the ordinary way~~ Ordinarily we think of the world as a solid surrounded by a layer of atmosphere. Metereology speaking this is inexact. Our world is a ball of gaseous fluid with a solid center. In the air age we are lost without a knowledge of this ancient science.

~~The diameter of land and ocean is 8,000 miles. The diameter of the entire globe including the atmosphere is approximately 50,000 miles.~~ gasses may be The adjacent panels by Herbert Bayer present a simplified pictorial of this sea of atmosphere in the lower reaches of which we now navigate.

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GROSS SECTION OF THE ATMOSPHERE

The Ionosphere is the highest known layer of the atmosphere: it is known as the "radio-roof" because radio waves bounce back from it.

The Stratosphere is a layer of air too thin for human life but navigable and sensitive to ~~our modern~~ radio-electric communications. Its temperature is almost constant, at 67 degrees below zero.

The Troposphere is ~~that~~ the air we breathe, the layer in which we live, and in which the temperature rises as one approaches the surface of the earth. Like the solid earth it bulges slightly at the equator.

The diameter of the land and ocean is about 8000 miles. The diameter of the entire globe including the atmosphere maybe 50,000 miles.

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THE ANATOMY OF CLOUD FORM

Clouds are of three types: cumulus (lumpy).
stratus (straight layers).
cirrus (icy).

They are all indicative of weather, and over-weather flight eliminates turbulence and the dangers of storm. The only cloud which is dangerous in itself is cumulo-nimbus ~~circus~~ and, which there are updrafts of over 200 miles per hour. Lightning will not injure an all-metal ship except by burning out its radio.

The ~~soaring~~ soaring airship welcomes clouds for they mark good thermals to ride upon.

~~At an altitude of over~~ Above 20,000 feet clouds are composed of tiny ice-particles.

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AIR CURRENTS

Primarily because of expansion and contraction, warm air rises and cold air descends.

A. is a warm front. See how the warm air rises (in areas covering from 500 to 1500 miles and extending to the Stratosphere). Varying from high cirrus to low rain clouds, most of the cloud form here is stratus.

B. is a cold front. The rising, unstable summer air attracts the cold, which pushes it into cumulus shapes. The central cloud is a thunderhead (cumulo-nimbus) with a high cirrus "anvil top."

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	MoMA Exhs.	236.4

PEG-5600

VI

AIRWAYS TO PEACE QUESTIONAIRE

1. What percentage of the earth's population lives north of the equator?
   - 67%
   - 93% ✓

2. Which city is farther north?
   - Vladivostock, Russia
   - Venice, Italy ✓

3. What percentage of the world's land area does Europe occupy?
   - 16%
   - 6% ✓

4. Which city is farther east?
   - New York, N. Y.
   - Santiago, Chile ✓

5. After the war you will fly to London in about the time it now takes by train to
   - Charleston, S. C. ✓
   - Portland, Maine
   - Miami, Florida
   - Halifax

6. The antipode of Gibraltar is
   - Auckland, New Zealand ✓
   - Nome, Alaska

7. If Germany wanted to attck Alaska, would it first attack
   - Spitsbergen ✓
   - Iceland

8. If you were flying from Buenos Aires to Melbourne, Australia what continent would you cross?
   - Antarctica ✓
   - Africa

9. What percentage of the world's population has the United States?
   - 6% ✓
   - 15%

10. Which is nearer to ~~the state of Maine~~ New York?
    - Berlin, Germany
    - Dakar, Africa ✓

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CAA
VI

HERBERT BAYER 850 SEVENTH AVENUE NEW YORK TELEPHONE CIRCLE 5-4576

Mr. Monroe Wheeler,
Museum of Modern Art,
New York City.

February 3, 1943

Dear Monroe:

Yesterday I sent to you five sketches for the posters, "CAA Speeds The War". Sketches number 1,2, and 3 are about the airways. Sketch 4 is about airports, and sketch 5 is about airmen.

Number 1. As I didn't have any facts regarding which of the airways CAA controls the net of airlines in this sketch will have to be revised.

Number 2. This shows the three means by which CAA controls the airways. The weather vane and the wind sock could be replaced by a weather map or by one or two more beacon lights without the towers.

Number 3. This sketch is supposed to show the function of the beams, illustrating the messages which are sent out. As I again do not have the facts about this idea the presentation might have to be changed.

Number 4. On the airport you might want to show a beacon tower or the beams or other buildings. Perhaps you

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HERBERT BAYER 850 SEVENTH AVENUE NEW YORK TELEPHONE CIRCLE 5-4576

Monroe Wheeler - continued

would like to show another type of airplane, although the view I have chosen illustrates the plane starting to land.

Number 5. The drawing on the blackboard can, of course, be changed and the instruments at the lower part of the poster might be left out entirely. The lettering could go there in a larger size.

Sincerely yours,

H. Bayer

Herbert Bayer

hb/jp

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AIRWAYS

President's globe

IV

June 11, 1943

Mr. Edward H. Dodd, Jr.
West Cornwall
Connecticut

Dear Mr. Dodd:

I cannot tell you how deeply I appreciate all the time and trouble you have taken to supply us with data about the President's globe. Your letter contained just exactly the information we need, and, together with the facts which you gave me by telephone, has already proved tremendously helpful. With many, many thanks for your kindness and interest, I am

Sincerely yours,

MW:CH

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~~OFFICE OF WAR INFORMATION~~
~~WASHINGTON~~

Dear Mr. Wheeler —

Here is the information I promised you on the Fifty Inch Globe. Use what you like of it and feel free to change as you wish. I'm in the country temporarily and must apologize for the lack of a typewriter, but I shall try to be legible so your secretary can copy without too much trouble.

The making of the so-called Fifty Inch Globe (which measures ~~only~~ approximately, but not exactly 50 inches) was started shortly before Pearl Harbor in Colonel Donovan's Office of Strategic Services (then Coordinator of Information) in Washington. The largest printed globe then in existence was an English 30 inch globe which was badly out of date;

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nothing was manufactured in this country except small globes for schools. Anything larger was individually hand painted. From a practical point of view globe maps which are printed on paper gores and then mounted on a ball can be made more accurate than hand painting on a curved surface; they can contain a great many more place names; and of course possess the other reproductive advantages of printing. Now the fifty inch globe is the largest of its kind in the world, and probably the most accurate and complete.

The size, 1.270 meters equatorial diameter, was chosen because it is a scale of 1/10,000,000th of the size of the earth and because it is as large a globe as can be used by a normal sized person without ladders or a sunken pit. Few people realize how large a map is spread on this size globe. The map of the

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	MoMA Exhs.	236.4

sorts of bearings including air blasts and mercury baths. One of the main considerations in designing the bearing was to permit drawing and plotting with grease pencil on the acetate surface.

The chief feature of the globe is, of course, the editorial compilation of the map. It contains over 17,000 names which is about ten times as many as might ordinarily be placed on a school globe of like size. Each one entailed purposeful selection from ancient sources as well as last minute teletype reports. Some fifty geographers, cartographers and draughtsmen worked for several months compiling, plotting and checking the place names, an undertaking comparable to the building of a dictionary and all done under the greatest pressure.

The map was designed for as a tool for strategic military purposes

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	MoMA Exhs.	236.4

OFFICE OF WAR INFORMATION

WASHINGTON

fifty feet is roughly equivalent to a Mercator wall map 13 feet wide and 6½ feet high.

The Ball on which the map gores are mounted is made of cherry wood, laminated, doweled, and machined to a shell 7/8 inch thick which is accurate to one milimeter. It is not a sphere but an ellipsoid with the poles flattened in accord with the shape of the earth.

The stand was devised to permit the surface to be measured and examined without the interference of the traditional furniture which makes up the conventional mounting. The globe rests upon the main and three subsidiary universal ~~bearings~~ rubber bearings, invented for this purpose after the failure of many experiments with all

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	MoMA Exhs.	236.4

to President Roosevelt. It was given to him by the War Department at Christmas time 1942 and customarily stands behind the chair of his desk in the White House. A similar globe was presented at the same time to Winston Churchill. Several others are in use in Washington and still more are being made. The globes all come through the Office of Strategic Services. That Agency's Geography Division, ~~of that Agency~~, under Dr. Richard Hartshorne and Dr. Arthur Robinson are mainly responsible for the globe map. The chief outside consultants were Mr. William Briesemeister of the American Geographical Society; Mr. Samuel W. Boggs, Geographer of the State Department; and Mr. Richard Edes Harrison. It was executed by the Weber Costello Company of Chicago Heights, Illinois. The ball was made by Cummings and Engbert, New York

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	MoMA Exhs.	236.4

OFFICE OF WAR INFORMATION

WASHINGTON

and hence many of the semi-scientific and folk lore features of the ordinary globe are omitted. The cartography comprises much new data especially in Alaska, Antarctica and the northern coasts of Siberia. Special studies and treatment of ice conditions are shown. The topographical coloration follows the system of "surface configuration" because, on a map of this scale, the showing of the character of terrain (1. Smooth, 2. Rough 3. Mountainous) was deemed more useful than simplified conventional contours. The 5° grid permits more rapid and accurate plotting. This is further facilitated by the ~~carved~~ lucite measuring arc, which shows statute miles, nautical miles and kilometers.

This particular globe belongs

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	MoMA Exhs.	236.4

OFFICE OF WAR INFORMATION

WASHINGTON

City. The stand was designed by Henry Dreyfuss and executed by L. L. Schacht of New York. The fellow who kept worrying everyone concerned from start to finish was

Yours sincerely

Edward H. Dodd Jr.

West Cornwall, Conn

December eighth

P.S. The whole business is heavy, six or seven hundred pounds so you had better send several strong men to do the moving

EHD Jr.

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June 1, 1943

Mr. Harry Hopkins
The White House
Washington, D.C.

Dear Harry Hopkins:

I asked Pauline Potter, when she was on her way to see you the other day, to inquire whether there was any possibility of borrowing the President's globe for the opening of our great Summer exhibition of air-age geography, and I was delighted to hear upon her return that you thought this could be arranged.

This will be an educational exhibition of air-age geography, entitled AIRWAYS TO PEACE, and the opening section, called HOW MAN HAS DRAWN HIS WORLD, begins with the earliest known map, that of Ga-Sur (2500 B.C.), from the Semitic Museum at Harvard. We should like to terminate this section with the greatest modern globe: the President's own. We should not dare to request it for more than the opening week or two, although the exhibition will continue until October. But if the President could agree to share with a large public for a few days his own globe, which is unquestionably the finest, it would give the exhibition a magnificent send-off, and serve to focus attention upon its much-needed message. AIRWAYS TO PEACE, the outline of which I enclose herewith, is a sequel to last year's ROAD TO VICTORY, five versions of which are now touring the world--three of them subsidized by Government agencies. The Museum of Modern Art is, of course, a non-profit, educational institution, operating under the charter of the University of the State of New York.

If you will be kind enough to confirm this arrangement and let us know for what length of time the President would be willing to lend the globe, the Museum can arrange to call for it on Friday, June twenty-fifth, which will give us ample

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	MoMA Exhs.	236.4

time to install it before the opening on the twenty-ninth. We can then see that it is returned to the White House whenever it is desired.

Will you please assure the President that the Trustees of the Museum will be deeply appreciative of his generosity? We are also most grateful for your own kind offices in our behalf.

With best regards to you and Louie, I am

Very sincerely yours,

MW:CH
Enclosures 2

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	MoMA Exhs.	236.4

RUDOLPH RUZICKA
DOBBS FERRY N. Y.

September 8-1942

Dear Mr. Wheeler,

I found your letter of August 31st upon my return from a short vacation. The letter from Mr. Uthus of which you sent me a copy is perfectly clear. I shall look up Life of August 3rd and will try my hand at a design or two. I suppose that sketches made to scale for approval would do much that they should be sent directly to Mr. Uthus.

Sincerely yours,

R. Ruzicka

August 31, 1942

tter I have just
ce regarding the

maps for you,
l in Life maga-
required. If you
along these lines
e them.

yours,

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	MoMA Exhs.	236.4

August 31, 1942

Dear Mr. Ruzicka,

I am sending herewith a copy of the letter I have just received from the Department of Commerce regarding the poster map which they require.

I will try to get extra copies of the maps for you, but I think that the one which appeared in Life magazine will give you an idea of what is required. If you care to submit any ideas you may have along these lines I am sure Mr. Uthus will be glad to have them.

Sincerely yours,

Mr. Rudolf Ruzicka
Dobbs Ferry
New York

MW:CH
Enclosure

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	MoMA Exhs.	236.4

A to P. MESSMORE IV
General -

19

December 11, 1943

Mr. George W. Messmore
1327 Goodale Avenue
Toledo, Ohio #6

Dear Mr. Messmore:

To answer your questions about the 50" globe recently shown in our AIRWAYS TO PEACE EXHIBITION I am going to quote the last part of the caption which appeared by the globe in the exhibition.

"This particular globe belongs to President Roosevelt. It was given to him by the War Department at Christmas 1942, and customarily stands behind the chair of his desk in the White House. A similar globe was presented at the same time to Winston Churchill. Several others are in use in Washington and still more are being made. The globes all come through the Office of Strategic Services. That Agency's Geography Division, under Dr. Richard Hartshorne and Dr. Arthur Robinson are mainly responsible for the globe map. The chief outside consultants were Mr. William Briesemeister of the American Geographic Society; Mr. Samuel W. Boggs, Geographer of the Department of State; and Mr. Richard Edes Harrison. It was executed by the Weber Costello Company of Chicago Heights, Illinois. The ball was made by Cummings and Engbert, New York City. The stand was designed by Henry Dreyfuss and executed by L.L.Schacht of New York. The entire construction was supervised by Edward H. Dodd,Jr. of the Office of Strategic Services to whom we are indebted for the above description."

The Weber Costello Company is at 12th and McKinley Streets, Chicago, Illinois. Cummings and Engbert are at 329 East 29th Street, New York City 16. I hope very much that this will answer your question.

Very sincerely yours,

w

Assistant to Mr. Wheeler

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DEC 10 1943

1327 Goodale Avenue
Toledo, Ohio, #6.
December 7, 1943

Information Department
Museum of Moderne Art
New York, New York

Gentlemen:

I have been advised by Popular Science to write to you with regard to the 50 inch sphere, world globe, depicted on page 121 of the December issue, 1943.

The idea of owning such a globe, I must confess, greatly intrigues me, altho I may have to reserve the idea as a post-war project when national boundaries will have once again become static, instead of dynamic as they are today.

So, with the above in mind, would you knidly furnish me with the name and address of the manufacturers of this article. Hoping that I may have an early reply, I am,

Yours very truly,

Geo. W. Messmore

Geo. W. Messmore

Self-addressed envelope enclosed.

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A town suit of an imported English woolen in shepherd checks with an over-stripe is tied with string bows. The pointed collar is characteristic of Adrian's 1943 Spring suits.

Designs

which is so characteristic of the American woman. Fashion at Adrian's is endowed with a living quality. Simplicity of style prevails.

All of the designs shown on this page were selected from Adrian's custom-made collection. With meticulous care this expert in fashion supervises the creation of hats and the ensembling of costumes.

VIRGINIA POPE.

The New York Times at Adrian's, Beverly Hills.

Dramatic insets of tan in light and dark brown distinguish this soft dressmaker suit of fine black woolen. Adrian conceals a pocket under the side draping of the fabric belt end.

A dinner gown of fragile beauty. Its name "soufflé" describes its airiness. Black silk chiffon is draped from the center to the sides in the skirt to give it filmy transparency. The frills on the white mousseline de soie bodice suggest a bolero.

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	MoMA Exhs.	236.4

The New York Times Magazine

MAY 2, 1943

A Tunisian version of a familiar American scene—boys swapping yarns around a camp fire.

What Sort of World Do Our Soldiers Want?

A reporter in the field finds few thinking about America's part in shaping the peace; he holds this a bad omen for the future.

By Drew Middleton

LONDON *(By Wireless)*.

THE average American soldier in the European and African theatres has a single peace aim: To get home to his job and his family and forget about the rest of the world and the war. The possibility that, in twenty years or so, some part of the rest of the world may follow him home has occurred to very few.

This burning desire to return home is not limited to Americans by any means. British soldiers, many of whom have been abroad three or four years; Frenchmen, unable to return to their homes until the day of victory, and Axis prisoners all long for the familiar sights and sounds of Liverpool, Lyon, Dresden or Genoa.

But only among our own people, most of whom have had more formal schooling than their allies or enemies, does this reporter encounter the idea that the war is a tremendous football game, and that, somehow, after it is over and won, the soldiers can forget the war and the conditions which caused it. They want to go back to "the same kind of world" they knew in 1939. Very few of them realize that it can never be the same kind of world again.

These are sentiments encountered in Iceland, Britain, North Africa, in camps during manoeuvres and in other camps where they are "playing for keeps," aboard transports and in the backs of trucks rolling to the front. One thing must be understood: our people mean to finish this war with a smashing victory, and they realize, perhaps much better than any one at home, just how high the cost will be in blood and treasure. Whatever the price, you can be sure they will push resolutely on to victory. It is in the organization of the world after victory that they are not interested. It is about the conditions of our enemies and allies that they are uninformed and largely indifferent. No one has told them that although they win the war they can lose the peace by indifference and complacency.

For instance, many of them talk vaguely about an international police force of all three services. Others insist that America alone must police the world. But in each case the soldier or airman or sailor is quick to add that he "wants no part" of the job. The responsibility will have to be assumed by some one else. When the Germans and Japanese are beaten he wants to get out of the service and go home.

This may seem a harsh and gloomy picture of my own generation, but it is a factual picture. As an American reporter not much older than many of the boys with whom I have discussed these topics, I had the opportunity to talk freely about the prospect before us. These were the same fellows I played ball with in Van Cortlandt Park and in New Hampshire; these were the fellows I grabbed lunches with in little restaurants off Wall Street back in the days when nothing seemed more important than a pennant race or the best trumpet player in the country.

THINGS are different now. There is a war on, a very serious war. I have seen it from the beginning in Belgium, France and England, in the Channel at Dieppe, in Iceland and in Africa. I have watched scores of friends, Americans, French and British, die or go forth uncomplainingly to death because the world was too busy in the Nineteen Thirties to think about the approaching catastrophe.

IN the old days most of us — behind grocery counters, on farms, in big plants, or fresh from college—didn't pay much attention to the rest of the world. But this war is one of ideas as well as tanks, guns, planes and ships. We've got to do some thinking now if we win the peace as well as the war. To be sure, it is a highly complicated matter. So was making the Constitution of the United States. But the people then, like our soldiers now, figured that it would come out all right.

These men have a stake in this world, a big one. It is vital that they know more about the world, equally vital that they be able to take their place of responsibility in the world of the future. For what most of us have learned abroad is as simple as a bomber's flight—every place is the same place now.

One important aspect of this whole picture is that America's real position as a world power is at present insufficiently understood by many of our soldiers. On the one hand, our military strength has been so exaggerated by boys fed on the

(Continued on Following Page)

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	MoMA Exhs.	236.4

Fighting Men at Ease

To the victors belong the spoils—a carload of captured wine.

One American soldier who believes in being "well read."

An American gives a demonstration of correct dunking technique.

Music has charms—even in Africa. Yanks listening to new swing records

(Continued from Preceding Page)

claims of patriotic advertisements and ill-advised oratory that they have to make adjustments to reality in the battle areas. They are surprised but not disheartened to find that the Germans' equipment is on the average as good as theirs and in certain instances better. They find British fighter aircraft, notably the Spitfires, command greater respect from German pilots than any other aircraft. They arrived with little respect for the fighting ability of British infantry; now they realize what German military periodicals said as early as 1940, that British infantry, given commanders like Montgomery and Alexander, is the equal of any in the world.

All this has produced a healthy reaction. Our troops have lost none of their cocky ways or their dash, but there is a vein of iron underneath. They are growing up. But few of them realize as yet the immense moral strength of the United States in world affairs. It is not as the greatest industrial nation of the world that the United States is admired by the farmers of Morocco or the industrial workers of France, but as a nation in which human liberty and human dignity are still more than catchwords. Things that to the doughboy are commonplace and hence seldom mentioned are like a promise of new life to many of their present associates and allies. They do not yet realize the great part they can play in history. Their allies expect them to play the leading role in the post-war world, although at present their own apathy and, at times, downright ignorance of the rest of the world are not encouraging.

THIS extends past national and international politics to the rudiments of military life. For instance, I heard a first lieutenant of infantry tell an admiring doughboy that the Spitfire was an American plane made in America and distributed to the British through lend-lease. The result is a limited stock of ideas on the future of the world and, as far as this correspondent can find, very little thinking about it. A pilot who had done as much as any man in the service to bring about the defeat of the German air force —he had knocked down six enemy planes —said, "Yeah, it's interesting to think about, all right," and let it go at that.

A doughboy will tell you he is fighting first for victory and second for "a better world," by which he means a peaceful one. Yet he has done little thinking about how peace is to be insured. Only a minority consider the construction of any type of world system or even the widening of the present military alliance to cope with the problems of peace.

Similarly the post-war position of the United States in relation to the rest of the United Nations, particularly Britain, Russia and China, gets infrequent attention. Many soldiers believe in "some sort of cooperation," but they appear unaware of their own power of shaping American policy in the post-war years. Generally one encounters a lack of interest in the present or the future among young soldiers. Only a few read anything in the newspapers except the comic strips, the sports page and the gossip columns. Officers have often lamented to me the lack of current-events discussions like those in the British Army, which keep every Tommy, no matter whether he is in England or in the desert, informed of the course of the war and problems arising from it, and, what is most important, his own place in the war and the post-war world. When a radio is available, jazz is the objective of every dial twister. Rebroadcasts of important speeches run second to jam sessions.

Our Army, unexcelled in bravery and ingenuity, thus is neither politically mature like the British Army nor politically fanatic like the Germans. There is present the deep, abiding love of country from which political interest springs, yet it has not been expanded.

Unwillingness to close with the problems of our times is reflected in the attitude of many of our soldiers toward the Germans. They are unaware what the Axis threat to life, as they know it, means. This correspondent has been asked often, "Why are we here in Africa fighting the Germans? Why can't we go after the Japs?"

Once in action this mood, of course, passes. The realization that the fellow down the valley is going to kill you if he can brushes away any doubts as to who is the enemy. The first sight of a town through which the Germans have passed also convinces many a soldier that he is fighting the right people in the right place. It is not a pretty sight. Similarly the devastated areas of London and other British cities and the pinched faces of the children in French North African towns give them a clearer picture of what would happen if we lost the war.

FEW of our troops have been told why they are where they are, why it is important to hold Iceland, why it is vital to drive the Germans out of Tunisia, why it is necessary to crush Germany before turning on Japan. If immediate military problems are so little understood, it is little wonder that the problems of tomorrow win so little attention.

In North Africa this contrasts sharply with the attitude of the British and French troops. It is natural, of course, for our European allies to be more aware of the German menace. They have lived with it all their lives. But there is a great deal of political discussion among French and British soldiers and wide speculation not only about the future of Europe but of the world.

Even the British troops in the field find

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	MoMA Exhs.	236.4

During a lull in the fighting—American soldiers in North Africa enjoy an open-air luncheon.

time to argue about the outlines of the post-war world. During the battles around Tebourba I heard lengthy arguments among fighting men, five minutes from the firing line, on Russia's right to the Baltic States. Generally, French and British troops seem to have a much better idea of what they are fighting for than our soldiers have; a much clearer idea of how they want the world shaped at the peace conference.

The most animated and sincere discussion about the future that I have heard in North Africa took place at a night-fighter station of the R. A. F. Every one, from the wing commander to the rawest private, took part in a two-hour talk. Such discussions are a regular feature of this and other stations.

Our own pilots and crews have little if any interest in that type of discussion. Conversation about air strategy interests a few, but only a minority read any of the numerous books on air power published since the outbreak of the war. Many are less aware of the potentialities of their service in peace and war than are civilians or the officers in other services.

There's a lack of interest about the problems of international aviation after the war. Pilots will tell you, "Why, hell, the air's free, just as the ocean should be." Then change the subject. There is a genuine desire, however, on the part of senior officers to interest subordinate officers and men in the future of the air arm and in the air's part in the future of the world.

SOLDIERS from coastal States bordering on the Atlantic and Pacific generally have a far better idea of the problems of today and do more thinking about those of tomorrow than the ones from other areas. A private from Rhode Island said: "We gotta work with the British. That island of theirs is an aircraft carrier off the coast of Europe in this war, but in another twenty years it will be just about as close to the United States, the way they keep improving these planes." Boys from the Pacific Coast assure you, "We must have more bases in the Pacific" and "there's got to be some sort of agreement among Russia, China and the United States about the policing of the North Pacific."

Since arriving in Africa and after watching the British at work, much anti-British feeling has vanished under the pressure of actual war condtions. There are still traces of the old desire to "twist the lion's tail," but the kidding loses its edge and becomes friendly raillery when it is directed at men at whose side you have fought, gone hungry and experienced disaster and defeat. Our boys know well that the British can fight, that in some respects they are more efficient than Americans in war.

Most of the soldiers I have talked with feel our lot has been cast with Britain, not only in the war but afterward. They realize that, no matter how far it is from Piccadilly to Main Street, we and the British are going the same way. They respect what Britain has done in the war in progress here. Our fighting services are somewhat astonished at the Briton's aptitude for self-criticism.

For instance, when Tommies and doughboys do talk politics, one of the knotty problems is India. As a rule, the inquiring American is surprised, and in most cases gratified, to find that most Britons don't give a hoot about the Indian Empire and would be delighted to see the Indians freed, once the war is over. At the same time talks with British troops who have served in India give those of our soldiers who take time to ask a clearer picture of the problems involved. They accept the judgement of the Tommies "G. I.'s" like themselves, far more quickly than they would government pronouncements.

RUSSIA'S position in Europe both now and after the war is little understood either by American or British soldiers, although the latter have a better appreciation of the Soviet war effort than do our troops. For instance, few soldiers appear to have heard of the Anglo-Russian treaty which joins Russia and Britain in European interests for twenty years. The importance of this treaty seems to have been missed by Americans and Britons alike. There is considerable talk among soldiers of both nations about the dangers of communism or its present place in the new Russian nationalism.

Similarly only a very few understand the nature of fascism. To most soldiers it is some sort of politics practiced by the Germans and Italians. Since the essential nature of communism and fascism is so misunderstood, it is difficult to see how they can be fought intelligently in post-war years. The troops are serious in their dislike of each, but you feel that they will not recognize them unless they are clearly labeled. Some domestic brand, tricked out with patriotic slogans and stars and stripes might not be understood for what it is.

Russia's military strength is well understood, although the sacrifices of the Russian people to achieve that strength are almost unknown—probably because of the Russian censorship which prevents the reporting of the heroic sacrifices by the common people.

However much some of our soldiers vaguely fear post-war communism, they have rationalized their position as allies of the Red Army. The more widely read realize that there is nothing new in an American alliance with a nation with an undemocratic form of government. The majority, however, say, "The Russians are killing plenty of Germans, aren't they?" Seldom (*Continued on Page* 28)

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Letter to
Dr. Hans Weigert
Trinity College
Hartford Conn

Same letter to
Prof. Derwent Whittlesey
Harvard Univ.
Cambr. Mass.

~~We would like to exhibit~~
~~the [illegible] exhib.~~
~~[illegible] the use of maps~~

Mod. Mus. exhib. on the cartography of Total War to promote the laymans understanding of ~~the imp. of~~ geography & the use of maps. The influence of aviation on our concepts of the globe.

As part of the exhib. on war strategy ~~[illegible]~~ we would like to include ~~maps~~ examples of the ~~pre~~ maps prepared for ~~the~~ mass distribution by the German Government showing the threat of Czechoslovakia, etc.

Mrs. Joseph Thorndyke of Life Mag suggests that

We feel that they would be valuable examples of the effective use of maps in the education for war.

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Strategy

★ FOR A STRONG AND UNITED AMERICA ★

NEW PATHS TO FREEDOM

An American concept of a postwar world: Contrast it with Hitler's schemes for a Nazi "new order" of universal slavery

by Vice-President Henry A. Wallace

WE ARE witnessing today a race or struggle between geopolitics and the New Democracy. The outcome of that struggle will touch the lives of all of us, of our children, of our children's children.

What is geopolitics?

A generation ago a Scotch geographer by the name of Mackinder, living in England, unwittingly became the spiritual grandfather of that so-called science. He claimed that the nation which had control of Eastern Europe and Western Asia had control of the "heartland" of the world. In other words, he believed that if Russia conquered Germany or if Germany conquered Russia the heartland would be dominated by one nation, and that nation would, by reason of its domination of the heartland, be able to control the whole world.

A German by the name of Haushofer read the Mackinder thesis and was inspired to work out plans which would give Germans control of the heartland and therefore of the world. These plans are known in Germany as geopolitics.

Hitler put flesh on the dry bones of geopolitics, speaking again and again of *Lebensraum* (or breathing space) as the road to world empire for the German people. Breathing space was Hitler's excuse for moving into the Balkan States and Russia. He now holds much of the heartland which Mackinder declared was necessary for world control, and has been striking for the rest. All Hitler needs to do under the Mackinder thesis is to consolidate his gains, hold onto them and from time to time move from the center outward in perfecting his world domination.

We in the United States do not believe in the Mackinder-Haushofer-Hitler brand of geopolitics. In the air-power world which is now so rapidly coming into being, America is just as much the heartland of the world as is Eastern Europe. Moreover, we in the United States, while having a full respect for geography, can't help wondering if ideas and organization do not play an even more important part in world destiny.

We believe the New Democracy is a more powerful tool than geopolitics. By New Democracy I do not mean Anglo-American domination of the world. The New Democracy differs from the old democracy in its willingness to realize that democratic principles must eventually be made available to all nations. The New Democracy has faith in Chinese, Russians, Latin Americans and all citizens of the United Nations. It believes in tolerance toward all men except those who have taken up arms to crush democracy.

Today and for the immediate future it happens that the United States and England have an unusual responsibility. Our two countries have great natural resources which we have been able to exploit efficiently through the skill of the political and industrial system which was evolved in the nineteenth century. But that which the United States and England have learned does not belong to us alone. For our own preservation we must pass it on to the rest of the world.

I AM thinking especially of the billion people in Eastern Asia, the Middle East and Latin America. Four out of five of these people live on the land. Most of them because of small farms and lack of machines are less than one-tenth as efficient as United States farmers. They buy little — they sell little. Their average income per family is less than $100 a year. Perhaps one out of six knows how to read and write. They are only lightly touched as yet by the auto, the airplane, the telephone and the newspaper. But radio has reached into their lives, and their leaders by the thousands have received excellent technical education. We know that, given a chance, they are as intelligent as anyone. The rank and file want education, too. They want the machines of modern civilization. They want our capital and our technical assistance, because that is their only quick way to get a higher standard of living. But above all, they want freedom from the fear of being jumped on or exploited by a powerful neighbor.

WHETHER we of the United States are moved by altruistic or selfish motives, the fact remains that for us the great physical frontier of the future is helping these billion people to conquer peacefully a higher standard of living for themselves. If we help them on a just basis, we in the United States will have security for many centuries and the opportunity of establishing a vast and mutually profitable trade. If we do not help them, World War No. 3 will come and our destruction will not be far behind.

Geographically speaking, I say the heartland of the future is not East Europe alone, but an arc extending from Buenos Aires at the south on up through the United States, Canada, Alaska, Siberia, Russia and Western Europe, and including China and India. Some day there will be a combination air and highway route linking this vast area together, and connecting by collateral water, land and air routes with the rest of the world. When the determined fight of our United Nations has won the peace of victory, no one power will be able to control this heartland of the future. Perhaps there will be a "Joint International Highway and Airway Authority," assuring access to all the nations which are eager to eliminate fear from the world and observe the principles of New Democracy in their dealings.

While this international highway-airway extending along the Americas and across Asia is being constructed, many efforts will be started to increase the agricultural efficiency and improve the education of the billion and more who are now so poverty-stricken. As the standard of living of free peoples is lifted, the peace of the world can be made secure.

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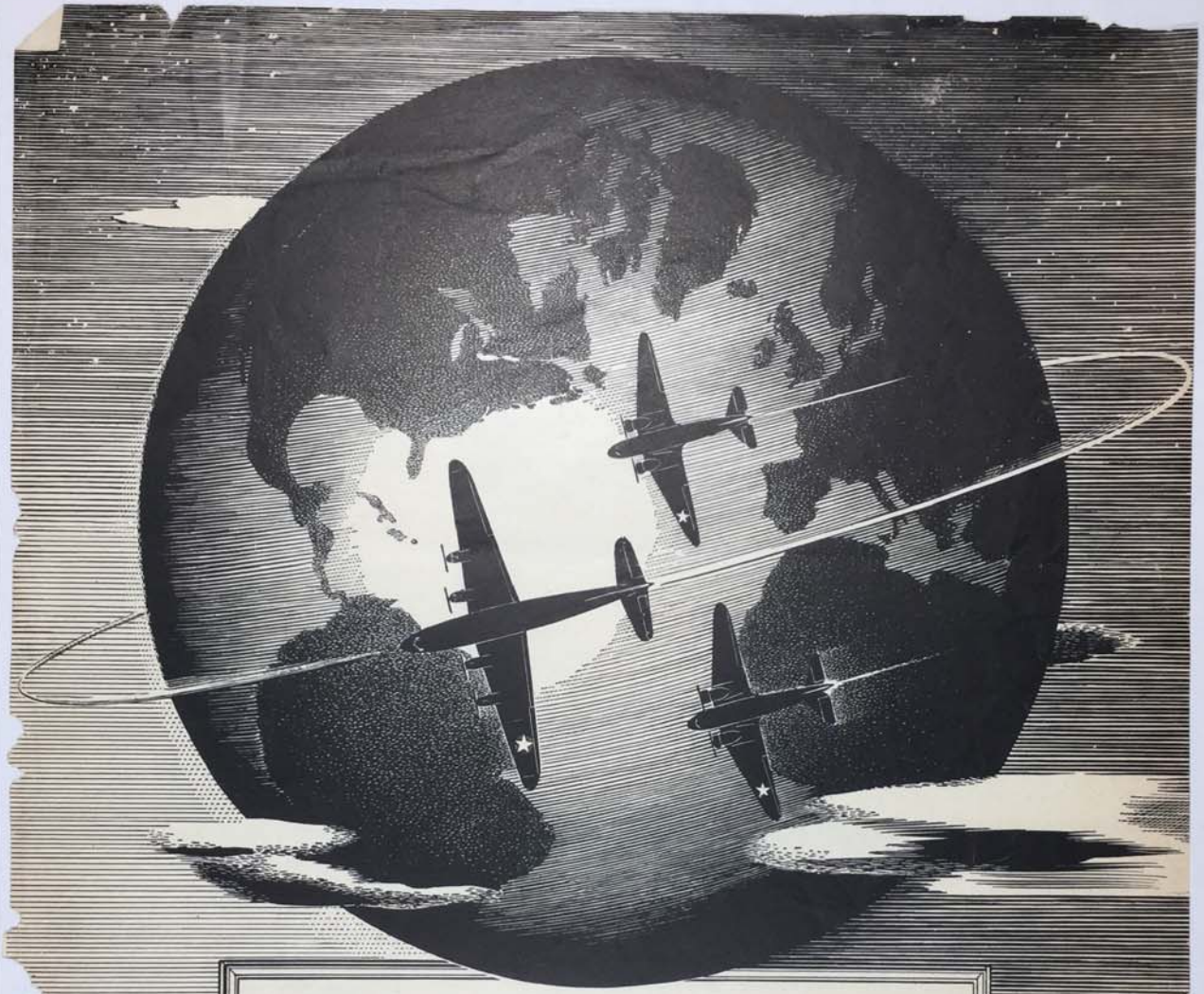

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[From Late Edition of Yesterday's TIMES.]

AMERICAN ATTACK FAILS AT HILL 609

U. S. Troops Forced to Fall Back by Furious Fire After Gaining the Approaches

OUR ADVANCE HELD UP

Desperate German Resistance Slows Second Corps in Two Sectors—We Gain in North

WITH THE AMERICAN INFANTRY SOUTHWEST OF MATEUR, Tunisia, April 29 (Delayed) (U.P.)—Viciously fighting Germans, holding fortified hills, held up the advance of the American Second Corps in two sectors today.

At dawn the doughboys moved out under the personal direction of their commanding general with orders to take flat-topped Hill 609 [Djebel Tahent] at all cost.

They met a German force which evidently had been ordered to hold it at all cost.

At dusk the Americans had fought their way up the hill for half a mile, snaking in and out among the rocks and suffering numerous casualties, only to be thrown back.

To the south other infantrymen were forced to fall back from the Djebel Badjar, which they had taken Wednesday.

In only one sector, at the north nd of their line, were the Americans able to gain ground.

There, in the Sedjenane Valley, infantrymen pushed forward onnaissance parties in strength ithin three miles of Lake Achjust south of Bizerte, against slight resistance.

as believed at headquarters this advance the Second ad outflanked Green Hill Hill, which its men had le to take from the Ger-

which gets its name ht, 609 meters or 1,998 es the American posives any troops adn the direct field of

d that only about d it. But they day that they n. They were supplied with vy and light ir positions lict heavy

y morn- vy cost cky

ory

ALLIES BAG 16 SHIPS IN MEDITERRANEAN

Continued From Page One

in on them. One Messerschmitt was shot down. All the bombers returned safely to their bases.

Other pilots of the Northwest African Strategic Air Force, flying Marauders and escorted by Lightnings, sank an enemy destroyer. They also scored direct hits on the bow and stern of a 150-foot merchant ship steaming north of Cap Bon.

Meanwhile, British Kittyhawks, escorted by Spitfires, ranged from Ras el Melah, on the eastern coast of the Cap Bon Peninsula, to Ras el Fortrass, on the Gulf of Tunis, spreading destruction across the aes. The major part of the Axis fighter force was diverted in attempts to halt the débâcle and, in speedy, tricky air fighting, downed eight Allied planes. Five Kittyhawks are missing.

Other British bombers struck at destroyers, motor barges, E-boats, tank landing craft and an assortment of other small vessels.

Merchantman Damaged

As direct hits made sudden gaping holes in the sides of the ships and near-misses flung geysers of water into the air, fires broke out and a destroyer, a motor torpedo boat, a tank carrier and a motor barge slid under the water. A merchant vessel of about 1,500 tons was hit. Several other vessels were attacked and there is some reason to believe that the final score of ships sunk was larger than reported. [The first official score was seven, including a corvette, The Associated Press reported.]

A bomb was dropped on the end of the Kelibia jetty, near the tip of Cap Bon. An explosion followed, tossing fragments of the jetty into the air.

Sergeant Browning and his observer, Sergeant J. Lyons, had been flying for eighteen months over England and North Africa without ever engaging in action when yesterday, as streaks of sunrise lit the sky with red, their Beaufighter sighted a speck in the sky and went to investigate it. They found a JU-52 transport, followed by three others, flying in line.

"We sent them down in short order," Sergeant Browning said.

Then they attacked a fifth plane, straggling behind the rest, and chased it for miles before catching it.

One of the planes landed successfully in the sea, despite a burning wing. Sergeant Browning saw its men, wearing yellow skull caps, inflating a dinghy and climbing aboard. Sergeant Browning swooped low and the men ducked,

the damaging or probable sinking of twenty-two others. In addition, they have announced the sinking of an unspecified number of smaller ships.

Today's bulletin, which revealed the largest single bag of confirmed sinkings of the month, said that all ten victims had been ships "which attempted to make passage between Axis-controlled ports in the Mediterranean."

The large tanker was intercepted near Marittimo Island, west of Sicily, while it was heading for Tunis, about 150 miles away. It was escorted by "an unusually large number of surface craft and aircraft" but the British submarine penetrated the strong protective screen and blew up the tanker with torpedoes.

The small tanker was sunk by submarine deck guns off the west coast of Sicily. In the same area two small suppply ships were sunk by torpedoes.

Off the east coast of Corsica a large transport and a large supply ship were torpedoed and sunk. Near the Island of Monte Cristo, which lies between Italy and Corsica, a torpedo hit on a large supply ship was followed by a heavy explosion. The Admiralty said that the ship, apparently laden with ammunition and gasoline, had subsequently blown up.

Another submarine, patrolling off the enemy-occupied tip of Tunisia, torpedoed and sank a large motor supply ship, while off the northwest coast of Sicily a small supply ship, which had been damaged and stopped by Allied airplanes, was finished off by a submarine. The medium-sized convoy escort vessel was torpedoed and sunk in the Sicilian area.

[From Late Edition of Yesterday's TIMES.]

CENSOR TROUBLE AHEAD

'Mission to Moscow' Faces Strict Rules in Great Britain

LONDON, April 30 (Reuter)—Before the film "Mission to Moscow," based on former Ambassador Joseph Davies's book, is shown in London in June, unusual problems of censorship will have to be faced.

Representations of living people are not, as a rule, allowed to be reproduced in films in England. The Board of Film Censors will have to decide whether the picture cast, which includes doubles of Prime Minister Churchill, Premier Stalin and Mr. Davies, can be granted a censors' certificate. If there is any doubt the matter will be submitted to Downing Street.

[From Late Edition of Yesterday's TIMES.]

WOMEN'S CHORUS HEARD

Concert by University Group Includes Religious Works

The University Women's Chorus of New York gave its Spring concert last night in Carnegie Chamber Music Hall before an appreciative audience of good size. Because Captain Morris Watkins, regular conductor of the ensemble, is on leave of absence serving with the United States Marine Corps, Lowell P. Beveridge, acting conductor, was on the podium.

The chorus presented a program which opened with a group containing Vaughan Williams's "Let Us Now Praise Famous Men," Brahms's "Psalm, No. 13," and further religious offerings by Byrde, Matthew Locke and others. Later came a sheaf comprising Weelkes's "Some Men Desire Spouses"; Douglas Moore's "Perhaps to Dream"; seven of the "Liebeslieder" waltzes of Brahms, and Randall Thompson's "Rosemary." The rest of the choral offerings consisted of seven folksongs of varied provenance.

Grace and Luis Harold Sanford, duo-pianists, who were the assisting artists, performed works by Bach, Brahms and Milhaud, as well as Orvis Ross's "Paul Bunyan Suite," which received its first presentation. Mr. Sanford also was the accompanist for the chorus.

[From Late Edition of Yesterday's TIMES.]

HEADS REPUBLICAN GROUP

Mrs. Reeve Schley Elected by New Jersey Women's Club

TRENTON, N. J., April 30 (AP)—Two hundred and fifty members of the Women's State Republican Club were told at their annual convention today by Mrs. W. Glenn Suthers of Chicago, president of the National Federation of Women's Republican Clubs, that "hopes for the future heighten daily as the new Congress asserts itself and reclaims its rightful prerogative."

Speaking at a luncheon of the convention, Mrs. Suthers said "vicious propaganda, designed to depreciate Congress and the United States, is the handiwork of the New Dealers."

Mrs. Reeve Schley of Far Hills was elected president to succeed Mrs. Clarence B. Mitchell, also of Far Hills. Mrs. Florence A. Pickernell of Englewood was elected first vice president to succeed Mrs. Schley.

it's time

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ROBERTS PICTURES POST-WARGROUPING

He Asserts World Organization to Succeed Involves Some Yielding of Sovereignty

ALTERNATIVE IS 'CHAOS'

Justice Tells International Law Society Our Prompt Support Is Needed

Special to THE NEW YORK TIMES.

WASHINGTON, May 1 — Owen J. Roberts, Associate Justice of the Supreme Court, urged members of the American Society of International Law today "to arouse and enliven public sentiment in this country in support of an integration of our own and other nations in a world organization having the purpose and the power to adjust the relations of the peoples of the earth in accordance with the dictates of justice and to promote and if necessary enforce the peaceful composition of all disputes and differences which may occur.'

If there was validity to the suggestion that the people of the democracies, and particularly of the United States, would never consent to surrender any portion of their national sovereignty in order to join such a world organization, Justice Roberts added, "we may as well then throw up our hands and let the world roll on into chaos."

No world organization can be successfully set up, the jurist asserted, unless this country "espouses and promptly and vigorously urges it." No plan, however apt, can have any chance of adoption or successful operation unless the American electorate is sold on its advantages, he asserted.

Plan for "Man in the Street"

"The man in the street," he said, "may not be competent to judge of the details of such a plan. But he is competent to comprehend the principles upon which a union should be built. He is competent to envisage in a broad way what he is willing to have his government adopt, what elements of national sovereignty he is willing to surrender and to pool with the peoples of other nations, and whether he wishes his government to embark upon a daring but hopeful experiment of world organization."

Justice Roberts outlined his conception of the proposed world organization in some detail. While there might be difference of opinion on minor phases of it, he said, any one supporting the general proposal must agree that "supra-national law must be law affecting and binding individual citizens of the supra-national government."

Cites Our Constitution

In this respect, he drew a comparison with the American Constitution which he said had endured for 150 years because the nation's laws are binding upon all citizens and not upon the States as entities.

"The psychology back of Federal legislation," he said, "is that the citizen's loyalty and fealty to the nation stands over against his loyalty to his particular State. That balance of loyalties, with all its obvious value, would be lost if issues between the Federal Government and its constituent members were closed by the mandate of the Federal Government to the State instead of to its citizens. Enforcement against a citizen is a police function; enforcement against State or nation as an entity is war."

"It seems obvious," the justice continued, 'that a world government must have a representative assembly to implement its delegated powers. Equally plain is the necessity for an executive to administer the laws and see to their enforcement. And under that executive there must be an independent police to effectuate the legislative policy and the executive action pursuant to it.

"Lastly, there must be a judiciary to which disputes between the citizens and the supra-national government, between citizens and any nation a party to that government, and between nations must be submitted - r adjudication."

Justice Roberts voiced confidence that "the intelligence of mankind" could overcome the difficulties inherent in setting up such a world organization, once the fundamental thesis was accepted.

Hugh S. Gibson, former American Ambassador to Belgium and Brazi also urged that "now is the time to prepare our approach to peace-making," and outlined methods of approach to the formation of a world organization.

REBUILDING

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The Air Offensive Against Germany:

Bombs Can Make Axis Helpless Before Invasion

Michie Believes Germany and Italy Can Be Knocked Out of War This Year

Writing on information from official sources, Allan Michie contends in his book, The Air Offensive Against Germany, *that massive, repeated air raids can break Germany's back. The book, published by Henry Holt & Co., is now in its third printing. You can start PM's serial-digest of it with the second instalment, below.*

By ALLAN A. MICHIE

Bombers Will Decide the War

The factors now preventing both American and British bombers from hitting Germany decisively can be remedied almost immediately *if we make up our minds.* If we decide to triple or quadruple our bomber striking force, Germany can be forced to her knees before the end of the Summer of 1943. After that, the combined British and American armies can walk across Europe when they open the real "second front."

Bombers may not *win* the war—but they will *decide* it by destroying Germany's industrial centers, her war factories and communications, and by breaking down her civilian morale to the point where the job of an invading army becomes relatively easy.

I am not arguing for an exclusive air war. The war will not be won finally until we defeat the German armies in the field by a land invasion of Europe—and, as Churchill has promised, that will come in 1943. Overzealous champions of the air have relegated land and sea arms to subsidiary roles and even total uselessness. But it is not a question of an army or navy being obsolete. These forces have merely changed their functions in a pattern for victory that has been tremendously modified by the air arm.

The air offensive against Germany is not a proposal for "winning the war cheap." It is not a comfortable substitute for defeating the German armies in the field.

The two attacks are complementary. The bomber offensive and military invasion are like the artillery barrage and infantry attack of the First World War. The infantry could not attack successfully until the artillery had pounded the enemy's defenses. The weakening of the defenses was also meaningless without a follow-up attack by the infantry. The function of continuous mass air raids is so to weaken Germany that the Anglo-American land forces can close in on the Nazi armies for the "kill" without facing another blood bath like Passchendaele.

Shall We Invade Now Or When Reich Staggers?

The issue in this war is simply whether we want to invade a German-held Europe while Germany is still strong and upright or only after she has begun to stagger.

I believe that the war will be won by the successful employment of all three arms—air, land, and sea. But in the final stages bombing will prove to be the decisive factor in the defeat of Germany and the acceptance by her of our armistice terms.

Despite the growing awareness of the possibilities of air power in both America and Britain, the ability of the air arm to destroy the enemy's facilities for making war is still not properly appreciated. Suppose a British Combined Operations force had been landed on the coast of France, had fought its way through to the outskirts of Paris and there destroyed three-fourths of the sprawling Renault tank and motor works, depriving the Nazis of enough equipment to supply from three to five armored divisions, and then had managed to fight its way back to England—all for the loss of twenty-five men.

Such a brilliant stroke would have been hailed all over the free world as a magnificent accomplishment of the greatest importance to the Allied cause. Suppose also that between 5000 and 7000 American soldiers had landed in Belgium and fought their way through German-occupied territory to Cologne, where they managed to place demolition charges in more than 250 factory buildings and workshops, including some of the most important in Germany, and had then successfully re-embarked, for the loss of only 257 killed and missing. Such a daring attack would have been properly recognized as the most crippling single blow ever struck at the heart of the enemy war machine. Yet to the Bomber Command of the RAF (which successfully carried out both those assignments) those exploits are routine.

Upon the success of our air bombardment of Germany depends our hope of cutting down our losses in men and equipment in the land invasion that is coming. Americans, no less than the British, must support this bombing offensive with all they have. The aerial front in the only one on which Britain and America outmatch the Germans at present.

Mass raiding is the one form of offensive in which America's productive capacity can make itself felt in the shortest possible time. With the British we must combine to knock down the resistance of the German home front and the Reichswehr as quickly as possible before the final land march to Berlin begins.

The Nazis began this war with overwhelming air superiority. Successful exploitation of that superiority against their continental opponents won for the Germans the whole of the Atlantic coastline from the Arctic Circle to the Pyrenees. It knocked France out of the conflict and gave the Nazis a wide choice of bases on the Continent from which to direct further operations. It brought the Germans to within twenty-two miles of the coast of Britain. There, despite a numerical superiority of four to one over the RAF, they were halted.

Mastery of the skies over the English Channel and above the fields and towns of southeast England enabled the RAF to stave off invasion and inflict its first defeat on the Luftwaffe.

Britain began the war in the air in a shocking condition of weakness. For years before the war she had been spending annually about eight times as much on her other services as on her air force. The lessons of the last war were largely lost on her high army and navy officers, as they were on those of the United States. Despite the clear warnings of the growing might of the German air arm which she received in 1935 and again in 1938, Britain failed to take her own aircraft production in hand.

For the first two years of the war, especially after Dunkirk, Britain was forced to concentrate her aerial resources on the defense of her base, the British Isles, the security of which was vital if the war was to be continued in Europe at all. In those years her aerial resources never equaled her requirements.

Balance of Airpower Shifted to Britain '42

By early 1942, however, the balance of air power had definitely shifted to the British side. By the end of the year, during, which the RAF was increased by one-third, Britain's air force outnumbered that of Germany and Italy combined.

The Luftwaffe, which has never recovered from the enormous losses of the Battle of Britain, was on the decline. Despite a policy of rigid conservation to offset continued losses on the Russian front, Germany's air force has been compelled to draw upon reserves from its rear echelons.

After three years of frustration, during which the RAF's fighter force, dangerously depleted after the Battle of Britain, was built up to almost four times its June, 1940, size, the leaders of the RAF's Bomber Command at last began to receive the bombers with which to begin their long-planned, systematic destruction of Germany's war machine.

Although it has yet to receive enough planes to go into full-scale operation, the Bomber Command's offensive already ranges from Trondheim, in Norway, down to the Spanish border, covering a continental coastline of nearly 2000 miles and extending to a depth of 800 miles into Germany.

In retaliation during 1942, Goering's Luftwaffe was able to stage only sporadic light raids, usually with fewer than fifty planes, on poorly defended English towns.

Britain's aircraft production now exceeds that of Germany, German-occupied, and Italian factories combined. She has about reached the limit of her production potential, but to her own strength in the air is now added the tremendous output of American aircraft factories. America is now producing more aircraft than all the three Axis partners put together, and as President Roosevelt revealed in his "state-of-the-Union" message to Congress on January 7, 1943, American aircraft factories produced the astounding total of 5,500 planes in December, 1942—more than twice the peak monthly output of Germany's aircraft industry—and the output in the United States is still rising.

As we move through 1943 Britain and America at last have in their hands a weapon able to deliver aerial blows never before known in the history of warfare. As President Roosevelt said in heralding the

The Matford Factory, some 10 miles northwest of Paris, was producing lorries at the rate of 20 a day for the Germans until the RAF struck in April, 1942, using American-built Boston bombers. This was a low-level daylight raid.

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THE WAR GOES INTO STUNNING REVERSE FOR AXIS LEGIONS

Axis Power at Its Flood . . .

. . . and the Picture Today

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Roosevelt Asks Post-War Unity To Keep Peace

(Continued from page one)

at his first press conference in 1943, follows:

"One year ago twenty-six nations signed at Washington the declaration by United Nations.

"The world situation at that moment was grim indeed. Yet on that last New Year's Day these nations, bound together by the universal ideals of the Atlantic Charter, signed an act of faith that military aggression, treaty violation and calculated savagery should be remorselessly overwhelmed by their combined might, and the sacred principles of life, liberty and the pursuit of happiness be restored as cherished ideals of mankind.

"They thus created the mightiest coalition in history, mighty not only for its overwhelming material force, but still more for its eternal spiritual values. Three other nations have since joined that coalition.

"The unity thus achieved amidst dire danger has borne rich fruit. The United Nations are passing from the defensive to the offensive.

"The unity achieved on the battle lien is being earnestly sought in the not less complex problems on a different front.

"In this as in no previous war men are conscious of the supreme necessity of planning what is to come after—and of carrying forward into peace the common effort which will have brought them victory in the war. They have come to see that the maintenance and safeguarding of peace is the most vital single necessity in the lives of each and all of us.

"Our task on this New Year's Day is three fold: first, to press on with the massed forces of free humanity until the present bandit assault upon civilization is completely crushed; second, so to organize relations among nations that forces of barbarism can never again break loose; third, to cooperate to the end that mankind may enjoy in peace and in freedom the unprecedented blessing which Divine Providence through the progress of civilization has put within our reach."

The newspaper men to whom the President read his statement were so impressed with its importance that they asked for amplification, and the President discussed the situation informally.

In these remarks he heavily stressed a thought brought out by Mr. Wallace in presenting his world-council idea. This was that first of all there must be peace, and enforceable peace. Otherwise there could be no enjoyment of the "blessings . . . of civilization" which he mentioned in his prepared statement.

At the insistence of the correspondents, Mr. Roosevelt authorized direct quotation of his informal remarks.

"Of course," he said, "as I think has been intimated before, there are a great many objectives when peace comes, so that we won't go back to the old menace of the prewar period—a great many things the United Nations ought to do and I think will remain united for.

"However, there is one thing which at the present time stands out as the most important war objective, and that is to maintain peace, so that all of us, in going through this war, including the men on the fighting fronts and on the seas, will not have to go through a world cataclysm again—that they will have some reasonable assurance that their children won't have to go through it again.

"Almost all the other things we hope to get out of the war are more or less dependent upon the maintenance of peace—all kinds of planning for the future, economic and social, and so forth and so on. It isn't much use if there is going to be another world war in ten years, or fifteen years, or twenty years. All the planning for the future is dependent, obviously, on peace."

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THE PHILADELPHIA INQUIRER. WEDNESDA

CURRENT LITERA

Books of the Week

Generals, Geographers And Grim Geopolitics

3 Books Remove The Mask From Nazi Aggression

By Alexander Kendrick

"GERMAN STRATEGY OF WORLD CONQUEST," by Derwent Whittlesey. Farrar & Rinehart, $2.50.

"THE WORLD OF GENERAL HAUSHOFER: Geopolitics in Action," by Andreas Dorpalen. Farrar & Rinehart, $3.50.

"GENERALS AND GEOGRAPHERS: The Twilight of Geopolitics," by Hans W. Weigert. Oxford University Press, $3.

The mask is stripped from German geopolitics in these three excellent books. All of them emphasize the same important point — that while geopolitics can most certainly be used for constructive and beneficial purposes, the Nazi brand is governed entirely by expediency and is manipulated solely for aggression and conquest.

Geopolitics involves a great many things, including psychology, economics and sociology. But primarily it is a matter of geography and political science, and it is fitting that one of these books should be written by a geographer, another by a political scientist and the third by a man who fits in somewhere between the two.

ROOTS IN THE PAST

Derwent Whittlesey is one of our foremost geographers, and he does an effective job of debunking such geopolitical concepts as "Lebensraum," "blood and soil," "realm" and "autarky." But his book is less geography than historical account of the development of geopolitics.

His chief point is that the vague science is not a Nazi invention, but a dream of expansion and conquest which reaches far back into German history. He discusses the philosophical basis of geopolitics, going back to Frederick the Great and bringing in the Pan-German League which flourished before the World War.

It was not even a German, but a Swede, Rudolf Kjellen, who christened and organized geopolitics, Mr. Whittlesey points out, while Halford Mackinder, the Englishman, had long before pioneered in the field, with his concepts of the Heartland and Euro-Asia. Karl Haushofer made the subject his own after the World War, and Rudolf Hess was his star pupil.

The maps and geopolitical symbols which are used to transform a "static" situation into a "dynamic" one form an engrossing part of the book, and a most valuable bibliog-

HANS W. WEIGERT
Author of "Generals and Geographers"

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	MoMA Exhs.	236.4

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THEIR OWN WORDS

Andreas Dorpalen's book is more geopolitical than geographical. It consists of chapters in which the author tries to read some sense into geopolitics, alternating with selections from the writings of Haushofer and other members of his Institute at Munich, in which the sense is once again removed.

Yet for all their absurdities (such as that America is really a German name), their redundance and their bombast (such as "the will to space," "boundary sense," "the drive to the sea"), the extracts are most illuminating. In 1921, for instance, Haushofer advocated an alliance between Germany and Japan, quite contrary to Mackinder's original idea that a German - Russian alliance could dominate the world.

Dorpalen's book contains a brilliant introduction by Colonel Herman Beukema, of our own U. S. Military Academy, showing that geopolitics, instead of being used for war as the Nazis use it, can also be used to provide a realistic peace.

INTO THE TWILIGHT

Hans W. Weigert, a former Prussian official now teaching at Trinity College in this country, has frankly written a political book, showing that democracy can become a world cause as global as the Nazi geopoliticians have made their imperialism.

To the cast of geopoliticians with whom we are already acquainted Dr. Weigert adds the cynical philosopher of the 20th century, Oswald Spengler, with his dictums against democracy and the freedom of man.

Dr. Weigert's book in many respects parallels Dorpalen's, but it gives us a much more rounded picture of Haushofer and his influence on Hitler and the German generals. Hitler repudiated Haushofer by attacking Russia, and Japan repudiated him by attacking China, Dr. Weigert declares. Hence we have the twilight of German geopolitics. It will fall with Germany's and Japan's military defeat.

The three books are listed here in the order in which they were read and not on a qualitative basis. All contain basically the same material, and any of them will give the average reader an excellent introduction to the mysterious realm of geopolitics and geopoliticians.

Bob Hope Unhappy At Chimp Double

Bob Hope has a double in his new comedy, "Road to Morocco," which comes to the Stanley today, and he's not at all happy about it. The double is Mulk, Hollywood chimpanzee, and Mulk isn't happy about it, either.

Bob and his side-kick, Bing Crosby, who, with Dorothy Lamour, share acting honors with Mulk, run into many strange adventures in Morocco. It's all for laughs and you're not supposed to believe any of them. You certainly won't believe the one involving Mulk.

Bob and Bing are languishing in desert jail when Dottie sends them magic ring with instructions it can be used to get three wishes — any three wishes made on it. While fiddling the ring, Hope is suddenly

...uide in Philadelphia

8.15, 9.55, 11.40, 1.20, 3, 4.50, 6.25, 8.10, 9.50 11.30 and all night.

STANLEY—"Road to Morocco," comedy, with Bing Crosby, Bob Hope and Dorothy Lamour. 11, 12.35, 2.05, 3.40, 5.15, 6.50, 8.20, 10. Opens today.

STANTON—"The Navy Comes Through," guarding merchant ships, with Pat O'Brien, George Murphy and Jane Wyatt. 11, 12.50, 2.40, 4.30, 6.20, 8.10, 10.

STUDIO — "Dead Men Walk," thriller, with George Zucco. 11, 1.14, 3.33, 5.52, 8.11, 10.33, and "Night for Crime," mystery, with Glenda Farrell and Lyle Talbot. 12.04, 2.18, 4.37, 6.56, 9.18.

...CEMBER 30, 1942

...Y AND ...

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ARMY? Sloane - Aero Med Labs

AIRWAYS

V

July 19, 1943

Dear Mr. Sloane:

Under separate cover I am returning to you some more of the material which you so kindly furnished us in connection with the preparation of AIRWAYS TO PEACE. This is material which we did not use directly, though the information was very valuable to us. In fact, this material seems so useful to me that I think it can doubtless be used at either Wright Field or elsewhere. It makes problems involved very clear.

Once more I should like to extend to you the thanks of both the Museum and myself for all you did to help us prepare AIRWAYS TO PEACE. It has already proved exceedingly popular with the public and the press. It is invoking great response from educators in particular. We are doing our best to keep the show up to date, and new material is being added from time to time.

I hope that when you are in the city you will drop in to see me. With all best wishes and renewed thanks, I am

Sincerely yours,

Mr. Eric Sloane
Aero Medical Laboratories
Wright Field
Dayton, Ohio

Dear Mr Wheeler

I am planning to leave Dayton now and shall see you before the end of this week. I presume that this will be convenient to you. I should be glad to [illegible] at your office at [illegible] moments to [illegible] following that Northwest Airlines [illegible] interested in [illegible] have been soliciting [illegible] along the lines of your exhibit. I contacted my friend, head of this line.

He immediately phoned St. Paul and asked his engineers to contact you. Did they do so? They have global maps etc. of interest. My friend is Mr Ferguson. V.P. & Manager of Northwest Airlines. I am deeply sorry that I have neglected your cause but the Air Force has had me working hard despite a bad case of poison ivy that has closed one eye completely.

Sincerely
Eric Sloane

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Dear Mr Wheeler-

I am planning to leave Dayton now and shall see you before the end of this week. I presume that this will be too late to have helped out at your exhibit but if not, I shall be glad to pitch in + work the last moments to the best of my ability

Knowing that Northwest Airlines have been particularly interested in northern orient routes, and have been doing extensive research work along the lines of your exhibit, I contacted my friend, head of this line.

He immediately phoned St. Paul and asked his engineers to contact you. Did they do so? They have globes - maps etc - of interest. My friend is Mr. Ferguson. V.P. + Manager of Northwest Airlines. I am deeply sorry that I have neglected your cause but the Air Force has had me working hard despite a bad case of poison ivy that has closed one eye completely. Sincerely

Eric Sloane

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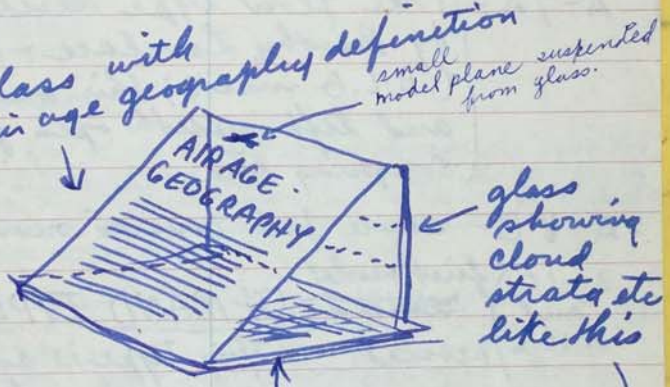
The chart (of which I have sent in another letter) you might use the A-10·A or A-10 mark as they are very similar. Here's a good model—



This shows that the geography of the air is earth geography + sky geography.

E.S.

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Sloane - Burg-Lee

AIRWAYS

ARMY AIR FORCES
MATERIEL CENTER
OFFICE OF THE COMMANDING GENERAL
WRIGHT FIELD, DAYTON, OHIO

June 8, 1943

Mr. Eric Sloane
Wright Field
Dayton, Ohio

Dear Mr. Sloane:

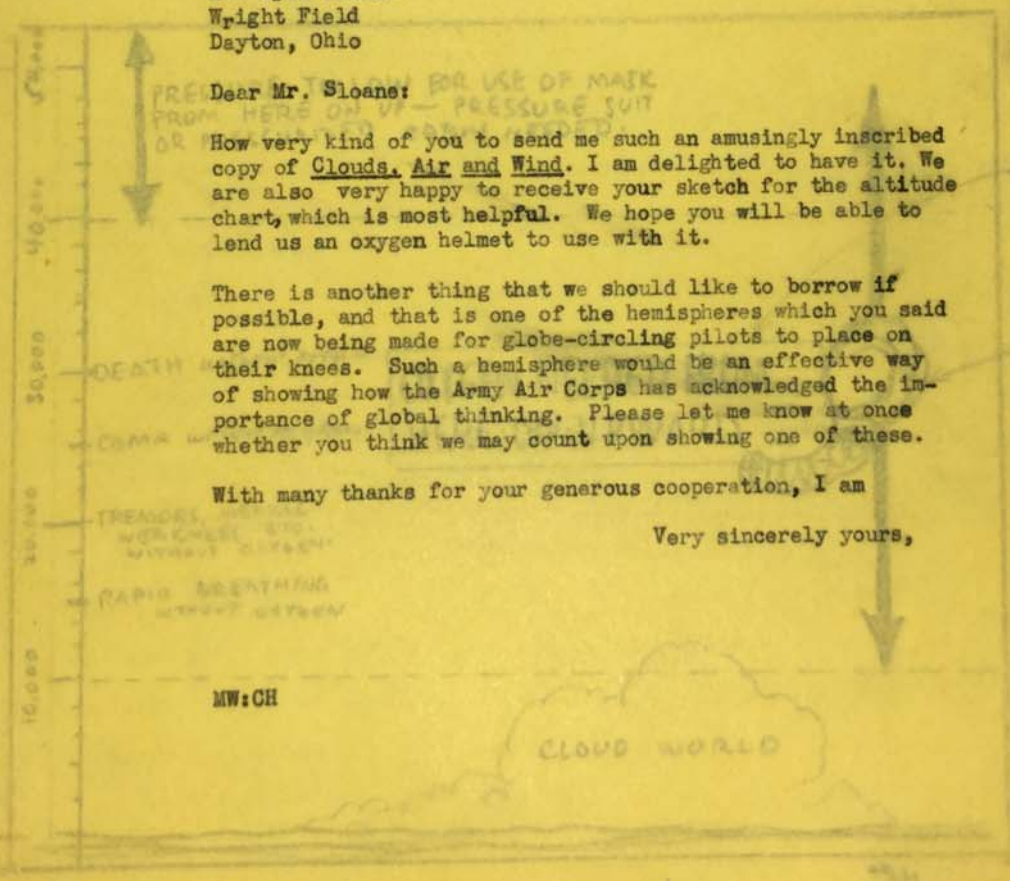
How very kind of you to send me such an amusingly inscribed copy of Clouds, Air and Wind. I am delighted to have it. We are also very happy to receive your sketch for the altitude chart, which is most helpful. We hope you will be able to lend us an oxygen helmet to use with it.

There is another thing that we should like to borrow if possible, and that is one of the hemispheres which you said are now being made for globe-circling pilots to place on their knees. Such a hemisphere would be an effective way of showing how the Army Air Corps has acknowledged the importance of global thinking. Please let me know at once whether you think we may count upon showing one of these.

With many thanks for your generous cooperation, I am

Very sincerely yours,

MW:CH



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ARMY AIR FORCES
ADDRESS REPLY TO
COMMANDING GENERAL,
AAF MATERIEL CENTER

AIRWAYS

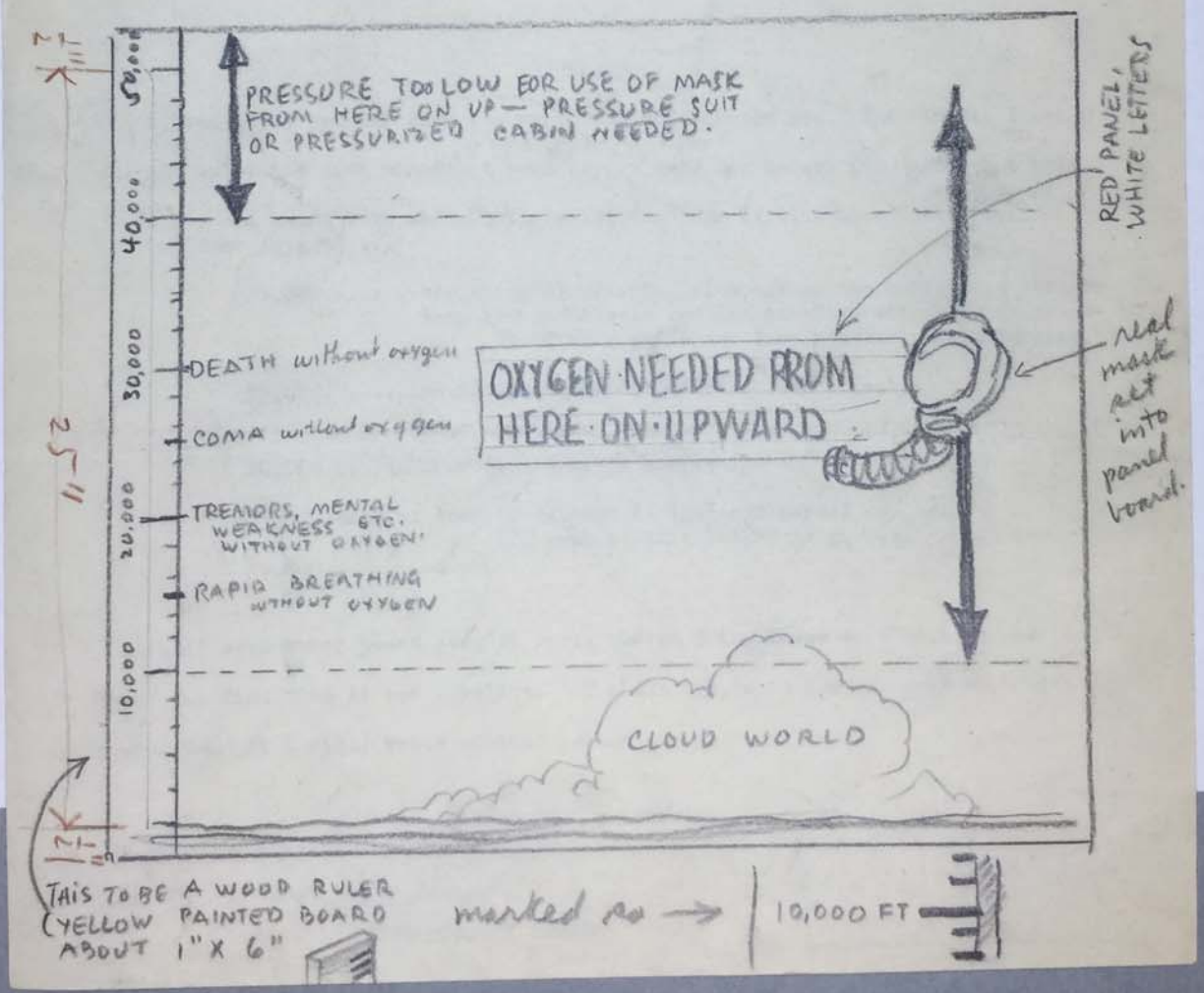
ARMY AIR FORCES
MATERIEL CENTER
OFFICE OF THE COMMANDING GENERAL

WRIGHT FIELD, DAYTON, OHIO

Dear Mr. Wheeler,

I arrived at Dayton to find loads of work piled up for me and the weather most disagreeable; you are lucky to be a New Yorker for the flat lands here are hot and without maritime breezes such as we have in the East,

Here is one chart that I believe will be useful in your exhibition.....
The oxygen mask I shall send to you through the Army and Col. Lovelace, with whom I am now stopping.



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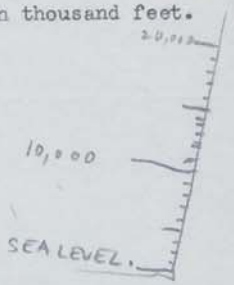
ADDRESS REPLY TO
COMMANDING GENERAL,
AAF MATERIEL CENTER

ARMY AIR FORCES
MATERIEL CENTER
OFFICE OF THE COMMANDING GENERAL

WRIGHT FIELD, DAYTON, OHIO

This will make an attractive chart if done upon a good white board with simple showcard lettering. To the left a good imitation of a ruler done by nailing a board to the chart, painted yellow and with ruler markings, showing hundreds of feet, and indicating each ten thousand feet.



At sea level you can show the earth and a few trees etc. The clouds, I can add in at the last minute. (if you want me to) A real oxygen mask can be set into a cut-out hole and a red panel with white letters issuing from it.....the effects are (without oxygen)....

10,000.....beginning of effects, although no one notices it because they are anesthetic and identical to alcoholic drunkenness. The finger nails and lips however, begin turning blue.

15,000.....rapid breathing but no other bad effect.

20,000,,,,,,...tremors and mental confusion

25,000coma.... coma or extreme fatigue and mental collapse (if kept at this height long, death would occur)

30,000.....death

I shall send other plans etc. at once, but am doing these as I come across them and can find time to see Lovelace. I shall try to be home soon to work with you. Tonoght I shall write another letter to you.

Sincerely,

Eric Sloane

will see about
shipping oxygen mask
tomorrow.

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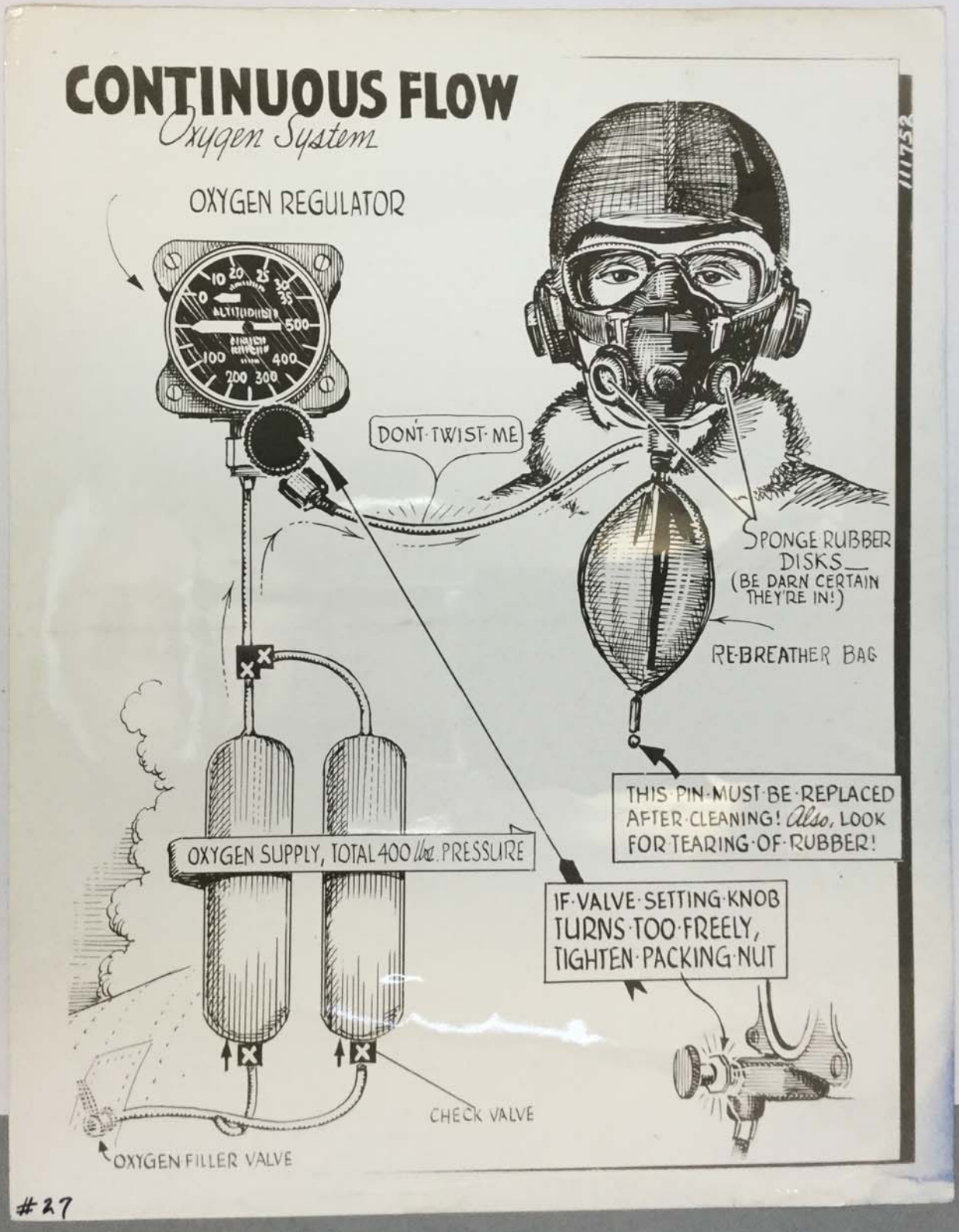

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Sloan, Aero Medical Lab.
AIRWAYS

May 19, 1943

Mr. Eric Sloane
Care of Lt. Laurence Bachman
Aero Medical Laboratory
Wright Field
Dayton, Ohio

Dear Mr. Sloan:

We have been informed that you are now working on a book on the effect of aviation on geography, and if possible we should like very much to consult you about an exhibition on air-age geography which the Museum of Modern Art is presenting this Summer. I enclose herewith a tentative outline of this exhibition. It is directed toward the layman, and we should particularly appreciate your advice regarding examples or models which might impress upon his mind in simple, dramatic form the basic factors involved. Won't you let me know if you are planning to be in or near New York shortly? The Museum of Modern Art, as you know, is a non-profit, educational institution, and we should greatly appreciate whatever assistance you can give us. Although we operate in these times on a very limited budget, we shall, of course, be happy to pay you a moderate consultation fee.

If this exhibition is successful, it should help to prepare the public for your own book. I hope that this will prove to be the case. Thanking you in advance for the courtesy of your consideration, I am

Sincerely yours,

MW:CH

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Stanford HANNA

April 4, 1944

Mr. Paul R. Hanna
Director
Stanford University
California

Dear Mr. Hanna:

I have delayed replying to your recent letter regarding material in our Airways to Peace exhibition for your source book on aviation education. The lateness of my reply has been due to the fact that I was trying to determine whether any of this material would come back to the Museum in the near future. However, since your letter arrived, the exhibition has now been booked for the rest of the winter and so there is no possibility for the rest of its contents being available for your purpose. All of the photographs of the exhibition which we have are included in the Bulletin which I am enclosing. Most of the photographs of the aviation section were obtained from the Institute of the Aeronautical Sciences, Inc., 30 Rockefeller Plaza, New York 20, to whom I suggest that you reply.

I wish you every success for this important project.

Very sincerely yours,

MW:as
Enclosure (Bulletin AtoP.)

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HANNA

STANFORD UNIVERSITY
UNIVERSITY SERVICES

OFFICE OF THE DIRECTOR

STANFORD UNIVERSITY, CALIFORNIA

Mr. Wheeler

March 8, 1944

The Director
Museum of Modern Art
11 West 53rd Street
New York 19, New York

Dear Sir:

The Civil Aeronautics Administration of Washington, D. C. has contracted with Stanford University to prepare a source book on Aviation Education to be used by textbook authors and course-of-study writers in an effort to introduce appropriate aviation content and activities into the elementary and junior high school. This volume will be ready for distribution by the CAA later in the year.

We are aware of the outstanding materials which have been produced or assembled by the Museum on aviation and its background. We are writing to ask whether it would be possible for you to loan us for a brief period as much of this material as you think reasonable. Much of the material described in your "Airways to Peace" exhibit will be extremely useful to us; likewise aviation materials in your pamphlet entitled "Visual Materials on Modern Art" will be helpful.

The CAA will distribute widely to textbook authors and public schools throughout the country the volume now under preparation. Any listings which we make of the exhibits of the Museum will, therefore, reach an important audience. We hope that you will find it possible to assist us in the very near future.

Cordially yours,

Paul R. Hanna

Paul R. Hanna
Director

PRH:hh

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ADDRESS REPLY TO
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AAF MATERIEL CENTER

ARMY AIR FORCES
MATERIEL ~~CENTER~~ Command
OFFICE OF THE COMMANDING GENERAL

AIRWAYS

WRL:kw:49
WRIGHT FIELD, DAYTON, OHIO
June 22, 1943
Loaned

US Army Air Forces V

THE MUSEUM OF MODERN ART

MA

Date February 5, 1945

Bayer —

To: MISS DUDLEY
MISS JARDEN

Re: Gas mask from AIRWAYS TO PEACE

From: H. Ward

Mr. Wheeler says that the gas mask used in AIRWAYS TO PEACE was given to us and I can find nothing in the correspondence with Wright Field officials (Dayton, Ohio) to indicate that they expected to get it back. Since it is now more than a year and a half since the mask was sent to us I am sure that it would be very confusing indeed to have it returned. Mr. Wheeler said that it could be given to Mr. Bayer with the rest of his design but I think that it would be advisable to check with Mr. Bayer first to make sure that he wants it.

Monday ok

Leave yes Sunday after 9:30 Natlet 12:30-2 until 5

Retd to Bayer 2/13/45 with panels

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ADDRESS REPLY TO
COMMANDING GENERAL,
AAF MATERIEL CENTER

ARMY AIR FORCES
MATERIEL ~~CENTER~~ Command
OFFICE OF THE COMMANDING GENERAL

AIRWAYS

WRL:kw:49
WRIGHT FIELD, DAYTON, OHIO
June 22, 1943
Lovelace

Mr. Monroe Wheeler
Director of Exhibitions and Publications
The Museum of Modern Art
New York, New York

Dear Mr. Wheeler:

We are very glad that you received the oxygen masks and also that they will fit in with your exhibition. Any of us that are in New York will certainly plan to drop in and see you. Please feel free to visit us any time you are out this way.

With best wishes,

Sincerely yours,

W. Randolph Lovelace II

W. RANDOLPH LOVELACE, II
Lt. Colonel, Medical Corps
Chief, Oxygen Branch
Aero Medical Laboratory

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WAR DEPARTMENT
AIR CORPS

June 17, 1943.

Dear Colonel Lovelace: Ref: LDC:ke:49

Thank you so much for sending us the five different types of oxygen masks for our forthcoming exhibition Airways to Peace. The masks arrived in perfect condition and I am most grateful to you for your kindness in providing them.

The exhibition will open on July 1 and continue through October 17. I hope that you and Colonel Benson may be able to see it and, if so, that I shall have the pleasure of meeting you personally. Will you please convey to Colonel Benson our great appreciation of his generous cooperation.

Sincerely yours,

Lt. Colonel W. R. Lovelace, M.C.
Commanding General
AAF Materiel Command
Att: Engin. Div.
Wright Field, Dayton, Ohio

MW:lf

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MDAC-312-WF-1-20-42-500M

WAR DEPARTMENT
AIR CORPS
MATERIEL ~~DIVISION~~ Command
~~OFFICE OF THE ASSISTANT CHIEF OF DIVISION~~

ADDRESS REPLY TO
~~Asst. Chief, Materiel Division~~
Commanding General
AAF Materiel Command
Att: Engin. Div.
Ref: LDC:ke:49

WRIGHT FIELD, DAYTON, OHIO
June 9, 1943

Museum of Modern Art
11 West 53rd Street
New York, N. Y.

Attention: Mr. Wheeler

Gentlemen:

Materiel Command is forwarding to you five different types of oxygen masks - A-7A, A-8B, A-10, A-10 Revised and A-14, for use in exhibit on aviation of the future.

Very truly yours,

W. R. Lovelace, II, Lt. Col. M. C.

OTIS O. BENSON, JR.
Colonel, Medical Corps
Chief, Aero Medical Laboratory
Engineering Division

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THE ART

To:

From:

Please underline in red

USArmy Service

Don't Forget

Ben Kocivar
Pentagon Bld
Room 2E 580
Army Orien. Course
Army Service Force
Arlington Va.
copies of news map
proofs - 1 no printing on ...

MANHATTAN ART PRESS, Inc. ✣ Printers ✣ 228 E. 45th St. ✣ MUrray Hill 2-4107-8

...tle
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...e exhibition.
...s for
...he plain
...."

--Henry A. Wallace

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VI AIR-AGE GEOGRAPHY

Spheres and sections of spheres of glass, illuminated from within, showing how little

THE MUSEUM OF MODERN ART

Date June 21, 1943

To:

From: Mr. Wheeler

Re: Attached

Please place red-ink dot at center of each two-thousand-mile range, and underline in red name of base selected. Please also remove soil, ready for framing.

test the knowledge he has derived from the exhibition.

"Americanism in its deepest meaning stands for the freedom, welfare and brotherhood of the plain people of the world, wherever they may be."

--Henry A. Wallace

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VI AIR-AGE GEOGRAPHY

Spheres and sections of spheres of glass, illuminated from within, showing how little time now separates the various population centers of the earth. Lines indicating air routes will be suspended above the globes, showing why Burma is nearer to Alaska than to England; that the great circle route to Calcutta is via Iceland and Moscow; why Chicago is as near to Leningrad as to Dakar etc.

VII CONCLUSION: PROBLEMS OF PEACE

Text and photo-murals suggesting the chief problems of world government after the war, emphasizing the extent to which they depend upon a true understanding of air-age geography and the well regulated exchange of goods among all peoples.

A series of question-and-answer devices requiring audience participation will permit the visitor to test the knowledge he has derived from the exhibition.

"Americanism in its deepest meaning stands for the freedom, welfare and brotherhood of the plain people of the world, wherever they may be."

--Henry A. Wallace

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US-CAA

DEPARTMENT OF COMMERCE

BURDEN

Dr Hans Weigert
Trinity College
Hartford
German
Conference
note.

Eric Archdeacon
Bankers Trust Co.
consult 16 Wall

Robt
Strausz-Hupé
author
Ethnogeopolitics

Prof
Derwent Whittlesey
Geo. Strategy of W. Empire.
Harvard

Air power
strategy

L. F. V. Drake
Air Corps -
Grand Cent. Bldg.

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US-CAA
BURDEN
VI

DEPARTMENT OF COMMERCE
OFFICE OF THE SECRETARY
WASHINGTON

June 26, 1943

Mr. Monroe Wheeler
The Museum of Modern Art
11 West 53rd Street
New York City

Dear Monroe:

Unfortunately it will not be possible for me to be in New York on the first for the opening, but I will be up soon thereafter.

I do not know Girdler so cannot help you with him, but an old friend, Hugh Fenwick, has been very active in Consolidated. If you send him a copy of the material you sent to Girdler (as I suggested in my telegram), I think you will find him helpful.

Sincerely,

Bill

William A. M. Burden
Special Aviation Assistant
to the Secretary of Commerce

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DEPARTMENT OF COMMERCE
OFFICE OF THE SECRETARY
WASHINGTON

8½ x 11

May 11, 1943

Struggle for Latin-American Airways

Mr. Monroe Wheeler
Museum of Modern Art
11 West 53rd Street
New York City

Dear Monroe:

I asked Bailey to set aside 25 copies of the book for hand binding and I would like to have an attractive binding, modern in design in style and in keeping with the character of the typography design for these copies. I will place this matter entirely in your hands including the selection of the binder.

I would appreciate your having a binding made up just as soon as possible.

Sincerely,

Bill

William A. M. Burden

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April 29, 1943

Mr. William A. M. Burden, Jr.
Special Aviation Assistant
Office of the Secretary of Commerce
Washington, D.C.

Dear Mr. Burden:

Mr. Wheeler has asked me to return to you the sketches by C. R. McComas for insignia for (1) CAA and (2) CPT. These are being sent under separate cover, and I trust that they will reach you promptly.

Very sincerely yours,

(Mrs. C. S. Hartman)
Assistant

CCH:cv

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CAA

DEPARTMENT OF COMMERCE
OFFICE OF THE SECRETARY
WASHINGTON
March 31, 1943

April 8, 1943.

Mr. Monroe Wheeler
Museum of Modern Art
11 West 53rd Street
New York, N. Y.

Dear Miss Pinson:

The "Air Neighbors are Near Neighbors" poster has been published by the Hamilton Paper Company only in the small size which Mr. Burden has already seen. I shall suggest to them that they do it in larger format, and if this can be arranged, I shall see that Mr. Burden gets plenty of copies.

Sincerely yours,

Irene Pinson
Secretary to Mr. Burden

Miss Irene Pinson
c/o Mr. William A. M. Burden
Office of the Secretary
Department of Commerce
Washington, D. C.

MW:lf

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DEPARTMENT OF COMMERCE
OFFICE OF THE SECRETARY
WASHINGTON
March 31, 1943

Mr. Monroe Wheeler
Museum of Modern Art
11 West 53rd Street
New York, N. Y.

Dear Mr. Wheeler:

Mr. Burden is in receipt of the "Air Neighbors are Near Neighbors" poster, and he asked if I would write you to see if this poster has been made up in a larger size. If you have it in a larger size, I would suggest that you send him several.

Sincerely yours,

Irene Pinsau
Secretary to Mr. Burden

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Burden

DEPARTMENT OF COMMERCE
OFFICE OF THE SECRETARY
WASHINGTON

January 29, 1943

SPECIAL DELIVERY - REGISTERED

Mr. Monroe Wheeler,
Museum of Modern Art,
11 West 53rd Street,
New York, New York.

Dear Monroe:

March 15, 1943

Dear Bill,

I was so grateful for the note you sent me in the South. My restoration required a bit of time, but I am now entirely fit again, and am tackling the various aspects of the global war show. I have to come to Washington on Saturday, and I wonder if by any chance you would like to put me up Saturday night? If this is not convenient, could you save an hour for me any time Saturday or Sunday so that I could tell you our ideas about this show, which I think you will find very exciting?

We have interrupted our exhibitions program to rush in an exhibition of the work of all the artists in the armed forces who do illustrations for Yank, which seemed a timely and worthwhile thing to do.

I am enclosing herewith a proof of the "Air Neighbors Are Near Neighbors" poster. The changes you suggested have all been made, but I am asking Beyer to correct the colors.

Best regards,

Sincerely yours,

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DEPARTMENT OF COMMERCE
OFFICE OF THE SECRETARY
WASHINGTON

January 29, 1943

SPECIAL DELIVERY - REGISTERED

Mr. Monroe Wheeler,
Museum of Modern Art,
11 West 53rd Street,
New York, New York.

Dear Monroe:

Our fiscal people tell us that this can be handled through the Government Printing Office so you don't need to worry about getting a private bid at this moment. I am returning the poster to you under separate cover.

Will you please have Kauffer prepare his final drawing just as quickly as possible including the words "Civil Aeronautics Administration" in the place you want them. We would like to have final Kauffer drawing early next week.

All the best,

William A. M. Burden

William A. M. Burden
Special Aviation Assistant
to the Secretary of Commerce

PL 5-6890
Approval on it.

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January 29, 1943

Mr. William A. M. Burden
Civil Aeronautics Administration
Commerce Department
Washington, D.C.

Dear Mr. Burden:

Mr. Wheeler has asked me to confirm his telephone conversation with your secretary this afternoon.

The Manhattan Printing Company of New York will print five thousand of the McKnight Kauffer CAA posters in four colors by offset in the commercial size (thirty-two by twenty-four inches) or the Government size (forty by twenty-eight inches) on seventy-pound offset paper for seven hundred dollars. "I consider this," Mr. Wheeler says, "a very fair price."

Mr. Wheeler thinks that if you do have these posters printed, it would be a good idea to have Mr. Kauffer check the color proofs himself.

Sincerely yours,

(Mrs. C. S. Hartman)
Secretary

CCH:cv

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DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ADMINISTRATION
WASHINGTON 25

August 17, 1943

December 23, 1942

Mr. William A. M. Burden
National Aviation Company
111 Broadway, Room 807
New York, New York

Dear Mr. Burden,

I enclose herewith a re-draft of your letter of December 11th to Mr. Monroe Wheeler. As I explained to Miss Devereaux over the telephone this afternoon, the change is very slight but is something we need for our records. We should appreciate it very much if you would have the letter retyped according to the enclosed form and sent to Mr. Wheeler.

I hope this detail will not inconvenience you too much.

Sincerely yours,

Enclosure

Secretary to Mr. Abbott

Fred Hanlin, Director,
Information and Statistics Service

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US-CAA
Information & Statistics
VI

DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ADMINISTRATION
WASHINGTON 25

August 17, 1943

Mr. Monroe Wheeler
Museum of Modern Art
11 West 53rd Street
New York, New York

Dear Monroe:

We have not yet received the prints and negatives of the CAA pictures which we sent for your consideration.

Since some of these are our only copies, we would appreciate your returning the ones which are not being used.

Sincerely,

Fred Hamlin

Fred Hamlin, Director,
Information and Statistics Service

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DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ADMINISTRATION
WASHINGTON 25

August 13, 1943

Mr. Monroe Wheeler
The Museum of Modern Art
11 West 53rd Street
New York, New York

Dear Monroe:

If this isn't too late for your purposes, it might be helpful in showing what the Air Service Command does.

Regards,

Fred

Fred Hamlin, Director,
Information and Statistics Service

Enclosure

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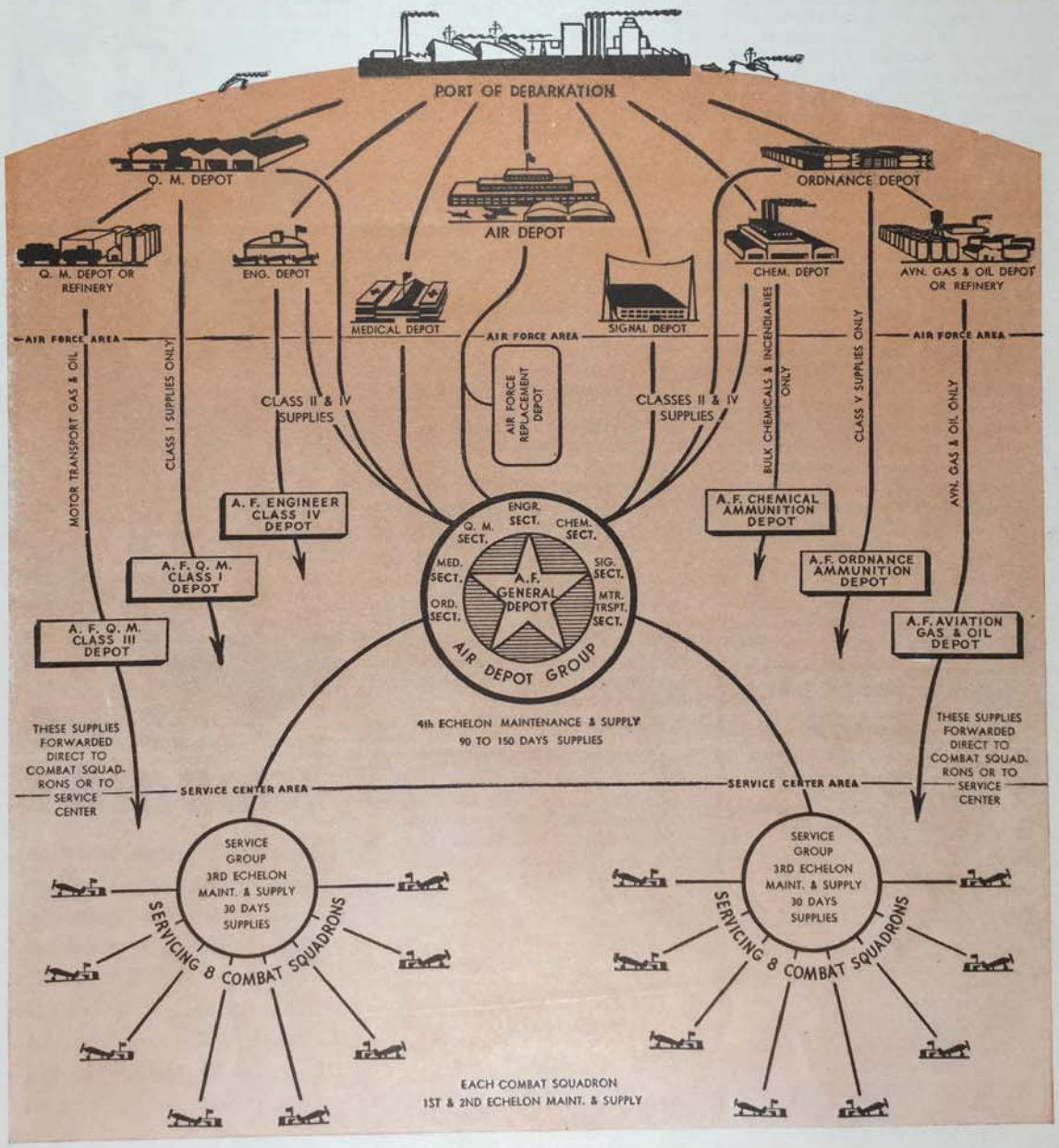
AAF SUPPLY

IN THEATRE OF OPERATIONS



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BE READY FOR ANYTHING

(Continued from Page 7)

their bodies. Soldiers who weren't killed by the blasts were finished off by Marine bayonets.

"We worked closely with the Marines and Navy all the time," explains Lanphier. "And raids would be made by groups of planes. Sometimes, for example, we would fly along at 30,000 feet in P-38s, with a flight of P-40s several thousand feet below us and perhaps some Grummans several thousand feet below them.

"We were so high, in fact, that it was entirely possible for the Grummans to get into a scrap without our seeing or knowing a thing about it. When they wanted to ri[illegible]s, they called the P-38 a 'high-altitude fox hole.'

"But, seriously, everybody out there knows that the P-38 is good, and far superior to the Zero. It has an exceedingly fast rate of climb, high speed, long range and its guns throw plenty of lead. And it's pretty sweet having two engines when one gets shot out miles from home and the other brings you back."

That business of getting back, say both Mitchell and Lanphier, really taxes a pilot's ability.

In the Solomons campaign missions were long and were flown in all kinds of weather. Time and again, planes would go out on escort under extremely hazardous conditions and upon their return have to land after dark in a heavy rainstorm with no landing lights. Enemy bases were always close and the Japs always outnumbered our aerial forces by four or five or six to one.

"Both living and fighting conditions were about as tough as I want to see them," said Lanphier. "But don't forget, it's *always* going to be rugged for a fighter pilot. As this war moves into new areas our men will again have bad food and bad quarters and will again be outnumbered, probably. That sort of thing can't be helped. All you can do—as Mitch says—is be ready for it."

"That raises another point," added Mitchell. "Physical condition. I can't tell you how important it is for a man to be in shape when he gets to the front.

"In the Pacific, for example, it was terribly hot all the time. Many a man came out there in poor physical condition and got sick. You just can't fly when you're sick, though lots of them try and as a result get hurt or killed.

"Especially new men. They don't want other pilots to think they have lost their nerve. So they conceal their illness, take off when they should be in bed, and too often don't come back.

"If you are in shape and have stored up plenty of physical energy, the chances are you won't get sick at all."

Mitchell paused briefly, his face troubled and serious.

"Here's a tough thing to talk about," he said finally, "but it's the truth and should be realized. The majority of pilots who get lost are lost on their first two or three missions.

"Perhaps they grow rattled and leave a formation. Perhaps they're sick. Perhaps they don't know their equipment well enough and something goes wrong. Perhaps they are not familiar enough with the ship itself, with its climbing or turning capabilities. Acrobatics will correct this; it helps you get so used to the plane that you can do things in combat that you will never remember doing. Or perhaps they are just not expert enough at night flying or instrument flying.

"A squadron commander can and will provide last-minute training in combat work. But the prime responsibility is the pilot himself. He must take such advantage of his training here in the States that he is ready when he gets to the front.

"If he does that he has little to worry about. Our planes and equipment are far superior to those of the enemy. Our ground crews do a wonderful job of keeping the ships in fighting trim and they get a kick out of it when you bring down a Jap.

"All that's expected of you is to know how to bring them down." ☆

ANSWERS TO QUIZ ON PAGE 37

1. (b) Two .50 caliber machine guns.
2. (b) Give him a burst and let him know you see him even though you can't hit him.
3. (a) Flying by use of maps and recognition points.
4. (c) Wearing night adapter goggles for about half an hour.
5. (c) Mister Smith.
6. (d) Put it under your armpit or between your legs. 7. Spitfire.
8. (b) Watch the white caps.
9. (c) Pays out a dollar.
10. (c) Attacking a target in waves of planes.
11. (c) Sighting land when you come in from over water.
12. First Air Force, Mitchel Field, New York; Second Air Force, Colorado Springs, Colorado; Third Air Force, Tampa, Florida; Fourth Air Force, San Francisco, California.
13. (a) 2840 miles.
14. There is no navigator in a P-39.
15. (b) False. 16. (b) California.
17. (c) A composite photograph formed by matching a number of photographs of contiguous parts taken from the air. 18. Lancaster.

PICTURE CREDITS

Front Cover: Air Force Editorial Office. 14-15-16-21: Signal Corps. 34-35: Signal Corps. 40-41-43: Air Service Command. 46-47: Civil Air Patrol. 51: Jack Holland, Albany (Ga.) Herald. 52: Patterson Field, 54: Vega Aircraft. Third Cover: Acme. All other photographs secured through official Army Air Forces sources.

IS HE KIDDING?

We don't know whether he is or not, lady—but we agree with you that it's time for him to pass on that copy of AIR FORCE! How about it, soldier? Share your copy of the service journal with the other men in your unit.

PASS IT ON!

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DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ADMINISTRATION
WASHINGTON

July 5, 1943

Mr. Monroe Wheeler
The Museum of Modern Art
11 West 53rd Street
New York, New York

Dear Monroe:

This is to introduce Mr. Charles E. Planck who comes armed with pictures and captions for the exhibit. He is prepared to work with you and your exhibit staff in refining the art and captions to fit any role which you may have for them.

I am counting on getting to New York soon myself and seeing the complete show, which I already understand is a typical Wheeler success.

Best regards,

Fred

Fred Hamlin, Director,
Information and Statistics Service

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Special captions for Monroe Wheeler,
Director of Exhibitions and Publications,
Museum of Modern Art Air Transport Exhibit,
New York City, July 5, 1943.

YOU CAN'T FLY AIR TRANSPORT ON A WING AND A PRAYER

First group

The nation's peacetime air transport network has been expanded under pressure of war needs by the transport arms of the Army and Navy air arms until it now spans the seven seas. The big silver hulls are seen only on domestic lines. When they start for war areas, the glinting silver is hidden under drab camouflage. Across the South Atlantic to Dakar, across the Dark Continent to the Near East; across the North Atlantic to Britain; across the polar short-cut to Russia, they carry vital supplies and key men of global war.

Second group

Wherever the big liners drop to earth, they must have long, hard, level runways; and in remote spots, at all points of the compass, workmen with big machines (or armies of Chinese coolies with baskets) are toiling day and night in the fight against time to prepare safe havens for the couriers of the sky. When peace returns, the great war-built airports of the world will be ready for the "Air Age."

Third group

Keeping 'Em Flying Requires Men and Skill. The great motors, the intricate propellers, the vast structures filled with wiring and control-cables, the awesome banks of instruments require top-notch mechanics of many types.

Fourth group

Whence come the pilots to fly these huge machines across all the continents and all the oceans? Twelve years ago, or five, or even last year, they were taking their first hesitant hops in the little single-engine trainers on which all must start. Behind them today is a vast network of ground and flight schools which carries them, step by step, into successively heavier and faster aircraft, through instrument-flying, through multi-engine practice -- until they start their great adventure as co-pilot alongside a veteran.

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But the skilled transport pilots, flying fine big aircraft which have been tuned like a fiddle by the mechanics, still need help as they fly. Criss-crossing America, for their guidance, is the most efficient airways system in the world, Government-owned and operated by the Civil Aeronautics Administration. Here is a map of this system. It is 34,000 miles long... and at strategic "hop-off" points it is extended across the seas by super-powered radio stations which reach literally around the globe.

Group A

At intervals along the airways, C.A.A. traffic-control centers keep constant radio check on the progress of planes in flight, report weather to pilots, post all flights in the area on control-boards or maps.

OK
black + white of color shot of weather info report

Group B

? Weather reports from 450 stations, and other essential flight communications, speed to their destination quickly over 45,000 miles of C.A.A. teletype and telephone circuits.

Group C

? When weather is clear and visibility good, big rotating light-beacons show night-flyers the course of the airway.

Group D

? But in fair weather or foul, the modern pilot places main reliance on directional signals sent out automatically from more than 300 C.A.A. radio range stations. Located near the principal airports, these radio ranges also guide the arriving pilot as he "lets down" blindly through low-hanging banks of clouds to approach a landing. One picture shows a fair-weather "practice" landing, with the range station beneath.

Group E

? Newest super-safety device is the complete "blind landing" system, designed to guide a pilot completely to the ground when even the airport is fog-blanketed. This requires both a directional beam, to guide him onto the runway, and a "glide-path" signal which eases him down to ground-level. These are pioneer installations, by the C.A.A., of such signal devices.

marker beacon
drawing?

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Color photos:

1. At each airport, traffic experts guide the planes in and out by radio. This is especially vital in "instrument weather," when approaching planes must "let down" through the overcast. At such times these controllers keep arriving aircraft cruising at different levels, letting them land "off the bottom of the stack."

2. Lives may depend on the condition of an airliner's radio. Here it's being tested.

3. You have to know about wind and weather conditions aloft before you can tell about them to pilots in flight. This weather balloon will carry up the tiny transmitter which reports aerial weather, at various levels, automatically.

4. C.A.A. aids to navigation. Top, putting a new tube in a radio range station. Bottom, adjusting a revolving light-beacon.

5. An experimental glide-path landing light.

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THE CAA

The Civil Aeronautics Administration is charged with the safety of aircraft and in the planning of radio networks and devices that guide aircraft pilots in flight.

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FEDERAL AIRWAYS

by CHARLES INGRAM STANTON
Administrator of Civil Aeronautics

THE history of the airways of the nation may be built around the development of its three most important elements.

The first element is, of course, the pilot. All air transportation has been built around him, and he was and still is the keystone of winged commerce.

The second element is a system of landing fields.

The third element is radio. At first only an experimental device—and at times a not very successful one, at that—it has grown in recent years to become one of the dominant instruments in airways operations. In 1932, expenditure for the maintenance and operation of radio and communications on Federal airways in the United States represented only 20 per cent of the total expenditure for all airways maintenance and operation; today it represents 60 per cent of that total. In the same period, the number of radio range stations on the airways jumped from 128 to 401. There were only 20 ultra-high-frequency fan markers on our airways in 1939; today there are more than 200. From a total of two in 1940, ultra-high-frequency range stations have increased forty fold.

Sometimes called "Father of the Federal Airways," Mr. Stanton rose steadily in government aviation posts. Won his wings as Army Cadet during World War I and commissioned at Kelly Field. Began commercial aviation 1919 as test pilot when he flew first air mail routes for U. S. government. Appointed Div. Supt., Supt. of Operations, and (1921) Asst. Gen. Supt. of Air Mail for U. S. Post Office. In 1926, Aeronautics Branch of Dept. of Comm., then Airway Extension Supt. Chief Airways Eng. (1933), Chief of Airways Eng. (1937), Director of Federal Airways.

To understand this development is first to understand the early history of airways, the development of pilots, and the problems which arose. It is a story of American enterprise which began with Yankee ingenuity in a very limited area and led to the four corners of the world.

Boeing plane circling Mount Ranier. Many of the old type planes could not obtain sufficient ceiling to cross higher peaks.

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Carrying on the pioneering spirit of the Wright's and first Air-Mail, CAA pushes forward the frontiers of aviation to the four corners of the world.

When the need for the first U. S. airway arose, there was practically nothing from which to start. This was on May 15, 1918, when the first regular air mail was flown between New York and Washington, with a stop at Philadelphia. Army fliers made the first hops, the Post Office Department taking over with civilians early in August. One round trip was made daily except Sunday. There was no night flying. The first of the three leading elements—the pilot who could fly cross country on a regular schedule—began immediately to develop.

Until that time, he had, generally speaking, been not a little casual about flying from place to place. Trained as a war pilot or a barnstormer or both in planes not notable for the reliability of their engines, he had become accustomed to start out for a general destination, sit down when he had to, and not be too perturbed if several pastures intervened between point of departure and destination. Landing flares had been developed casually in France during the war to aid pilots coming in after dark; shortly after the Armistice, the first aerial beacon was built in England, but it was an experiment at best and was considered unfit for peacetime operations. The first U. S. airways beacons were bonfires built by farmers and villagers during a test night air mail flight in February, 1941. Night flying, at best, was considered extremely unwise.

At this point, the air mail pilot began to develop cross country techniques. He took his five senses and made them flight conscious. With his eyes he learned to use geographical features in addition to the "iron mike"—railways. He learned to judge his airspeed by the whine of the wind in the rigging, his engine by its roar, its temperature by the odor of the oil. Jack Knight tells of spotting a gas leak by tasting what first seemed like water dripping in his cockpit. Before they had gone very far, all of them developed a sixth sense which taught them to detour for tunnels when they were following the iron compass. They also developed a high sense of duty, as witness H. G. Boonstra, who crawled thirty-six hours on his hands and knees after a forced landing in the Rockies—and had the mail delivered.

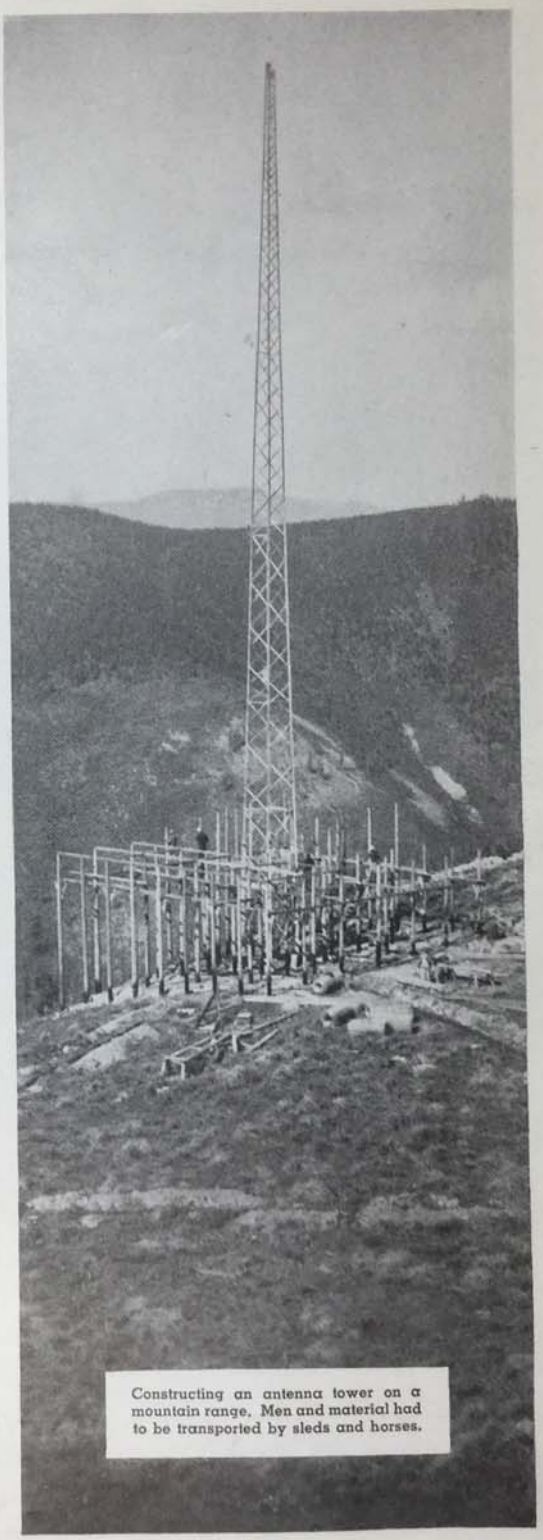
Although there were fewer than one hundred air mail pilots at any one time during the years that the operation was run by the Post Office Department, they proved remarkably efficient—and successful—without much in the way of instruments. During their first year they made a record of 92 per cent successful performance of schedules, transporting 7,720,840 letters. Modern air transportation hasn't raised that figure by much.

But almost from the beginning the air mail pioneers recognized that however skilled the pilot, dependable service was impossible without the development of aids to air navigation. The twin demons of the airways—weather and darkness—were constantly handicapping flight schedules.

Airways were laid out by engineers. Beacons were set up at approximately 10-mile intervals and the beacons themselves standardized. Intermediate fields were created, marked, and lighted. The weather service was coordinated with the airways program, and experimental work began on radio.

As early as 1919 the Post Office experimented with radio direction finder devices. By November 1920, seven radio stations were in operation and by July 1927, when a separate Federal Airways Division was established, there were 17 directive radio beacons. Radiotelephony equipment and other aids were ready for trial.

(*Continued on page* 260)



Constructing an antenna tower on a mountain range. Men and material had to be transported by sleds and horses.

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CAA

DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ADMINISTRATION
WASHINGTON

April 9, 1943

Mr. Monroe Wheeler
Director of Exhibitions and Publications
The Museum of Modern Art
11 West 53rd Street
New York, New York

Dear Monroe:

The fire poster has been referred to Bill Burden and R. M. Stewart, and I am sure that we will have some answer from them within the next few days. They've been awfully busy. I'll let you know.

Best regards,

Fred

Fred Hamlin, Director
Information and Statistics Service

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April 8, 1943.

Dear Fred:

The last time I was in Washington you said that you wanted a change made in the Kauffer "fire prevention" poster. Kauffer now tells me that you have never sent it back to him.

If there is anything you want me to do about this please let me know. I hope you can get the matter fixed up. I do want the poster to be to your liking because it was a definite commission and you will, of course, have to pay for it whether you use it or not.

Ever yours,

Mr. Fred Hamlin
Information and Statistics Service
Civil Aeronautics Administration
Commerce Building
Washington, D. C.

MW:lf

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April 2, 1943

Dear Fred,

I am not planning to come to Washington until the week of the twelfth, so if you want to see me next week perhaps you had better come here. Then you could also settle the matter of the Kauffer insigne for the C.A.A.

I enclose herewith an outline of our global war show. I hope we will be able to bring it to fruition, but as yet we have not succeeded in arranging adequate financing for it. Will you let me know if you have any ideas along these lines?

Ever yours,

Fred

Mr. Fred Hamlin, Director
Information and Statistics
Service
Civil Aeronautics Administration
Department of Commerce
Washington, D.C.

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CAH

DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ADMINISTRATION
WASHINGTON

March 29, 1943

Mr. Monroe Wheeler
Museum of Modern Art
11 West 53rd Street
New York, New York

Dear Monroe:

I believe that things are lining up favorably for both your global exhibit and the poster contest. I should like very much to go over the whole thing with you in detail sometime within the next ten days.

Will you let me know when you are going to be in town.

Best regards,

Fred

Fred Hamlin, Director,
Information and Statistics Service

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CAA

DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ADMINISTRATION
WASHINGTON
March 20, 1943

Mr. Monroe Wheeler
Museum of Modern Art
11 West 53rd Street
New York, New York

Dear Monroe:

Under separate cover we are sending you twenty copies of the poster "CAA Speeds the War."

Sincerely,

Fred

Fred Hamlin, Director
Information and Statistics Service

pay Toupee!

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CAA

AIR MAIL

February 24, 1943

Mr. Fred Hamlin, Director
Information and Statistics Service
Civil Aeronautics Administration
Department of Commerce
Washington, D.C.

Dear Mr. Hamlin:

Your letter of the twenty-second to Mr. Wheeler has just been delivered, and I am hastening to answer it for him. He will not be back in New York until March eighth, because, as you evidently know, his doctor sent him away for at least a two weeks' rest.

I think the artist to whom you refer in connection with posters is Mr. E. McKnight Kauffer, 40 Central Park South, New York City. I am sure that Mr. Wheeler would have no objection whatever to your getting in touch with Mr. Kauffer directly.

If I can be of any further assistance to you in this matter, please let me know, and I shall be happy to do whatever I can.

Very sincerely yours,

(Mrs. C. S. Hartman)
Assistant to Mr. Wheeler

CCH:cv

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DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ADMINISTRATION
WASHINGTON
February 22, 1943

Mr. Monroe Wheeler
Museum of Modern Art
New York, New York

Dear Monroe:

I am sending this to your office in hopes that they will keep it out of your hair -- a left-handed way of our saying that we hope you can get away from the headaches of New York and Washington and have a real rest.

Will your standin then please get in touch with me regarding a fire prevention poster which we propose to get out as quickly as possible. We would be inclined to favor the same artist who did the last job for us, but hesitated to get in touch with him or any of your other people direct until we had checked with you.

I would appreciate an air mail response -- and the best of luck on your vacation.

Incidentally, I would judge that about the best time to reopen our contest idea might be the day you get back North.

Sincerely,

Fred Hamlin, Director
Information and Statistics Service

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THE MUSEUM OF MODERN ART

Date January 29, 1943

To:

From:

Re:

THROUGH 550 AIRPORTS

CAA SPEEDS THE WAR

120,000 COURSES IN 600 COLLEGES

CAA SPEEDS THE WAR

GUIDES

~~XXXXXXXXXX~~ A MILLION FLIGHTS A MONTH

CAA SPEEDS THE WAR

BEACONS, BEAMS, WEATHER REPORTS

CAA SPEEDS THE WAR

~~XXXXXX~~ GUIDANCE IN FLIGHT

CAA SPEEDS THE WAR

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HERMANN

POSTER NOTES FROM MR. HERMAN OF C A A

1. Trajectory line

2. Message

In war and in peace
Make America Strong in the Air

3. Statute miles

Washington - London 3671 - 250

Detroit - Leningrad 4431

Seattle - Chunking 6301

New Orleans - Rio de Janeiro 4799

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	MoMA Exhs.	236.4

DATA FOR CAA "MORALE-BUILDING" POSTER OR POSTERS

The CAA is doing two general categories of work to "implement the air age," for war or peace. These are (I) the training and education of people, (II) construction and operation of air facilities.

I. TRAINING AND EDUCATION subdivides as follows:

A. Civilian Pilot Training - An unprecedented nation-wide program of teaching young America to fly, through thousands of colleges and commercial flying schools. Quadrupled the number of licenses U. S. civilian pilots in three years, helped staff the expansionof the armed forces, now conducts mass flight training at the direction of Army and Navy.

B. Pre-Flight "Air Conditioning" - Sponsors nation-wide study of aeronautical subjects and concepts in the nation's high schools to prepare teen-age youth for flight.

II. FACILITIES subdivides as follows:

A. Federal Airways - CAA builds, maintains and operates the nation's entire system of "highways of the air" -- a 33,000-mile network of air-lanes equipped with radio "Beams", beacons, emergency landing fields and other facilities to increase the safety of flying along those lanes. CAA actually directs traffic by radio on those highways and in-and-out of key terminals, informs airmen in flight concerning weather ahead, other planes approaching, etc. 85% of the traffic on those airways today consists of <u>military</u> airplanes.

B. Airport Construction - CAA helps local governments to build airports. Today it is constructing, enlarging or improving 550 airports deemed of primary importance to national defense and the war effort.

C. Air Safety - CAA technicians examine all civil aircraft designs for airworthiness, inspect all civil aircraft for safe condition, all civil pilots for competence.

A single "morale-building" poster is contemplated to give an over-all impression of the CAA's activities in relation to the war effort. "Implementing the Air Age", with trained personnel, with places to land and with guidance in flight, seems to be the most accurate general description that can be given in brief.

The over-all concept may be followed by a breakdown of the general story into its major components, with subsequent posters on these individual phases:

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(L) Flight Training (2) Pre-Flight Training (3) Highways of the Air (4) Airport (5) Safety.

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Notes:

I. The CAA training program has made aviation training, for the first time, a regular part of high school and college education for those who wish it. Result: the first "mass production" of airmen, on a scale previously thought impossible. This pilot training was begun in 1939. Yardstick: for every licensed U. S. civil flyer in 1938, there were more than four in 1941. Current program (for Army and Navy): largest ever.

The CAA conducts six successive flight courses, in which a student may develop all the way from raw beginner to instructor or transport flyer, or step off into military specilization at any desired stage.

****

II. A. It is not desired to limit the conception of airways and air traffic control. Factually, it is a matter of radio signals moving out in a "beam" from transmission towers to the airplane. Army aircraft depicted in this connection should be plainly military.

B. In developing landing-fields, the CAA does not construct buildings, but stresses the landing-area itself. Probably the best symbol of this is the building of hard-surface runway, and the construction angle can perhaps be dramatized by a glimpse of construction machinery.

****

Random Thoughts:

"To Speed the Air Age" might be a good top-strip across this entire series. If so, the summarizing poster might be "Airmen -- Airways -- Airports." Intersting layout ideas suggest themselves at once, with the letters AIR always dominant.

Posters in this series, since it is directed at least in part at CAA employees who are presumed to know more than the average about CAA affairs, should contain more typographical matter than those sought in the later competition. Size of the agency's operations is important. Example: CAA is improving one out of every five U S airports. Example: Nine million times a year, CAA traffic men counsel pilots in flight.

* * * *

For sixteen years the CAA and its predecessor agencies have been developing the system and the facilities through which the Federal Government assists civil aeronautics.
After the War the CAA will, of course, have a critical role in the shifting of America's great aviation industry from war to peaceful objectives. This, however, is fairly well understood by the audience to which these posters are addressed.

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	MoMA Exhs.	236.4

Not so well understood, and therefore, requiring the maximum possible emphasis, is the tremendous role which these civilian facilities have played and are playing in the military effort itself. Thus it is imperative that wherever possible in the various illustrations for this series, military aircraft and uniformed men should be pictured.

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	MoMA Exhs.	236.4

Life has a new dimension
Today's flier is tomorrow's peacemaker.
The military highways of today are the peaceroads of tomorrow.

MEMORANDUM ON POSTERS

Audience -- The audience sought includes the following in the order of their importance: (1) parents of flight eager adolescents, (2) the general public, (3) adolescents, (4) CPT instructors, operators, and students, and (5) the aviation industry.

The problem -- To present the war and postwar duties of the Civil Aeronautics Administration and of civil aviation generally.

General outline of material -- The CAA, and civil aviation, in all their functions are on a full-time war basis. CAA functions include domestic airways, over which some 80 per cent of the traffic is military, the balance closely identified with the war effort; airports, $200,000,000 of which are being built currently for war purposes by the CAA; safety, all aspects of which are as vitally tied into the war as are efforts toward conservation in many other fields; pilot training, 100 per cent military as now operated; and pre-flight training, devoted to preparing the youth of today for participation in the potential war effort of tomorrow.

Poster ideas -- (It is believed that as much freedom as possible in choice of ideas and their development should be given individual artists. The purpose of these suggestions, therefore, is simply to state the problem from a number of angles. In developing the themes it should be the ideal to present them with both the war and the postwar aspects of the specific theme clearly stated. When this is not feasible, the war theme should dominate.)

1. The airplane is everybody's business. Aviation has become the nation's second largest industry and the airplane civilization's most publicized invention. Aviation, therefore, has taken on a social significance and a major role not only in winning the war but as a potent factor in postwar economy.

2. The world is your neighborhood. Aviation is rewriting geography. The aerial highroads of today have been designed to speed the war effort clear around the globe. They will be the express highways in the peacetime world of tomorrow. The world is our neighborhood.

3. The airport is tomorrow's town square. Linked by radio, even today it can tune in on any plane flying anywhere in the world. Its social significance, both in winning the war and winning the peace, is already evident. It will influence every individual. Every individual

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	MoMA Exhs.	236.4

should therefore be told of its importance and of his role in guiding its destiny. It is the symbol of a revolution which is bringing the people of the world together into a closely knit community.

4. The airplane can be understood by a child -- an adult must understand it. It is easier to learn to drive than the early automobile. It is more reliable, more easily serviced. It is safe. By the device of using things familiar to the average man in the street, it should be introduced to him, not as a panacea or a strange superman contraption, but as a part of his everyday life.

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	MoMA Exhs.	236.4

BARKER ON

November 26, 1942

SUGGESTED POSTER PROJECT

I think our publicity should be geared to one theme "CAA Goes to War." There might be separate posters for each division -- including "Airways", C.A.A. War Training Service "C. P. T.", "Airports", and "Safety Regulation." One general poster for the whole CAA would be desirable, too, if it could be devised.

As a possibility for this last, a DC-3 might be shown in its pre-war silver, with passengers unloading at a modern U. S. airport -- fading into a converted DC-3 in wartime drab, unloading military gear in a rough field in India, Africa or New Guinea. From the four corners we might be able to portray the four major ways CAA services these planes, viz:

1. Supervision of design and construction (Safety Regulation)
2. Guiding and supervising their flight (Airways)
3. Providing homes for them (Airports)
4. Training the men to fly them (C.P.T.)

As for the individual posters for the four main divisions, simple and striking posters might be designed along these lines:

1. Airways -- A heavy bomber or Army cargo plane buffeting its way through thick weather at night with the steady, sure radio beam keeping it on course;
2. C. P. T. -- Pilots pouring from flying schools across the nation to join the flood of men moving to battlefronts abroad.
3. Airports -- Men and machines forging a new landing field out of rough terrain.
4. Safety Regulation -- CAA inspectors poring over blueprints and assembly lines of cargo planes and peering up into the sky as they soar away into the blue.

RRBarker

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STANTON

Prepared at the request of
Honorable Clifton A. Woodrum
By Charles I. Stanton, Administrator
Civil Aeronautics Administration
November 25, 1942

CIVIL AERONAUTICS ADMINISTRATION:
Its Functions and Specific Programs

The present activities of the C. A. A. fall into five main categories:

1) Civilian Pilot Training Program
2) Airport Program
3) Airways Services
4) Safety Services
5) Pre-flight Aeronautics Educational Program

The following presents a summary account of the current functions and relevant background of each:

I. Civilian Pilot Training Program

The C. P. T. program, initiated on an experimental basis in the spring of 1939, has now been in operation almost four years.

The program has had a two-fold purpose -- (1) to encourage the development of civil aviation, and (2) to provide a large reservoir of trained airmen for use in a possible national emergency.

War Functions of the C. P. T. Program

Since December 7th, 1941, the C. P. T. has devoted itself entirely to meeting the needs and supplementing the training facilities of the military air forces.

As early as the summer of 1940, C. P. T. adopted the policy of training only those candidates who gave a written pledge of their intention to join the military air forces if needed, and who met substantially the same physical and mental tests required of military aviation cadets.

C. P. T. has never offered and does not now offer instruction in the military phases of flying.

It merely teaches the theory and art of flight, producing competent airmen who can be turned into combat flyers, etc., with additional training at Army, Navy, and Marine air schools.

Under its present program, designed to offer 130,000 such courses this year at 600 colleges and universities, C. P. T. is training (1) flight instructors and potential

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combat flyers for the Navy, (2) glider pilots for the Marines, and (3) flight instructors and glider, liaison, transport, and general utility pilots for the Army.*

The Navy and Marines designate their own candidates for training in C. P. T. schools.

Through C. P. T., civilians in the 18-36 age bracket are eligible to volunteer for the Army-C. P. T. courses, in which high physical and educational requirements are designed to reach qualified men other than potential combat flyers.

This broadening of age and other qualifications has brought directly into the air forces tens of thousands of men with high qualifications who would otherwise have found no military or semi-military function for their aviation skills, actual and potential. Many of the older men enlisted through the program have had years of flying experience.

To carry out its present functions, C. P. T. has necessarily had to mobilize to a maximum degree the ground facilities, flying equipment, technical skills, and organizational experience of civilian aviation throughout the country, a major and vital problem in conversion which has been successfully solved.

At the request of the military, and following the passage of enabling legislation, C. P. T. is now in a position to expand its program to include the training of aviation mechanics.

History of C. P. T.

The pre-war C. P. T. program was the largest of its kind in the world to be conducted in powered planes.

During 1940, its first full year of operation, C. P. T. trained 46,000 pilots, more than had been trained in the United States in the thirty-five years since the Wright's historic first flight at Kitty Hawk.

The increase in licensed civilian pilots through December 31, 1941, was as follows:

*Exhibit A, on the following page

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	MoMA Exhs.	236.4

Calendar Year	Total Licensed Pilots	Percentage Increase
1937	17,681	10.84%
1938	22,988	30.80%
1939 (CPT began in Feb., 1939)	31,264	37.00%
1940	63,113	101.9%
1941	100,787	59.7%

All told, there occurred in the 1939-41 period an increase of almost 400 per cent in the number of licensed civilian pilots, and C. P. T. accounted for approximately three-fifths of the growth.

At the same time, C. P. T. had trained or given refresher courses to some 4,000 instructors so that the rapidly accelerated training of pilots could be maintained.

Up to Pearl Harbor, C. P. T. had provided the military services with an estimated 2,500 flight instructors and 25,000 volunteer fledgling pilots, about 15,000 of whom had gone into the air forces. In addition, there existed in the colleges a great reservoir of 25,000 licensed pilots ready to serve when called.

In December, 1941, one of every three candidates voluntarily signing up for the military air schools was a C. P. T. graduate.

These C. P. T. recruits made enviable records for themselves both during training and afterwards. In Army primary flight courses, their "washout" rate during 1941 declined sharply from 16.1 to 7.3 percent while the rate for non-CPTers was climbing from 39.7 to 45.6 per cent.

In short, only one in fourteen C. P. T. graduates was a "bust," whereas almost half of the non-CPT boys failed to make the grade.

The record of CPTers in the field has also been outstanding. Nineteen of the seventy-nine airmen on General "Jimmy" Doolittle's smashing raid on Tokyo first sprouted wings in C. P. T. Two-thirds of the famed Eagle

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	MoMA Exhs.	236.4

Squadron of the R. A. F. did likewise. CPTers fought at Pearl Harbor and Midway. They are fighting today in the Solomons, New Guinea, Australia, Britain, and Africa. The first Distinguished Service Cross to go to an American pilot on the Libyan front was awarded on November 15th to Lieutenant Lyman Middleditch, a graduate in 1940 of the C. P. T. school at Red Bank, New Jersey.

Thousands of other CPTers are flying in the Army Air Transport Command and the Civil Air Patrol, the story of which, when it is finally told, will be hailed as one of the most thrilling and significant chapters of the war.

Incidentally, as an instrument of our Good Neighbor Policy, C. P. T. has given training to 500 selected students sent here from the Latin American republics.

Organization and Method of Operation

From the start the program has been carried on by decentralized operation in the field, with the C. A.A. responsible for the establishment and maintenance of high standards of performance.

Ground school work in the principles of aerodynamics, navigation, meteorology, and related subjects is offered at the present time in 600 participating colleges and universities.

Most of these now grant regular academic credit for such C. P. T. courses, thus introducing aviation into the established curricula of almost every larger college and university in the country.

These institutions, in turn, make contracts with local flying schools to teach students the art of flight.

Safety Record

The C. P. T. safety record is reflected in the testimony of hard-boiled actuaries of the insurance companies which underwrite aviation risks.

Insurance rates for all flyers have been reduced by the increased volume of business and the spread of risk brought about by C. P. T.

In the initial course in 1939, students paid a $20 premium for $5,000 of accident insurance and $500 of medical insurance, which in itself was a great reduction from the prevailing rate of $35 for such

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	MoMA Exhs.	236.4

insurance.

By the spring of 1942, as a result of six successive premium reductions, students were paying a mere $4.90 for the same amount of accident insurance and double the amount of medical insurance -- a total reduction of more than 75 per cent within little more than three years. In addition, coverage was increased, with students paying $5 for $500 of sickness insurance which normally would have cost them about $12.50.

At the same time, flying school operators were carrying a $100,000 passenger and public liability policy for each of their students. The rate for this in 1939 was $22.90; the rate today is $4.48.

In short, according to a recent statement by the Aero Insurance Underwriters, "it is only because of the excellent safety record of the C. P. T. program that underwriters can offer such rates," which are reflected in aviation premiums generally.

Lowered insurance rates have put money into the pocket of every base operator and private flyer in the country, and have measurably brought nearer the day when the average American family can afford to own and operate its own plane as it now owns and operates its family car.

By-Products of C. P. T.

First and most obviously, the C. P. T. gave incontrovertible proof, for the first time in this country, that flying was not as difficult or dangerous as most people -- far too many people -- erroneously supposed. It exploded the popular myth that a pilot had to be endowed with a pluperfect physique, a special magic with "the stick," and an inherited knowledge of air currents, spark plugs, and navigation charts. It demonstrated that under competent instruction 95 per cent of the individuals of the nation can learn to fly easily, economically, and safely.

C. P. T. brought aviation out of the country-fair and aerial-circus atmosphere into the marketplace, dispelling the illusion that flying was for professionals only.

When Tom Smith saw his friend Johnny Jones piloting a small plane around the countryside, he was convinced that anybody could do it and if there were a C. P. T. school in the neighborhood, signed up and did it -- and in all probability is now flying for the military services.

Secondly, the growth in the number of pilots greatly

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	MoMA Exhs.	236.4

stimulated the manufacture of small planes. In the three years preceding Pearl Harbor, the number of certified civilian aircraft more than doubled, rising from 10,000 in 1938 to 24,836 in 1941.

Many of these small planes are now doing yeoman service in the Civil Air Patrol. This increase also contributed to the war by expanding our aircraft manufacturing facilities.

Thirdly, to insure the best possible instruction, the C. P. T. developed better aviation texts, new visual aids, and improved technical devices. C. A. A. textbooks for use in C. P. T. courses have become best-sellers, spreading the gospel of aviation and knowledge of aeronautics far and wide. More than 1,000,000 copies of these manuals have been sold, and an additional 115,000 are on the presses.

C. P. T. stimulated aeronautical research in the colleges among physical scientists and psychologists as well. Many of the latter took flying instruction and now hold licenses. More than 50 psychologists trained in the C. P. T. research program are conducting screening tests for the Army and Navy air forces.

Out of the psychological research program came a Pilot's Patter Manual, designed to simplify and standardize teaching techniques and vocabulary problems, based upon careful analytical study of automatically recorded conversations between instructors and students while in flight. This patter book has been taken over by the military and adapted to their use.

Interesting experiments were conducted with a new small plane which cannot be put into a spin, the most frequent cause of accidents among beginners. Sixty persons of all ages up to 45 were given training in these spin-proof planes, which fly considerably faster than ordinary small models. Run-of-the-mill trainees soloed in four hours, instead of the usual eight, and took their flight test for a private certificate at the end of twenty-five hours, instead of thirty-five -- another demonstration that almost anybody can fly, even those who have been doing little more active than sitting at a desk for years.

In testing planes for use in C. P. T., engineers of C. A. A. brought to light in various models of planes a number of weak spots previously unreported by private owners. This data was passed along to manufacturers, who took steps to correct these faults in new models and issued service bulletins on the best means of remedying or neutralising such defects in older ones.

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	MoMA Exhs.	236.4

Operators were asked to comment on the different types of planes and other equipment they were using, being asked to note their specific good and bad qualities, and this information also was passed along to the manufacturers.

It is this kind of concrete field data provided by men who are flying planes every day that assures the good, sound, healthy growth of aeronautics.

The C. P. T. program, it can be fairly said, has resulted and will increasingly result in better planes for everybody, which will be of the highest economic and social importance in the post-war world.

The family plane of the future will be built, in large part, upon C. P. T. experience.

II. Airways Program

With a total mileage of 33,779 miles, the Federal Airways System has grown more than 700 per cent since 1927, and almost 100 per cent since 1932, when it totaled 19,239 miles.

Military aircraft accounts for approximately 80 per cent of the traffic along the airways today. This traffic rose to almost 1,000,000 aircraft movements during a single recent month -- September, 1942.

The airways system is being enlarged at Army and Navy request to meet military demands. Several new airways have been established in the country primarily for such use.

C. A. A. specifications for air traffic control by radio and other devices have been adopted by the Army, Navy, and many of the United Nations. After an exhaustive study of airway control systems throughout the world, Canada is following the American pattern and using C. A. A. specifications in purchasing radio ranges and other equipment.

The ultra-high-frequency radio system for airway control, developed by C. A. A. engineers within the past few years, is generally acknowledged to be the best in the world. Australia is using it in installing a similar system of its own.

The ultra-high-frequency airways communication system eliminates ordinary static, is not subject to the electrical disturbances which seriously and often dangerously affect radio ranges of lower frequency, and provides a visual means of navigation in addition to oral signals.

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	MoMA Exhs.	236.4

Along the Federal Airways System the C. A. A. is today operating 318 lighted intermediate (emergency landing) fields, 211 flashing beacons, and 2,095 rotating beacons. The cost of fields and lights per airway mile has fallen from $185 in 1932 to $56 in 1941, a decrease of almost 70 per cent.

At the request of the armed forces, instrument landing systems -- i. e., for use in fog, etc. -- are being installed in more than 100 fields throughout the country. The first instrument landing system was put into operation in 1940 at Indianapolis, having been developed there at the C. A. A. Experimental Station.

For the benefit of all airmen, the C. A. A. maintains and operates 348 intermediate-frequency radio range and marker stations, 199 ultra-high-frequency radio fan markers, and 72 ultra-high-frequency radio range stations (which are to be increased to 180 during 1943).

In the airways system are 469 weather-reporting stations, joined by a 55,300-mile teletype circuit for quick reporting of meteorological conditions from coast to coast.

Traffic from point to point along the airways is directed from 23 control centers, which use a 10,400-mile teletype circuit and a 35,000-mile interphone circuit to check and clear movements of swiftly-traveling aircraft along the airways.

Lastly, at 74 designated fields, which include all principal air terminals in the country, the C. A. A. operates airport traffic control towers. This number is to be increased, at the request of the military, to 130 or more by the summer of 1943.

In terms of passenger miles flown on the domestic airlines, the cost of these many navigations aids has declined almost 80 per cent within the past ten years, falling from $0.067 per passenger mile in 1932 to $0.014 in 1942.

War Functions

The smooth and efficient operation of the entire Federal Airways System, with its many interlocking aids to airmen, is obviously a prime military asset as well as an indispensable transportation need.

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	MoMA Exhs.	236.4

At the request of the military, C. A. A. traffic experts have been assigned to Army Information Centers to assist in the vital defense job of identifying and keeping a strict check on all aircraft in flight, particularly those traversing defense areas.

Identification is made in large part upon the basis of information disseminated by C. A. A. air traffic control over its radio, teletype, and interphone systems.

At times of low visibility, pilots of all aircraft using the Federal Airways are required to obtain prior flight clearance from the proper airway traffic control center; such clearance includes instruction on the altitudes at which pilots must fly to avoid collision with other craft.

To fill an urgent need of qualified personnel, the C. A. A. is conducting at the request of the armed forces a school for training airport traffic control experts. Conducted at seven training centers, the program offers primary courses, refresher and advanced courses, and special courses in the problems of military airport control. Since July 1, 1942, almost 400 men from the Army and Navy have taken the special course, and 285 are now in training.

Two new phases of the airways program, both of the highest strategic importance, were initiated in 1941. In that year several million dollars were spent in improving and extending the Alaskan airways system. During the current year, the program has been vastly expanded until Alaska has today as fine a system of airports and airways as any section of the United States.

At the request and with the cooperation of the Army and Navy, similar programs have been undertaken in Hawaii and other insular possessions in the Pacific and elsewhere.

C. A. A. radio engineers are cooperating with the armed forces in establishing airway communications systems in South America, Africa, Europe, Asia, and Australia, and in providing aids for transoceanic flights.

To provide weather and navigation information for craft in flight between our shores and any point in Europe, a super-radio station was established at New York in 1941.

Operated by C. A. A., with the Army providing security in the coding and decoding of messages, three more of these stations have been established and are now operating at New Orleans, San Francisco, and Seattle.

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	MoMA Exhs.	236.4

In their combined range, these super-stations blanket the world, providing communication between this country and a plane in flight anywhere on the globe -- an asset of inestimable value both for our war and our post-war needs.

III. Airports Program

Under the National Defense Airport Development Program, for which $399,333,050 has been appropriated by the Congress for fiscal years 1941-43, the C. A. A. is developing and improving hundreds of public airports -- not to exceed 668 in number -- designated as essential to national defense and successful prosecution of the war.

Situated in all parts of the country, these airports belong to municipalities and other political subdivisions, each of which has agreed to operate its field as a public facility except insofar as the Army and Navy may require its exclusive use at the present time.

Under the general supervision of the C. A. A. Airport Division, construction on the National Defense Airport Development Program is carried out by (1) the Airways Engineering Division of C. A. A., (2) the U. S. Army Corps of Engineers, (3) the Bureau of Yards and Docks of the Navy Department, and (4) the Works Progress Administration.

The C. A. A. acts in a consulting advisory capacity on all civil airport development programs undertaken by Federal agencies. From 1933 to September, 1940, the C. A. A. acted in such a capacity to P. W. A. and W. P. A. in an extensive program involving the development or improvement of more than 770 public airports, at a total expenditure of $271,300,000. This included $212,511,700 of Federal funds, the remainder being contributed by local sponsors.

IV. Safety Regulations

The C. A. A. enforces standards established by the Civil Aeronautics Board for the design, manufacture, maintenance, operation, and repair of all civil aircraft, and for the technical an physical competency of civilian airmen in every category -- not only pilots, but mechanics, radio technicians, traffic control experts, ground school instructors, flight instructors, parachute riggers, airway meteorologist, and other aeronautical specialists.

Approximately 15,000 examinations are given each month to determine the technical competency and an equal number to test the physical fitness of such airmen. C. A. A. certificates of competency are accepted by the Army and Navy.

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	MoMA Exhs.	236.4

More than 850 doctors conduct C. A. A. physical examinations, and more than 150 of these have joined the military forces to perform similar functions.

The Inspection Division of Safety Regulation enforces all civil air regulations laid down by the Civil Aeronautics Board, and exercises general supervision of all commercial and industrial operations, flying schools, instructor schools, mechanic and technical schools, and repair shops.

The Air Carrier Inspection Division is charged with establishing and enforcing the highest possible standards of performance for all American commercial airlines, whether they operate in the domestic or the foreign field.

All accidents to civil aircraft are investigated by the C. A. A. Inspection Divisions to ascertain whether faults of design or structure, failure of engine or other working parts, violations of civil air regulation, etc., were possible contributing causes.

At the request of the Army and Navy, almost all non-combat military planes -- trainers, troop carriers, gliders, cargo planes, and auxiliary craft -- are engineered, manufactured, and flight-tested under C. A. A. engineering and inspection, which issues type and production certificates for the various models of planes and exercises quality control during production, thus relieving the armed forces of this control and inspection work.

As members of the Army-Navy-Commerce Committee, C.A.A. representatives assist in writing the A-N-C handbooks -- the Bibles of the aviation industry -- in which are set down detailed specifications on the strength of materials, structural design requirements, etc., for all aircraft, and aircraft parts and appliances.

With our present and future needs in mind, the C. A. A. is engaged in streamlining the Civil Air Regulations, in cooperation with the Civil Aeronautics Board. Pilots are now issued permanent certificates and are subject only to periodic physical examinations. Periodic endorsement of aircraft airworthiness certificates has also been suspended for the duration of the war. Repair stations which have been officially approved can now clear aircraft for flight after major repairs without waiting for a check by a C. A. A. inspector.

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	MoMA Exhs.	236.4

V. Aviation Education Program

In the fall of 1941, encouraged by the success of the Civilian Pilot Training Program, which had to begin of necessity at the college level, made a nation-wide survey to determine what the lower schools were doing in teaching the broad cultural aspects of aviation and related subjects.

The survey revealed a great educational lag in the field. Not only were the schools doing little to make clear to young minds the terrific impact of the airplane upon the lives of all of us. Most of them, in fact, were unaware of the problem and its deep economic, social, and political implications.

Under the joint sponsorship of the C. A. A. and the U. S. Office of Education, with the Army and Navy cooperating, a National Joint Advisory Committee was established to explore the problem of aviation education in the primary and secondary schools, and to take appropriate steps to promote such education for the purpose of adequately preparing young Americans both for the war and the post-war world.

Composed of interested public officials, prominent educators, aviation experts, and specialists in other fields, this committee set up two aviation research projects -- one at the University of Nebraska, the other at Columbia University, New York City.

These projects had the duty of determining the specific needs of the primary and the high schools in the field of pre-flight aeronautics and related subjects, and of making available to them suitable teaching material.

This material was designed (1) to supplement existing courses in the curricula and (2) to provide a basis for establishing new courses on the theoretical and practical aspects of aviation -- not merely its technical aspects, but its effect upon our conception of time and space, the relation of community to community and of nation to nation, our ways of doing business both in the domestic and international field, our military and commercial strategy, etc.

The research projects enlisted the aid of mathematicians, geographers, historians, biologists, and specialists in all the arts and sciences. The latter undertook to prepare appropriate text-book materials for use in the schools.

This material was available for use at the opening of the school year in September, 1942.

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The response of students, teachers, and the general public has been astonishing. More than 700,000 volumes of these new texts have been ordered by the schools, and a fifth large printing is now under way.

The titles of these books are as follows:

Science of Pre-Flight Aeronautics for High Schools
By: Aviation Education Research Group
Teachers College, Columbia University

Elements of Pre-Flight Aeronautics for High Schools
By: Aviation Education Research Group
Teachers College, University of Nebraska

Human Geography in the Air-Age
By: George T. Renner

Physical Science in the Air-Age
By: J. G. Manner, M. M. Penko, J. M. Lops

Social Studies for the Air-Age
By: Hall Bartlett

Globes, Maps and Skyways
By: Hubert A. Bauer

Flying High (Anthology)
By: Rose M. Cohen

Wings for You (Anthology)
By: H. A. Cross

The Air We Live in
By: George T. Renner and Hubert A. Bauer

The Biology of Flight
By: Frederick L. Fitzpatrick and Karl A. Stiles

Mathematics in Aviation
By: George Osteyee

Education for the Air-Age
By: H. L. Engelhardt, Jr.

Aeronautics in the Industrial Arts Program
By: Gordon O. Wilber and Emerson H. Neuthardt

Elementary School Science for the Air-Age
By: Charles K. Arey

Teachers' Manual for Science of Pre-Flight Aeronautics for High Schools
By: George Franklin Stover (Gen. Ed.)

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	MoMA Exhs.	236.4

Teachers' Manual for Elements of Pre-Flight Aeronautics for High Schools
By: Aviation Education Research Group
Teachers College, University of Nebraska

Teachers' Manual for the Biology of Flight
By: Frederick L. Fitzpatrick and Karl A. Stiles

More than 14,000 of the 26,000 high schools in the country are now teaching aviation subjects, and elementary courses are now being offered in a large part of the 200,000 primary schools from coast to coast.

All children, even the youngest, are interested in airplanes and what makes them go. In recent years, as the C. A. A. was aware, more than 2,000,000 youngsters have been building and flying model planes -- but largely out of school.

Now, for the first time, this lively and spontaneous interest is being channeled into the classroom to broaden the content and sharpen the relevance of almost all subjects in the curriculum -- not only arithmetic, algebra, geometry, physics, and chemistry, but biology, all of the social studies, the manual arts, even literature.

All of the high schools in New York City, Providence, Washington, Atlanta, Seattle, and thousands of other cities are now teaching pre-flight aeronautics. More than 160 of the 170 high schools in Massachusetts and half of those in New Hampshire are offering such courses. Similar large programs are under way in all sections of the country -- notably, in Tennessee, Missouri, Texas, Oklahoma, New Mexico, Utah, Arizona, California, and Oregon, to name a few.

In Virginia, officials of the State Department of Education have informed the C. A. A. that school administrators in the state are more interested in the aviation program than any other, and that the Department is encouraging an accelerated course in pre-flight aeronautics in all the high schools under its jurisdiction.

The aviation education program assumes new significance with the passage of legislation make boys of eighteen and nineteen subject to the Selective Service Act.

Their high school instruction in aeronautics should enable many of them to pass without further study the C. A. A. ground school examination required to obtain a private pilot certificate.

With proper selection of candidates and under carefully controlled training it may be found desirable to give

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	MoMA Exhs.	236.4

qualified high school students flight training as well.

In the summer of 1942, an experimental program along this line was conducted in twenty-two high schools in various sections of the country. Results were more than encouraging, making it evident that under proper controls boys between 16 and 18 can be quickly and safely taught to fly.

The C. A. A. is continuing research in the development of suitable aviation teaching materials, with especial emphasis upon laboratory equipment, simple and practical meteorological texts, aeronautical charts, and visual aids. It is also continuing to concern itself with the training of qualified teachers in this new field. During the summer of 1942, to break a bottle-neck at this point, several thousand teachers were given instruction in the ground schools of the C. P. T. program.

Mr. Monroe Wheeler
Museum of Modern Art
11 West 53rd Street
New York, New York

Dear Monroe:

I read your preliminary outline for your exhibit on Global War for World Peace. It looks like a very promising theme for the Museum.

The best people that I could suggest to help you in this are Dr. Ben D. Wood, Hamilton Hall, Columbia University, and Dr. George T. Renner, Professor of Geography, Teachers College, Columbia University. Dr. Wood has been paying considerable attention to geographical relationships of the United Nations, and Dr. Renner, as you know, is the author of Human Geography in the Air Age.

I am planning to visit your exhibit when it is ready, and I know that I shall enjoy it.

Sincerely yours,

Bruce Uthus

Bruce Uthus, Director
Pre-Flight Aeronautics Program

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US CAA

DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ~~AUTHORITY~~ ADMINISTRATION
WASHINGTON

AIRWAYS

March 27, 1943

UTHUS

VI

Mr. Monroe Wheeler
Museum of Modern Art
11 West 53rd Street
New York, New York

Dear Monroe:

I read your preliminary outline for your exhibit on Global War for World Peace. It looks like a very promising theme for the Museum.

The best people that I could suggest to help you in this are Dr. Ben D. Wood, Hamilton Hall, Columbia University, and Dr. George T. Renner, Professor of Geography, Teachers College, Columbia University. Dr. Wood has been paying considerable attention to geographical relationships of the United Nations, and Dr. Renner, as you know, is the author of Human Geography in the Air Age.

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Bruce Uthus, Director
Pre-Flight Aeronautics Program

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DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ADMINISTRATION
WASHINGTON

January 6, 1942

Dear Monroe:

Enclosed please find two photographs of airports from the air, two of airway light beacons and one of a five-tower radio range station. These pictures should give a general idea of the type of construction involved in airways facilities.

I have no doubt that the artist will want to take definite liberties in portraying these structures and it is, therefore, hoped that the enclosed prints will prove adequate.

Very sincerely,

Roscoe

Roscoe Wright

Acknowledged January 12, 1942

Mr. Monroe Wheeler
Musuem of Modern Art
New York, New York

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Maps

August 21, 1942

Dear Mr. Uthus:

I have discussed with several artists the matter of the poster versions of the polar projection map. Mr. Herbert Bayer seemed to have the best ideas about possible solutions and he is now making preliminary sketches which I hope to bring with me on my next trip to Washington on Wednesday, August 26.

May I assure you that we shall be most happy to assist you in any way we can. Your letter conveys very clearly the requirements.

Very sincerely yours,

Mr. Bruce Uthus
Technical Assistant to the Administrator
Department of Commerce
Civil Aeronautics Administration
Washington, D.C.

MW:fp

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1c

DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ADMINISTRATION
WASHINGTON

August 13, 1942

Mr. Monroe Wheeler
Director of Exhibitions
Museum of Modern Art
11 West 53rd Street
New York, New York

Dear Mr. Wheeler:

In accordance with our conversation of August 5, 1942, we are pleased to obtain the assistance of the Museum of Modern Art in the development of a poster which will graphically portray the proximity of actual or potential centers of military air power or post-war centers of air commerce by use of great circle air routes. This presentation might show that surfaces of the earth which were heretofor barriers to trade and communication are traversed by the great circle routes of planes. Such a poster is needed by this Administration for popular information, and should be of a type which could be displayed in public buildings, offices, stations, etc.

Two outstanding features of such a poster might well be:

1) A background consisting of the world's major land surfaces in the northern hemisphere, with the north pole as the center, i.e., a polar projection representation.

2) The relatively small distances between a few selected cities in the United States and selected centers of the Eurasian continent.

As a guide to the polar projection for the poster, use might be made of the map of the Northern Hemisphere published by the Hydrographic and Map Service of Ottawa, Canada. The orthographic projection by Erwin Raisz, Harvard University, the Casson Projection of the World Map, and the Chart of the World, No. 5199, Hydrographic Office, Navy Department, may also be helpful. Our copies of these are being forwarded to you under separate cover. Life magazine of August 3, 1942, also has some excellent illustrations. The enclosed advertisement of the Douglas Aircraft Corporation may be suggestive of a type of presentation you may want to consider.

It is doubtful whether more than three or four great circle routes, with military and cargo plane illustrations, should be shown, although

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this determination can best be made by your artists. Selections might be made from the following list:

Great Circle Routes	Statute Miles	Hours Distance*
New York to London	3,445	13.78
✓Chicago to Leningrad	4,580	18.32
Seattle to Vladivostok	4,706	18.82
Detroit to Berlin	4,255	17.02
Minneapolis to Murmansk	4,104	16.42
New Orleans to Cairo	6,771	27.08
✓San Francisco to Tokyo	5,137	20.55
Denver to Chunking	7,235	28.94

* Assumed net speed over land and water surfaces of 250 miles per hour

It is suggested that the proximity of selected centers be shown in terms of hours required to travel the great circle routes connecting such centers by air.

Some brief message should, of course, appear on the poster. This message might be any one of the following types:

1) Air Age Neighbors are Near Neighbors

2) The Greater the Air Power, the Smaller the Globe

3) Shrink the Globe with Air Power

4) Save Time Through Air Power

We shall do more work on this feature as the art work gets under way.

The final reproduction size of the poster should be approximately 24" x 36". A larger original would enable us to achieve better detail in the final reproduction. The Civil Aeronautics Administration will arrange for reproduction of the poster. We may arrange to do this with the United States Coast and Geodetic Survey which advises that it can work from a black and white ink drawing, and also a sketch showing the suggested use of colors. You can plan on using as many as four basic colors, including black. By overlaying colors we can increase the number of colors in the final reproduction if necessary.

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We will be very pleased to consult with you from time to time on this poster development, and can send a representative to New York City for this purpose upon your request.

We are indeed appreciative of your interest in assisting this project, and we consider ourselves fortunate in having your help.

Sincerely yours,

Bruce Uthus

Bruce Uthus
Technical Assistant
to the Administrator

Enclosure

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US-055
Airways to Peace

copy to Mr. Wheeler

October 15, 1943

Dear Mr. McHugh:

Mr. Wheeler has asked me to answer your telegram regarding the White House globe which is included in our exhibition Airways to Peace. We have been directed by Mr. Crim, Chief Usher of the White House, to release the globe to Major B. W. Davenport of the War Department at the close of our exhibition. A tentative arrangement has been made for Major Davenport to have the globe collected from the Museum on Monday, November 1st.

Sincerely yours,

Registrar

Mr. M. I. McHugh, Assistant Chief
Procurement & Supply Branch
Office of Strategic Services
25th and E Streets, N.W.
Washington, D. C.

DD:joc

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Arrivays to Peace

US President - Comm

IV

CLASS OF SERVICE

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WESTERN UNION

1201

SYMBOLS

DL = Day Letter
NL = Night Letter
LC = Deferred Cable
NLT = Cable Night Letter
Ship Radiogram

A. N. WILLIAMS, PRESIDENT — NEWCOMB CARLTON, CHAIRMAN OF THE BOARD — J. C. WILLEVER, FIRST VICE-PRESIDENT

The filing time shown in the date line on telegrams and day letters is STANDARD TIME at point of origin. Time of receipt is STANDARD TIME at point of destination

NBD256 34 GOVT 13 EXTRA=WUX WASHINGTON DC 12 637P

MONROE WHEELER=MUSEUM OF MODERN ART 1943 OCT 12 PM 7 27

11 WEST 53 ST=

→ Miss Hadley

=WE UNDERSTAND WHITE HOUSE GLOBE WILL BE IN =YOUR CUSTODY UNTIL NOVEMBER =FIRST PLEASE CONFIRM SO SHIPPING ARRANGEMENT CAN BE MADE=

M I MCHUGH ASST CHIEF PROCUREMENT & SUPPLY BRANCH OFFICE OF STRATEGIC SERVICES 25TH & E STREETS NW WASHINGTON DC.

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING P 25 CE

The White House
Washington, D. C.

DD:joc

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Arrivage to Paris

US President - Crim

IV

Charge to the account of MUSEUM OF MODERN ART, 11 West 53rd St., N.Y.C. $

CLASS OF SERVICE DESIRED			
DOMESTIC		CABLE	
TELEGRAM		ORDINARY	
DAY LETTER		URGENT RATE	
SERIAL		DEFERRED	
NIGHT LETTER		NIGHT LETTER	

Patrons should check class of service desired; otherwise the message will be transmitted as a telegram or ordinary cablegram.

WESTERN UNION

1206

A. N. WILLIAMS, PRESIDENT — NEWCOMB CARLTON, CHAIRMAN OF THE BOARD — J. C. WILLEVER, FIRST VICE-PRESIDENT

CHECK

ACCOUNTING INFORMATION

TIME FILED

Send the following telegram, subject to the terms on back hereof, which are hereby agreed to

WANT A REPLY?
"Answer by WESTERN UNION" or similar phrases may be included without charge.

January 29, 1944

MR. H.G.CRIM
THE WHITE HOUSE
WASHINGTON, D. C.

SPINDLE FOR PRESIDENT'S GLOBE SHIPPED TO WEBER COSTELLO CHICAGO BY CUMMINGS AND PINGBERT NEW YORK. LETTER FOLLOWS.

DOROTHY DUDLEY,
REGISTRAR, MUSEUM OF MODERN ART

Mr. H. G. Crim, Chief Usher
The White House
Washington, D. C.

DD:joc

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Arrivals to Peace

US President - Crim

IV

CLASS OF SERVICE

This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable symbol above or preceding the address.

WESTERN UNION

1201

1944 JAN 27 AM 11 24

A. N. WILLIAMS
PRESIDENT

SYMBOLS

DL = Day Letter
NL = Night Letter
LC = Deferred Cable
NLT = Cable Night Letter
Ship Radiogram

The (22) shown in the date line on telegrams and day letters is STANDARD TIME at point of origin. Time of receipt is STANDARD TIME at point of destination

NAB31 12 GOVT= THE WHITE HOUSE WASHINGTON DC 27 1105A

MISS DOROTHY H DUDLEY, THE MUSEUM OF MODERN ART=

11 WEST 53 ST=

PLEASE ADVISE DISPOSITION MADE OF SPINDLE USED IN ASSEMBLING THE PRESIDENT'S GLOBE=

H G CRIM.

Cummings & Engbert

Mu 5-0868

Ms Wright

Shipped to Mickey Cortello in Sep box.

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

Mr. H. G. Crim, Chief Usher
The White House
Washington, D. C.

DD:joc

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Arrivage to Pierre

US President - Crim

IV

Spindle for President & glove
shipped to Weber Costello Chicago
by Cummings & Englert New York

Mr. H. G. Crim, Chief Usher
The White House
Washington, D. C.

DD:joc

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Arrivals to Peace

US President - Crim

IV

February 1, 1944

Dear Mr. Crim:

On January 29th we wired you as follows, in answer to your telegram:

> Spindle for President's globe shipped to Weber Costello Chicago by Cummings and Engbert New York. Letter follows.

At the request of Major B. W. Davenport, we released the President's globe to Cummings and Engbert, 329 East 29th St., New York 16. Cummings and Engbert had the globe packed here in the Museum. The spindle for it was packed in a separate box, and both boxes were shipped to Weber Costello Co., 12th and McKinley Streets, Chicago Heights, Illinois. I believe the Weber Costello Company was to make certain repairs on the globe. We have not been notified as to where the globe and spindle were to be sent after the repairs were made.

Sincerely yours,

Registrar

Mr. H. G. Crim, Chief Usher
The White House
Washington, D. C.

DD:joc

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Airways to Peace
Washington

October 5, 1943

Mr. H. G. Crim
Chief Usher
The White House
Washington, D.C.

Dear Mr. Crim:

I acknowledge with thanks your letter of October fourth, stating that the President has graciously authorized us to keep his globe in the Airways to Peace exhibition through the month of October, 1943. Will you please convey to him our sincere thanks for his kind collaboration?

Very sincerely yours,

MW:CH

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THE WHITE HOUSE
WASHINGTON

October 4, 1943

Dear Mr. Wheeler:

I have your letter dated September 27, 1943 regarding the President's globe.

I am authorized to state that the President has consented to your display of the globe at the Airways to Peace exhibition through the month of October 1943.

As soon after that date as Major B. W. Davenport can arrange for the repair you are directed to turn the globe over to him for reasons stated in previous communications.

Very sincerely yours,

H. G. CRIM,
Chief Usher

Mr. Monroe Wheeler
Director of Exhibitions and Publications
The Museum of Modern Art
11 West 53rd Street
New York, N.Y.

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September 27, 1943

Dear Mr. Crim:

We received your letter of September 22nd regarding the repairs you wish to have made upon the base of the President's globe. We have received a communication from Major B. W. Davenport of the Office of the Chief of Staff and we shall be glad to comply with his instructions in the matter.

We hope it may be possible to keep the globe in the Airways to Peace exhibition through the month of October, because the Board of Education of the City of New York is now arranging to have New York school children visit this exhibition in large numbers, and it, of course, means a great deal to them to see the President's globe. We have suggested to Major Davenport that a temporary base might be made which will permit him to repair the original without removing the globe from the exhibition.

Very sincerely yours,

Mr. H. G. Crim, Chief Usher
The White House
Washington, D. C.

MW:joe

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PRESIDENT ROOSEVELT'S GLOBE

AIR-WAYS IV

President's Globe

THE MUSEUM OF MODERN ART

Date June 23, 1943

To: Miss Dudley

From: Monroe Wheeler

Re:

If any problem arises at the White House regarding the moving of the President's Globe, Mr. Edward Dodd, formerly of the Office of Special Services which worked on its preparation, suggests that you get in touch with Major Davenport in General Marshall's office.

With renewed thanks for your own kind attention to this matter, I am

Very sincerely yours,

MW:CH

MW:CH

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PRESIDENT ROOSEVELT'S GLOBE

AIRWAYS IV

President is Globe

U S President - Full

THE MUSEUM OF MODERN ART

Date June 24, 1943

To: Miss Dudley **Re:** White House entry

From: Mr. Wheeler per Mrs. Hartman

Dear Miss Dudley,

Mr. Wheeler wants to be sure that he told you that it's necessary to telephone the White House and make an appointment (Mr. Crim) so that they know in advance just whom to expect and just when.

C. T. D.

With renewed thanks for your own kind attention to this matter, I am

Very sincerely yours,

MW:CH

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PRESIDENT ROOSEVELT'S GLOBE

AIRWAYS IV

President is Globe

U.S. President - Tully

July 29, 1943

Miss Grace G. Tully
Private Secretary to the President
The White House
Washington, D.C.

Dear Miss Tully:

The Trustees of the Museum of Modern Art are delighted that the President has so very kindly granted the extension of the exhibition period for his globe. Will you kindly convey to him again our grateful appreciation?

The AIRWAYS TO PEACE exhibition, of which the globe is so important a part, continues to find great favor with the public. In case you may have time to peruse them, I am sending you under separate cover some of the press comments upon the exhibition.

In accordance with your desires we shall notify you when the exhibition closes, so that Major Davenport may attend to any repairs which he may wish to have made before the globe is returned to the White House.

With renewed thanks for your own kind attention to this matter, I am

Very sincerely yours,

MW:CH

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July 19, 1943

Miss Grace G. Tully
Private Secretary to the President
The White House
Washington, D.C.

Dear Miss Tully:

I am in receipt of your kind letter of July seventeenth, in which you inform us that the President is willing to have us continue to display his globe in the AIRWAYS TO PEACE exhibition. This is very gratifying indeed, and we hope that it will be possible to keep it through the duration of the exhibition, which will extend through October. If the President has need of it before that time, we shall, of course, be willing to send it to him whenever he desires it. Will you kindly convey to him the profound thanks of the Trustees of the Museum of Modern Art for his great kindness, and assure him that the public as well is deeply appreciative of the opportunity to see this most important globe in the world.

Sincerely yours,

MW:CH

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Airways to Peace

THE WHITE HOUSE
WASHINGTON

July 17, 1943.

Dear Mr. Wheeler:

I have your letter of July eighth in which you ask for a time extension until October to display the President's globe. The President is very glad to grant this extension.

Will you be good enough to notify us when you are through with it, as Major Davenport may want to have it repaired in New York before it is returned to the White House?

Very sincerely yours,

Grace G. Tully

Grace G. Tully
Private Secretary

Mr. Monroe Wheeler,
The Museum of Modern Art,
11 West 53rd Street,
New York, N. Y.

Miss Grace T. Tully
Secretary to the President
The White House
Washington, D. C.
MW:lf

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Airways to Peace

July 8, 1943.

Dear Miss Tully:

The President's Globe, which he so kindly lent us for the opening of our Airways to Peace exhibition, arrived here safely and has aroused a most enthusiastic response from the New York public. The New York Times and many other papers have run a large picture of it, contrasting it to the first globe made by Behaim in 1492.

Our attendance since this exhibition opened has been very great, and I am writing now to ask whether the President might consider letting us have the globe for a longer time to enable more people to see it. A good deal of the publicity for this important educational exhibition will be in national magazines and will not appear until the August issues and, inasmuch as the President's Globe forms such an important part of it, we would like to exhibit it for a longer time if this would not inconvenience the President.

At the request of several New York schools we extended the duration of the exhibition until October in order to permit school children to come in groups, and it would of course be wonderful if we could keep the globe that long, but any extension whatever will be exceedingly welcome and will permit many more thousands to see this greatest globe of all.

Feeling that the President would not wish to be deprived of the globe for more than a very short time, we originally asked to borrow it for a period of only two weeks, but since it is apparently not to be returned directly to the White House in any case, we are encouraged to ask for whatever time-extension it may be possible to grant us.

Will you kindly convey to the President the profound thanks of the Trustees of the Museum of Modern Art for his generous contribution to this instructive exhibition of air age geography, which has met with most enthusiastic acclaim by educators throughout the East.

Thanking you in advance for your further kind consideration, I am

Very sincerely yours,

Miss Grace T. Tully
Secretary to the President
The White House
Washington, D. C.
MW:lf

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THE WHITE HOUSE
WASHINGTON

June 16, 1943

June 17, 1943

Dear Mr. Wheeler:

Miss Grace G. Tully
Private Secretary to the
President
The White House
Washington, D.C.

Dear Miss Tully:

It is a pleasure to acknowledge your kind letter of June sixteenth informing us of the President's gracious consent to lend his globe to the Museum of Modern Art's AIRWAYS TO PEACE exhibition. Will you kindly convey to him the deep gratitude of the Trustees of the Museum for his collaborating so generously upon this important educational exhibition. We are pleased to know that the arrangements mentioned in my letter of June seventh to Mr. Hopkins are satisfactory, and we have already discussed with those who made the globe the problem of dismantling it in order to move it through the doorways. The Museum's Registrar, Miss Dorothy Dudley, will make all further arrangements with Mr. Howell G. Crim, as you suggest, and will herself go to Washington to supervise the transportation of the globe.

We are, of course, sorry that it will not be possible for the President to write an introduction to the exhibition. We shall feature prominently in the exhibition one of Mr. Wallace's statements on the United Nations Heartland of the future, and, in view of Mr. Willkie's recent globe-circling mission, we are asking him to provide some of the explanatory text panels.

With renewed thanks for your great assistance, I am

Very sincerely yours,

Mr. Monroe Wheeler,
Director of Exhibitions and Publications,
The Museum of Modern Art,
11 West 53rd Street,
New York, N. Y.

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The Museum of Modern Art Archives, NY	Collection:	Series.Folder:
	MoMA Exhs.	236.4

THE WHITE HOUSE
WASHINGTON

June 16, 1943

Dear Mr. Wheeler:

This is in acknowledgment of your letter of June seventh, addressed to Mr. Hopkins, with respect to the loan of the President's globe.

The President is very glad to consent to this loan under the stipulations set forth in your letter to Mr. Hopkins. May I explain to you, however, that it will be necessary to dismantle the globe as it is of such great size that it cannot be moved through the doorways otherwise. I would suggest, therefore, that you get in touch with Mr. Howell G. Crim, Chief Usher, and work out with him the necessary arrangements for the dismantling, the insurance, the transportation and other steps necessary for the safety of the globe while it is on loan.

I regret to advise you that it will not be possible for the President to write an opening paragraph for the exhibition. As it has been necessary for the President to decline so many requests, I am sure you will understand why it would be difficult for him to make an exception in this instance.

Very sincerely yours,

Grace G. Tully

GRACE G. TULLY
Private Secretary

Mr. Monroe Wheeler,
Director of Exhibitions and Publications,
The Museum of Modern Art,
11 West 53rd Street,
New York, N. Y.

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Cummings to Pearce

November 2, 1943

Gentlemen:

I am enclosing a yellow copy of Government Bill of Lading No. 2820 covering two crates containing both sections of the 60-inch globe belonging to President Roosevelt. These crates were shipped yesterday to Weber Costello Co., 12th and McKinley Streets, Chicago Heights, Illinois. Since this globe was released by the Museum to you, will you be kind enough to sign and return to us the enclosed receipt for our files.

Sincerely yours,

Registrar

Cummings & Engbert
329 East 29th Street
New York 16, N. Y.

DD:joc

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CUMMINGS & ENGBERT
Cabinet Makers
329 EAST 29TH STREET, NEW YORK 16 TEL. MURRAY HILL 5-0868-9

November 1, 1943

Miss D. Dudley
Museum of Modern Art
11 West 53 Street
New York City

Dear Miss Dudley:

Enclosed herewith is Government Bill of Lading for shipment of globe ball. Please have all three copies signed by the Railway Expressman.

The original (white sheet) should be mailed to Weber Costello. The shipping order(peach sheet) will be taken by the expressman, and the memorandum copy (yellow sheet) should be mailed back to us. Enclosed also are stamped, addressed envelopes for your convenience so that you may mail them as soon as the shipment goes out.

Our boy, the bearer of this note, will mark the return address on the crates.

Thank you for your kind cooperation.

Very truly yours,

CUMMINGS & ENGBERT

per Miriam Cohen

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June 7, 1943

Mr. Harry Hopkins
The White House
Washington, D.C.

Dear Mr. Hopkins:

Mrs. Potter has conveyed to us your welcome message that the President has graciously acceded to our request to include in our air-age geography exhibition his own great globe.

Mrs. Potter has also transmitted your questions, which I am happy to answer as follows:

1 When will the globe be required?

We should like to call for it on Friday, June 25. The exhibition opens in New York on June 29.

2 How will the globe be transported?

An expert representative of the Museum of Modern Art will go to Washington to supervise its transportation personally, by truck of the Museum's Washington shipping representatives, Security Storage Company. It is our plan not to dismantle the globe, but to place in a padded truck and bring it just as it stands. We have learned from the Office of Strategic Services that the globe can very safely travel without being dismantled, provided our usual precautions are taken.

3 How long does the Museum wish to keep the globe?

Until July 16. The globe would be returned to The White House on July 18.

4 How will the globe be returned?

By the same means as it would be brought to New York, accompanied by the same expert representative of the Museum.

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5 Who will pay the charges?

The Museum will pay all transportation and insurance costs. We have been told by those who worked upon the globe that it should be insured for four thousand dollars, and we shall register it accordingly.

Our Trustees have asked me to express through to the President their profound appreciation and gratitude for his generosity in making it possible for a large public to see the most significant globe in the world in this important educational exhibition.

I enclose herewith the outline of AIRWAYS TO PEACE, and I wonder whether the President might consider writing an opening paragraph for the exhibition, calling attention to the urgency of its message? If you think there is any possibility of this, we should be glad to cooperate in every way possible, but we realize that this may be asking too much.

With many thanks for your extraordinary kindness in facilitating these important arrangements, I am

Very sincerely yours,

Monroe Wheeler

MW:CH
Enclosure

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VI

E MCKNIGHT KAUFFER
40 central park south new york plaza 5-6890

April 10 1943

BILL

from: E. Mcknight Kauffer
40 Central Park South
New York
N.Y.

to: Civil Aeronautic Administration
Department of Commerce
Washington
D. C.

---

for designing poster in color
"Watch out for fire" $ 250.00

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E MCKNIGHT KAUFFER
40 central park south new york plaza 5-6890

April IO I943

BILL

from: E. Mcknight Kauffer
40 Central Park South
New York
N. Y.

to: Civil Aeronautic Administration
Department of Commerce
Washington
D. C.

---

for designing poster in color for
"C. A. A. Speeds the War" $ 250.00

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IV

ARTHUR J. MORGAN, PRESIDENT
J. D. MORGAN, VICE PRESIDENT

JOHN V. MORGAN, SECRETARY
CHARLES D. MORGAN, TREASURER

MORGAN & BROTHER
FIREPROOF STORAGE WAREHOUSES, INC.
510-520 WEST 21ST STREET, NEW YORK 11
WATKINS 9-1300
~~YORK AVENUE AND 63RD STREET, NEW YORK~~
BUTTERFIELD 8-2874
434-436 EAST 91ST STREET

FIREPROOF VAULTS
ESTABLISHED 1851
CABLE ADDRESS
MORGANWARE

C. Last week in Nov 20th
3 Trucks to work to

June 19, 1943

Miss Dorothy H. Dudley
The Museum of Modern Art
11 W. 53 Street
New York 19, New York

Dear Miss Dudley:

We will pick up the globe and its stand from the Security Storage warehouse, 1140 Fifteenth St., N. W., Washington, D. C. on June 26 and deliver it to the Museum of Modern Art on June 28, as agreed.

July 16-17 We also agree to pick this globe up from the Museum on July 18 and deliver it to the President's Studio in Washington.

Yours truly,

MORGAN & BROTHER FIREPROOF
STORAGE WAREHOUSES, INC.

J. A. Borthwick
MANAGER

TB:BA

$77.25

Sec. Storage - 9.00

1851 MORE THAN NINETY YEARS UNDER THE MORGAN FAMILY MANAGEMENT TODAY

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The Museum of Modern Art Archives, NY	Collection:	Series.Folder:
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June 18, 1943

Dear Mr. Borthwick:

Will you please confirm in writing our understanding that your van will collect a fifty-two inch globe and its stand from the Security Storage warehouse, 1140 Fifteenth Street, N.W., Washington, D. C. on June 26th and deliver it to the Museum of Modern Art on June 28th. We have just learned that this globe weighs six or seven hundred pounds. It will probably be separated into two hemispheres. The Museum of Modern Art is insuring it for $4000.00 from the time it leaves Washington until it is returned on July 19th.

Will it be possible for you to collect this globe from the Museum on or about July 18th and deliver it to the Security Storage on the 19th.

Sincerely yours,

Registrar

Mr. Thomas Borthwick
Morgan and Bros.
510 West 21st Street
New York 10, New York

DD:ma

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cc Mr. Wheeler
Miss Ulrich

June 7, 1943

Dear Mr. Borthwick:

Confirming our telephone conversation of this morning, I understand that on June 26th you will be able to collect a globe, fifty-two inches in diameter, from the Security Storage Company in Washington and deliver it to the Museum of Modern Art on the morning of June 28th.

We are borrowing this globe for an exhibition which opens on the 29th and it is absolutely necessary that we have the globe here on the 28th. The globe must be handled with great care as it is very valuable and the only one of its kind in the country. Will you please reserve space on your van for this globe and let me know what the cost of the transportation will be.

I am enclosing a copy of our letter to Mr. Aspinwall of the Security Storage Company in Washington. We will write you again as soon as all arrangements have been completed.

Sincerely yours,

Registrar

Mr. Thomas Borthwick
Morgan and Bros.
510 West 21st Street
New York, New York

WA 9- 1300

Encl.

DDims

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SPECIAL DELIVERY

June 23, 1943

Dear Mr. Aspinwall:

Confirming our telephone conversation of this afternoon, I understand that you will have your men and van at the White House at 11 A.M. on June 25th to collect a fifty-two inch globe and its stand. I will be at the Security Storage at 10:30 in order to go to the White House with your men. According to our understanding, this globe will be stored overnight in your warehouse. Morgan and Bros. will collect it from you the first thing on the morning of June 26th.

I have just phoned Mr. Borthwick of Morgan and Bros. regarding the transportation of the Rembrandt painting from Pichetto in New York to the Corcoran Gallery on July 1st, 2nd or 3rd. He assures me that he will be able to do this. I told him the painting would be crated. Will you please write him confirming this arrangement.

Sincerely yours,

Registrar

Mr. C. A. Aspinwall, President
Security Storage Company
1140 Fifteenth Street, N.W.
Washington 5, D. C.

DD:ma

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ADDRESS POSTAL ZONE 5
1140 FIFTEENTH STREET
CABLE ADDRESS "STORAGE"

EUROPEAN OFFICE
31 PLACE DU MARCHÉ ST. HONORÉ (1er) PARIS
TELEPHONE OPERA 68-00 - TELEGRAM MEDIUM PARIS

District 4040

JUN 22 1943

Security Storage Company

AFFILIATED WITH THE AMERICAN SECURITY AND TRUST COMPANY

TELEPHONE DISTRICT 4040

Washington, D. C.

C. A. ASPINWALL, PRESIDENT
C. W. PIMPER, VICE PRES. AND TREASURER
PAUL ALVEY, SECRETARY
PHILIP LARNER GORE, ASST. SECRETARY
RALPH H. HOUSER, ASST. TREASURER
C. J. MATTIMORE, SUPERINTENDENT
URBAN B. MACMULLEN, MGR. COLD STORAGE DEPT.
MARY BELL MITCHELL, MGR. INSURANCE DEPT.

June 21, 1943

Museum of Modern Art
11 West 53rd Street
New York 19, New York

Attention: Miss Dorothy H. Dudley, Registrar

Dear Miss Dudley:

I have your letter of June 18th regarding the globe at the White House.

I hope that it will be possible to arrange for some leeway as to time, as it will be difficult and expensive to hold the van and crew here to go to the White House at a specified time. We are overwhelmed with work here and have a reduced force, so that you will appreciate the fact that it is almost impossible to make an exact appointment.

Very truly yours,

PRESIDENT

A:cmb

11 A.M. Re to see may Stagg at 10.30

Morgan and Dyer will collect 1:30 Thurs. in A.M.'s office Jun. 26.

6.18

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June 18, 1943

Dear Mr. Aspinwall:

Thank you for your letter of June 11th informing us that you can arrange to collect the fifty-two inch globe from the White House on June 25th as we requested. We have just heard that this globe weighs six or seven hundred pounds and that it will be necessary to separate it into two hemispheres in order to move it through the doors. Therefore, it will be necessary for you to send several men to do the moving.

We have written to Mr. Howell G. Crim, Chief Usher at the White House asking him to let us know the most convenient time on June 25th for collecting the globe and what arrangements need to be made for admittance to the White House. I will be in Washington and will meet your men at the White House at the time specified by Mr. Crim. I am enclosing an order for your men to bring to him.

The globe will be insured by the Museum of Modern Art for $4000.00 from the time of its removal from the White House until its return.

I will write or telephone you as soon as I hear from Mr. Crim.

As I wrote you on June 7th, the globe must be handled with very great care. We will appreciate anything you can do to facilitate its removal from the White House.

Sincerely yours,

Registrar

Mr. C. A. Aspinwall, President
Security Storage Company
1140 Fifteenth Street, N.W.
Washington, 5, D. C.

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JUN 18 1943

ADDRESS POSTAL ZONE 5
1140 FIFTEENTH STREET
CABLE ADDRESS "STORAGE"

EUROPEAN OFFICE
31 PLACE DU MARCHÉ ST. HONORÉ (1er) PARIS
TELEPHONE OPERA 68-00 - TELEGRAM MEDIUM PARIS

Security Storage Company

AFFILIATED WITH THE AMERICAN SECURITY AND TRUST COMPANY

TELEPHONE DISTRICT 4040

Washington, D. C.

C. A. ASPINWALL, PRESIDENT
C. W. PIMPER, VICE PRES. AND TREASURER
PAUL ALVEY, SECRETARY
PHILIP LARNER GORE, ASST. SECRETARY
RALPH H. HOUSER, ASST. TREASURER
C. J. MATTIMORE, SUPERINTENDENT
URBAN B. MACMULLEN, MGR. COLD STORAGE DEPT.
MARY BELL MITCHELL, MGR. INSURANCE DEPT.

June 17, 1943

The Museum of Modern Art
11 West 53rd Street
New York, New York

Attention: Miss Dorothy M. Dudley, Registrar

Gentlemen:

Please let us have reply to our letter of June 11th.

Very truly yours,

PRESIDENT

A:cmb

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ADDRESS POSTAL ZONE 5
1140 FIFTEENTH STREET
CABLE ADDRESS "STORAGE"

EUROPEAN OFFICE
31 PLACE DU MARCHÉ ST. HONORÉ (1er) PARIS
TELEPHONE OPERA 68-00—TELEGRAM MEDIUM PARIS

JUN 1 4 1943

Security Storage Company

AFFILIATED WITH THE AMERICAN SECURITY AND TRUST COMPANY

TELEPHONE DISTRICT 4040

Washington, D. C.

C. A. ASPINWALL, PRESIDENT
C. W. PIMPER, VICE PRES. AND TREASURER
PAUL ALVEY, SECRETARY
PHILIP LARNER GORE, ASST. SECRETARY
RALPH H. HOUSER, ASST. TREASURER
C. J. MATTIMORE, SUPERINTENDENT
URBAN B. MACMULLEN, MGR. COLD STORAGE DEPT.
MARY BELL MITCHELL, MGR. INSURANCE DEPT.

June 11, 1943

The Museum of Modern Art
11 West 53rd Street
New York, New York

Attention: Miss Dorothy H. Dudley, Registrar

Gentlemen:

In response to Miss Dudley's letter of June 7th, we shall arrange to pick up the globe at the White House on June 25th as requested and hold it here for Morgan Brothers' van.

What the cost will be, I cannot tell, as I do not know how long this work will take. The price will be based on $6 per hour for a van and three men if the value of the globe is not in excess of $100. Should there be a higher valuation placed on it, there will be an additional charge of 10¢ per hundred dollars excess valuation. Without extra valuation, I would guess that the cost would amount to approximately $18.

up to 4.30 time and a half, after

With your reply, please let us know the value of the globe and to whom we should apply at the White House.

Very truly yours,

PRESIDENT

A: cmb

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C
O
P
Y

Mr. Wheeler
Miss Ulrich
Morgan and Bros. (Mr. Borthwick)

June 7, 1943

Dear Mr. Aspinwall:

I am writing in reference to our telephone conversation of this morning during which I asked you if it would be possible for you to collect a globe, fifty-two inches in diameter, from the White House on June 25th or 26th and deliver it to the Museum of Modern Art in New York. Following your suggestion, I called Morgan and Bros. and talked to Mr. Borthwick. He tells me that if you can collect the globe from the White House on June 25th and take it to your warehouse, he can have one of his vans pick it up on the 26th and bring it to New York for delivery at the Museum on the 28th. Will you please let me know at your earliest convenience if you will be able to take care of this for us and what the cost will be.

As I explained to you over the phone, the globe may be too large to go through the door of the room in which it is kept. If this is true, I understand that it can be easily separated into two hemispheres by removing two screws at the North and South poles. Therefore, the men on your van should take along a screw driver. This globe must be handled with great care since it is very valuable and is the only one of its kind in the country.

I will write you later about any special arrangements that need to be made for admittance to the White House.

Sincerely yours,

Registrar

Mr. C.A.Aspinwall, President
Security Storage Company
1140 Fifteenth Street, N.W.
Washington, D. C.

District 4040

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Aero Medical Lab
Sloane
AIRWAYS

(DOPY)

DEPARTMENT OF COMMERCE
Civil Aeronautics Administration
Washington 25

May 10, 1946

June 14, 1943

Monroe Wheeler
Museum of Modern Art
New York, N. Y.

Dear Monroe:

I sincerely bow my head in shame and contrition for causing the unnecessary delay concerning the "outside-in" globe and for whatever I unknowingly have been responsible.

It truly was a shock to me when we were informed by Mr. Burden that you had not received a check for the globe and that the matter was pending.

Our fiscal year ends on June 30th and the appropriation which enabled us to purchase the globe would have been exhausted by that time. Because of the expenditure of business [illegible] Department of Commerce, because of some wartime [illegible] Mr. Burden approved and by the time the red tape is cut and the 1947 funds are available it will be about [illegible] make it [illegible]

I again [illegible] service [illegible] you [illegible]

Mr. Eric Sloane
Aero Medical Laboratory
Wright Field
Dayton, Ohio

Dear Mr. Sloane:

My last letter to you was returned to New York from Dayton. I hastened to send it back to you and trust that you have had it by now. You must, however, have thought me extremely unappreciative during the days this mailing and re-mailing went on. I enjoy your book more and more; thank you so much for it and for the special inscription.

I am writing also to confirm the matter of your acting as meteorological consultant for AIRWAYS TO PEACE. As I told you, we are a non-profit institution, but we shall be happy to pay you an honorarium of seventy-five dollars ($75) in appreciation of your very valuable services, for which we are all most grateful.

With many thanks, I am Cordially,

Sincerely yours,

(signed) Ben Stern

Assistant Administrator
Aviation Information

MW:CH

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STERN

Airways to Peace

(COPY)

DEPARTMENT OF COMMERCE

Civil Aeronautics Administration

Washington 25

May 10, 1946

Monroe Wheeler
Museum of Modern Art
New York, N. Y.

Dear Monroe:

I sincerely bow my head in shame and contrition for causing the unnecessary trouble concerning the "outside-in" globe and for which apparently I unknowingly have been responsible.

It truly was a shock to me when we were informed by Mr. Burden that you had not received a check for the globe and that the matter was still pending.

Our files in this office include a copy of the requisition which we submitted for its purchase and which we presumed had been cleared and the account closed. It appears that the business office and the Chief Clerk's office of the Department of Commerce were prevented from sending a check because of some wartime regulation. However, through the very kind offices of Mr. Burden this purchase has now been approved and by the time the red tape is cut and the 1947 funds are available it will be about July 1 before a check will be sent to you. I shall make it my business to follow through on this.

I again want to apologize and assure you that if there is any service we can render to compensate for this unnecessary trouble you need but call.

Cordially,

(signed) Ben Stern

Assistant Administrator
Aviation Information

Original to Miss Ulrich - 5/23/46

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December 23, 1942

Mr. Monroe Wheeler

MUSEUM (President's Globe) IV

THE MUSEUM OF MODERN ART

Date June 28, 1943

To: Miss Ulrich

From: Miss Dudley

Re: Expenses collecting Globe from White House for "Airways to Peace"

Dear Ione: The only room I could get in Washington was a $5.00 one so my expenses were mor than I thought they would be. I had to spend $3.10 more than the $25.00 I asked for. Would appreciate it if you can send this to me soon.

$10.00	Hotel room for two nights - bill attached
.20	Two phone calls
6.60	Meals
1.20	Taxis
.25	Tip
9.85	Train fare (coach round trip)
$ 28.10	

10.10.

28. LEHMBRUCK: *Kneeling Woman.* 1911 ☐

29. EPSTEIN: *Madonna and Child.* 1927 ☐

Kindly inquire at Information Desk regarding Membership Privileges

MW:lf

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December 23, 1942

Mr. Monroe Wheeler
Museum of Mod
11 West 53rd

President's globe
Cat no. P 73.43
to collect & deliver to
Mus.

27. DESPIAU: *Assia.* 1938 ☐
28. LEHMBRUCK: *Kneeling Woman.* 1911 ☐
29. EPSTEIN: *Madonna and Child.* 1927 ☐

Kindly inquire at Information Desk regarding Membership Privileges

MW:lf

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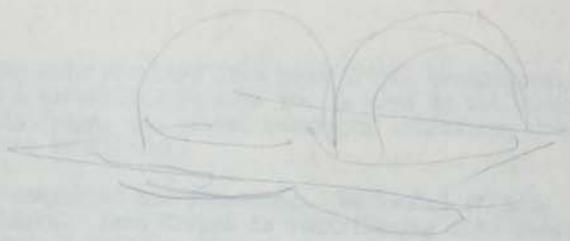
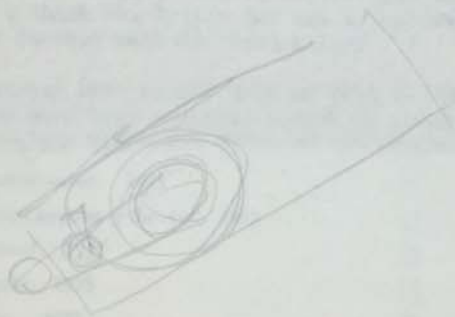
5-6-40 Name print-globe supplied.

14" x 27"





16" globe?

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18. MATISSE: *M*
19. BRAQUE: *Ma*
20. LA FRESNAYE
21. GRIS: *The Ch*
22. PICASSO: *The*
23. MIRO: *Compo*
24. BRANCUSI: *B*
25. MAILLOL: *De*
26. MAILLOL: *To*
27. DESPIAU: *As*
28. LEHMBRUCK:
29. EPSTEIN: *Ma*

Kindly inquire at

MW:lf

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December 23, 1940

Dear Bill:

I presume yo… flight, and … of Airways … which you we…

We have not … thousand dol… for Pan AM … with a like … I don't thi… matter furth…

The company … because the… same subjec… sultant car… Tom Girdler … well enough … might clin…

Wendell Will… and the Pre… for the ope…

I do hope y… July 1.

Ever faithfully yours,

Mr. William A. M. Burden
Special Aviation Assistant to the Secretary
Department of Commerce
Office of the Secretary
Washington, D. C.

MM:lf

Morgan & Brother —
One Special Van Lending
one large Atlas from
Wash. D C - 75/ —
Tax 2.25
Total 77.25
Sec. Storage
6.18
$ 83.43

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June 23, 1943.

Dear Bill:

I presume you have returned from your little transoceanic flight, and I am writing to urge you to come to the opening of Airways to Peace, the global geography exhibition about which you were so helpful.

We have not completed our financing. We needed fifteen thousand dollars. Juan Trippe is contributing five thousand for Pan AM and, I believe, United Aircraft is coming through with a like amount. But Curtiss-Wright turned us down and I don't think Mr. Trippe has had an opportunity to pursue the matter further with Mr. Rentschler.

The company that should help on this is Consolidated Vultee because they have recently issued an excellent booklet on the same subject which was prepared for the most part by our consultant cartographer, Richard Edes Harrison. I have sent Tom Girdler an outline of the exhibition and if you know him well enough to phone him briefly on the subject, I think that might clinch the matter.

Wendell Willkie has consented to write the text for the show, and the President is lending us his own great fifty inch globe for the opening.

I do hope you and Peggy can be with us on the evening of July 1.

Ever faithfully yours,

Mr. William A. M. Burden
Special Aviation Assistant to the Secretary
Department of Commerce
Office of the Secretary
Washington, D. C.

MB:lf

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	MoMA Exhs.	236.4

December 23, 1942

Mr. Monroe Wheeler
Museum of Modern Art
11 West 53rd Street
New York, New York

Dear Monroe,

This is to crystallize the details on the proposed Civil Aeronautics Administration and the Museum of Modern Art poster contest.

As I understand it, it will begin with a presentation to the artists on or about January 20. This will be followed by a brochure announcement on or about January 30. The contest will end on or about March 31.

It is understood that the winning posters will become the property of the Civil Aeronautics Administration to be used for general informational purposes. It is agreed that the expenses for the contest, including all prizes and amounting to $10,000, will be assumed by me personally.

It is also understood that the Executive Committee of the Museum has authorized you to conduct this poster contest and that all details including the choice of jurors will be left for decision between you and myself.

Sincerely yours,

William A. M. Burden
Special Aviation Assistant
to the Secretary of Commerce

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	MoMA Exhs.	236.4

December 9, 1942

Dear Monroe,

This is to crystallize the details on the proposed Civil Aeronautics Administration and the Museum of Modern Art poster contest.

As I understand it it will begin with a presentation to the artists on or about January 20. This will be followed by a brochure announcement on or about January 30. The contest will end on or about March 31.

It is understood that the winning posters will become the property of the Civil Aeronautics Administration to be used for general informational purposes. It is agreed that the expenses for the contest, including all prizes and amounting to approximately $10,000 will be assumed by me personally.

It is also understood that all details including the choice of jurors will be left for decision between you and myself.

Sincerely yours,

(Wm. A.M. Burden)

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	MoMA Exhs.	236.4

Uthus

February 4, 1943.

Mr. Bruce Uthus
Civil Aeronautics Administration
Department of Commerce
Washington, D. C.

Dear Mr. Uthus:

Mr. Burden has informed me that the "Air Neighbors Are Near Neighbors" poster, designed by Mr. Herbert Bayer, is to be paid for on the basis of consultant services at the rate of a certain amount per day for a certain period of time. The price of the poster is $250.00. As Mr. Bayer is not yet an American citizen and therefore not eligible for civil service, we have had the blanks filled out by one of his assistants, Mrs. Joella Levy, to whom payment should be made.

Mr. Burden said that you would clear this. Please let me know if I can do anything to expedite the matter.

Sincerely yours,

Encl.
MW:lf

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	MoMA Exhs.	236.4

THE WHITE HOUSE
WASHINGTON

June 23, 1943

Dear Miss Dudley:

I have your letter dated June 18, 1943, relating the arrangements which you have made to remove the large globe from the Executive Office to your Museum in New York City.

I have advised Mr. Aspinwall how his truck should proceed to the White House. He has been advised that the truck should be here at 11:00 A.M. Friday, June 25, 1943. You should therefore, enter via the Northwest Gate on Pennsylvania Avenue at 11:00 A.M. Friday the 25th, and your admission will be facilitated as much as possible.

Yours very truly,

Howell G. Crim

HOWELL G. CRIM
Chief Usher

Miss Dorothy H. Dudley, Registrar
The Museum of Modern Art
11 West 53rd Street
New York, N. Y.

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The Museum of Modern Art Archives, NY	Collection:	Series.Folder:
	MoMA Exhs.	236.4

June 18, 1943

Dear Mr. Crim:

We have received Miss Grace G. Tully's letter of June 16th informing us that the President has graciously consented to lend his large globe to our next exhibition, AIRWAYS TO PEACE. She suggested that we make arrangements with you for collecting it from the White House.

We have arranged to have the Security Storage Company, 1140 Fifteenth Street, N.W, Washington, collect the globe on June 25th. It will be taken to the Security Storage Warehouse where it will be held until the next morning when it will be picked up by Morgan and Bros., a very reliable New York moving company, and brought to the Museum of Modern Art in New York. I will be in Washington to supervise the loading of each van. The globe will be insured for $4000.00 from the time it leaves the White House until it is returned on July 19th.

I have explained to Mr. Aspinwall, President of the Security Storage Company, that it will be necessary to separate the globe into two hemispheres in order to move it through the doors. I have asked him to have one of his men bring a screw driver with him. Will you please let me know if anything else should be brought by the truck to facilitate the removal of the globe.

I am enclosing a copy of my letter to the Security Storage

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	MoMA Exhs.	236.4

Company. Will you please let Mr. Aspinwall and me know when would be the most convenient time on June 25th for us to collect the globe and what special arrangements should be made for admittance to the White House.

We shall greatly appreciate hearing from you at your earliest convenience.

Very sincerely yours,

Registrar

Mr. Howell G. Crim, Chief Usher
The White House
Washington, D. C.

Encl.

DD:ma

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	MoMA Exhs.	236.4

June 24, 1943.

Dear Miss Tully:

This note will introduce Miss Dorothy Dudley, Registrar of the Museum of Modern Art, who signs below. She is going to Washington herself to supervise the removal of the President's Globe from his study, and its transportation to New York.

Of all the department heads in the Museum Miss Dudley is the most skillful and experienced in these matters. You need have no fear whatever for the Globe and its safety while it is out of the White House. Miss Dudley has already arranged the insurance, in the amount of four thousand dollars. She has also communicated with Mr. Howell G. Crim, as you suggested.

We are most grateful to you for your very kind cooperation in the preparation of this most important exhibition.

With kind regards, I am

Very sincerely yours,

Miss Grace G. Tully
Private Secretary to the President
The White House
Washington, D. C.

MW:lf

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	MoMA Exhs.	236.4

Arrays of Peace
IV
U S WAR DEPT

Copy to Mr. Wheeler

November 17, 1943

Dear Major Davenport:

This is to notify you that the base for the 50-inch globe belonging to President Roosevelt was collected from the Museum by Schacht Associates on November 8th. We have heard from Weber Costello Company, Chicago, that the globe has been received by them.

Sincerely yours,

Registrar

Major B. W. Davenport
Office of the Chief of Staff
War Department
Washington, D. C.

DD:joc

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	MoMA Exhs.	236.4

Airways & Panc

November 2, 1943

Dear Major Davenport:

This is to notify you that the President's globe was released yesterday to Cummings & Engbert, 329 East 29th Street, New York City, as you directed. It was packed in two crates and shipped by railway express to Weber Costello Company, 12th & McKinley Streets, Chicago Heights, Illinois. We are holding the base for the globe until we hear from Schacht Associates and will notify you as soon as it has been collected.

Sincerely yours,

Registrar

Major B. W. Davenport
Office of the Chief of Staff
War Department
Washington, D. C.

DD:joc

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	MoMA Exhs.	236.4

Miss Dudley
Airways to Peace

19

October 25, 1943

Major B. W. Davenport
Office of the Chief of Staff
War Department
Washington, D. C.

Dear Major Davenport;

I acknowledge with thanks your letter of October 23 which we shall be glad to accept as our authorization to release the President's globe from our Airways to Peace Exhibition to Cummings and Engbert and Schacht Associates. We shall turn over the globe ball to Cummings and Engbert and the base to Schacht Associates as soon after October 31 as they call for them. Both parties should address themselves to Miss Dorothy Dudley, Registrar of the Museum, when they call.

With renewed thanks for the generous coöperation we have received from the General Staff and the White House in the matter of this important loan, I am,

Very sincerely yours,

Monroe Wheeler

MW:hw

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	MoMA Exhs.	236.4

WAR DEPARTMENT
OFFICE OF THE CHIEF OF STAFF
WASHINGTON

cc

23 October 1943

Mr. Monroe Wheeler,
Museum of Modern Art,
11 West 53rd Street,
New York City.

Dear Mr. Wheeler:

As we come to the end of October the question again comes up as to the disposition of the President's globe which has been on exhibition in your museum for some time.

Mr. Edward Dodd, of the Office of Strategic Services, has assumed the responsibility of repairing the surface of the globe ball. He tells me that you have quite rightly advised him that you can turn the globe over only to myself or Mr. Crim, of the White House.

I hope you can take this letter as authorization for turning over the globe ball to Mr. Dodd's representative, Cummings and Engbert. This concern will crate the globe and ship it to the Weber-Costello Company in Chicago, where it will be repaired. Our previous agreement with Schacht Associates to have the base repaired still stands, and Mr. Schacht has been requested by me to call for the base shortly after October 31. I think you can safely and confidently dispose of the globe by allowing Cummings and Engbert to take the globe ball and Schacht Associates to take the base. These two concerns will see to it that the two parts are returned to the White House after being repaired.

Your cooperation in this matter is greatly appreciated, and I am glad that the exhibition has been such a success.

Sincerely yours,

B. W. Davenport

B. W. DAVENPORT,
Major, General Staff,
Asst. Secretary, General Staff.

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	MoMA Exhs.	236.4

Miss Dudley
Airways to Peace

October 7, 1943.

Dear Major Davenport:

We are very grateful indeed to hear that you can arrange to take the President's Globe following the close of the exhibition here on October 31. If you could arrange to call for it on Monday, November 1, that would suit our convenience very nicely.

With many thanks, I am

Very sincerely yours,

Major B. W. Davenport, General Staff
War Department
Office of the Chief of Staff
Washington, D. C.

MW:lf

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	MoMA Exhs.	236.4

WAR DEPARTMENT
OFFICE OF THE CHIEF OF STAFF
WASHINGTON

5 October 1943

Mr. Monroe Wheeler, Director,
Exhibitions and Publications,
The Museum of Modern Art,
11 West 53rd Street,
New York, N. Y.

Dear Mr. Wheeler:

I received your letter of September 27 in which you raised the question of the Museum's keeping the President's globe on exhibition for another month, and I was delighted to learn that the globe had proved of such interest to visitors in the museum.

Naturally, I was in no position to say whether or not it would be convenient for you to keep the globe, but I got in touch with Mr. Crim at the White House and asked him please to let you know. As I understand it now, Mr. Crim has written you and stated that the White House would be delighted to have the Museum keep the globe until approximately November 1. Therefore, I will put off making further arrangements for the repair of the globe until the latter part of this month, at which time I will get in touch with you again.

Sincerely yours,

B. W. Davenport

B. W. DAVENPORT,
Major, General Staff,
Asst. Secretary, General Staff.

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	MoMA Exhs.	236.4

September 27, 1943

Dear Major Davenport:

I acknowledge with thanks your kind letter of September 24th regarding the repairs you wish to make on the base of the President's globe, which is now on exhibition at the Museum. Inasmuch as the exhibition continues through the month of October, I wonder if by any chance it will be possible to let us keep it that long before making the repairs. The exhibition has been extended at the instigation of the Board of Education of the City of New York in order that the school children of New York might visit it. The children are now visiting the exhibition in large groups, and the President's globe, of course, means a great deal to them. If you can possibly make arrangements to let us keep the globe for the duration of the exhibition, I am sure it would be greatly appreciated by the many thousands of people who otherwise would not be able to see it.

If, however, you wish to start the repairs on the base before the exhibition closes, I am sure we could construct a temporary base which would permit us to exhibit the globe itself while the ball-bearing base is being repaired. Please let me know what you would like us to do, and we shall be glad to comply with your wishes in the matter.

Sincerely yours,

Major B. W. Davenport
Office of the Chief of Staff
War Department
Washington, D. C.

MW:joc

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	MoMA Exhs.	236.4

As ways & Pave
Washington
(Davenport)

WAR DEPARTMENT
OFFICE OF THE CHIEF OF STAFF
WASHINGTON

24 September 1943

Miss Dorothy H. Dudley, Registrar,
Museum of Modern Art,
11 West 53rd Street,
New York, N. Y.

Dear Miss Dudley:

I believe that Mr. H. G. Crim, Chief Usher at the White House, has written you under the date of September 22 regarding the President's globe and stating that it has been decided to make certain repairs on the globe before it is returned to the White House. The repairs will be made in the base of the globe and it would be appreciated if arrangements could be made with the Museum of Modern Art whereby the museum will store the globe ball during such time as the base is being repaired.

If you find it agreeable, I would like to have a representative of Schacht Associates, Incorporated, call for the base sometime shortly after October 1. The repair work will be done in a shop in New York City and upon its completion the base will be returned to the museum. The globe and base can them be returned to the White House in accordance with arrangements made by you with Mr. Crim.

Will you please let me know whether the above plan can be worked out?

Sincerely yours,

B. W. Davenport

B. W. DAVENPORT,
Major, General Staff,
Asst. Secretary, General Staff.