WAR MANEUVER MODELS SHOWN AT MUSEUM OF MODERN ART

What has been, what might have been, and what yet may be in the war raging all over the world is graphically shown in an exhibition of War Maneuver Models created by Norman Bel Geddes for Life Magazine, which opens today (January 26, 1944) at the Museum of Modern Art, 11 West 53 Street, to remain on view through March 5. This is the latest in a series of exhibitions directly related to the war which the Museum has shown during the past two or three years. Others in the series have been exhibitions on camouflage, occupational therapy, war housing, and the big exhibitions Road to Victory, Wartime Housing and Airways to Peace.

In the War Maneuver Exhibition the models themselves and the enlarged photographs of models (so graphic that they seem to be on-the-spot pictures of the battle action itself) show in realistic detail events that have already taken place: engagements in the South Pacific, landing operations on the beaches of Sicily; battle scenes that might have taken place, such as the attack on Gibraltar which seemed imminent just before the American forces landed on North Africa; and the big event yet to come: the opening of a major second front, which the Geddes models foreshadow as possible through the North Sea coast of Germany, or through Norway.

Perhaps the most interesting part of the exhibition is a large model of an invading army coming up against a river defense line. Model makers of the Geddes organization will build this day by day under the eyes of the spectators who look down from the runway above. Stretching over the greater part of an entire gallery floor is the outline of the terrain to be covered: a river running at an angle through woodland, on one side the enemy, on the other our forces. Day by day the model makers will build the woods on either side of the river—little trees of fine dyed moss hung on tiny armatures of wire, with other vegetation represented by a woolly powder called floe, and in the distance the small village that is the invaders' objective.

The miniature tanks, jeeps, trucks, command cars, boats and other vehicles have already been modeled to scale, in exact detail, of sterling silver. The soldiers and officers of the opposing forces, complete with helmets, rifles and other equipment, are of white metal.
so soft that they can be twisted into realistic postures as they are placed in battle action.

**River Crossing** will be built in four phases, each of which will take several days to complete. Like all the other models and photographs of models in the exhibition, it is an actual Life assignment. Each phase of it will be photographed when finished and then broken up to be reassembled for the next phase. The four phases of **River Crossing** are:

1. Opposing forces drawn up on either side of the river. Artillery duel.
2. The building of pontoon bridges begun under shell fire and smoke.

As the visitor to the exhibition turns the next corner of the elevated runway he has a sudden view of the enormous sea model—a carrier task force stretching out in vast battle formation on the blue waters of the South Pacific, ready to strike at a target 250 miles away. Actually to view this great armada as it is shown in the model, the spectator would need to be 35,000 feet above it. At a scale of one inch to one hundred feet the model is composed of four carriers of the Lexington and Saratoga class, one small carrier of the Long Island class, two battleships, five heavy cruisers, four light cruisers and eight destroyers. The striking force is approximately 350 planes as the Saratoga and others of its class carry approximately 85 planes apiece and the smaller one 40 planes.

Again turning a corner the visitor steps onto a catwalk running at a diagonal six feet above a terrain relief map. If he were at the actual scene, instead of being six feet over it he would be 300 miles above sea level looking down upon the South Pacific area where MacArthur's forces are grimly island-hopping to Tokio. At the far end of the catwalk is the island of New Guinea with Port Moresby beyond its murderous mountains. On the near side of the island are Buna and Lae which our forces crossed the Owen Stanley Ridge to capture. Midway below the catwalk the island of New Britain stretches crookedly like a green alligator, with Cape Gloucester, now in our hands, just across the straits from Buna. The great distance over which we still have to fight our way to capture Rabaul is made clear to the spectator as he compares the extent and relation of one island to another. Just beyond New Britain lies New Ireland, while on the other side of the catwalk are the Solomons.

**The Battle of the Coral Sea** was the first Geddes assignment to
appear on the pages of Life Magazine. Shortly before the United States entered the war, Geddes had begun building our fleet in miniature. With Pearl Harbor his organization started a shipbuilding race with our own Navy. Geddes now has a complete bank of all the fighting ships of all the navies of the world, including even the warships which were blown up by the French at Toulon. He also has a complete set of model airplanes of all known types, miniature tanks, guns, jeeps, trucks, landing craft, men and equipment. A staff of jewelers, working with jewelry and dental tools, is kept busy in the Geddes office constantly building new models and altering old ones to keep pace with actual changes. A cruiser (miniature) can be built in three days and a battleship or carrier in five. The infinitesimal gun turrets on the tiny warships actually turn. The tiny aircraft-carriers have tinier planes on their decks—and so ad infinitum!

Some of the effects achieved in the Norman Bel Geddes models are ship wakes made of soda, distant rain simulated by a screen of slanting wire threads, long smoke trails of cotton-battling on a framework of wire; clouds are often nothing but studio lighting. Life researchers continually supply pictorial guides or written descriptions and specifications, accurate to the nth degree. Once a model has been completed and photographed, it is broken up and the material salvaged for new models. The small individual models, however, are retained in libraries of battleships, trees, war models, armies, etc., so that a large model of any naval engagement anywhere in the world may be set up at a moment's notice. A landing operation, invasion, attacks, retreats, etc. can be contrived in model form almost as quickly.

In the summer of 1942, when an attack on Gibraltar seemed more than a possibility, Life Magazine had Mr. Geddes prepare a series of models showing such an attack. Three of its most striking phases are shown in the exhibition by means of enlarged photographs. The first phase is the attack at dawn by enemy planes met by puffs from anti-aircraft guns. Ships of the British fleet can be seen leaving the protecting arm of the Rock as the enemy shelling begins. The second phase is the full attack with shells bursting and a plane-laid smoke screen blanketing the beleaguered fortress. The third picture shows the Rock at twilight, looking north from Spanish Morocco. The attackers are withdrawing, the shell fire abates and the smoke drifts away. The photographs of the Gibraltar models were never published in Life because the attack did not take place.
Now Life is ready with dramatic photographs of several possible invasion points. One of these is a huge photo-mural showing the second-front invasion as it might look if it were made off the coast of Germany. In the foreground LCT and LCI are landing men and equipment. These landing craft are made on the scale of one inch to ten feet and give a much more detailed and dramatic view than would be possible in photographs of the actual vehicles themselves. The foreground of this picture shows the main vehicles pushing across the island where resistance has practically ceased, while in the background on the other side of the island the landing boats are heading out toward the shore of Germany (seen on the horizon) under cover of air-laid smoke screens. This model has been made with the utmost realism, authentically reproducing houses, buildings, windmills and exact terrain.

Several large murals show a possible opening of the second front by invasion through Norway. In one model the photograph seems to be taken from a ship coming into a small fjord. In another, paratroopers are landed to infiltrate into the Nazi air field outside the town. In still another landing craft enter a Norwegian inlet with assault troops to establish a bridgehead.

Not one photograph or enlargement in the exhibition has been taken of an actual scene. In spite of this the sense of realism is so great, with a wrecked jeep run off the side of a mountain pass, a bulldozer stuck in the mud, a stately convoy steaming in formation out to sea, that it is almost impossible for the spectator not to believe he is seeing by means of the camera the actual event take place. As the weeks go by and the exhibition draws to a close on March 5, some of the scenes on the walls of the Museum may well prove to be prophetic previews of our actual second-front invasion.

Worthen Paxton, Art Director of Life, has been the over-all director of the exhibition. Allan McNab and Thomas Farrer of the Norman Bel Geddes organization have supervised the building of the models and their entire installation.

(Photographs of Gibraltar attack available on request to the Publicity Department of the Museum of Modern Art, 11 West 53 St.)