Prize-winning furniture in the International Low-Cost Furniture Design Competition, sponsored by the Museum of Modern Art and Museum Design Project, Inc., will be exhibited on the first floor of the Museum, 11 West 53 Street, from May 17 through July 16. All the furniture which won awards in the competition, that brought in nearly 3,000 entries from 32 countries, will be on view along with the original designs and models submitted to the jury. In addition, a number of non-prize-winning designs and models, both full scale and quarter-size, will be included in the exhibition because of their special interest and new ideas. The exhibition, which will include some 50 full size models, a dozen quarter-size models and more than 100 original design panels, is being organized by Edgar Kaufmann, Jr., Director of the Competition and Consultant on Design for the Museum.

The furniture is being exhibited at this time to tie in with the release by manufacturers of the actual, mass-produced pieces which will go on sale at retail stores throughout the country on May 17. Two hundred and forty-five retail stores and 22 manufacturers have joined Museum Design Project, Inc. to co-sponsor the enterprise, according to Ira A. Hirschmann, executive vice-president of the group.

Since January 1949 when the awards were given, the prize-winning designs have gone through a year of intensive work so that they could be adapted to the manufacturing procedures which will now allow most of them to be bought by the general public. At present 2 of the prize-winning chairs and all the storage units are on the market, and it is expected that some of the remaining winners will be able to reach the market soon.

In general the chair designs have been only slightly changed in this process of adaptation. More extensive research and increased information have sometimes suggested the substitution of one material for another or of one detail of construction for another. In all cases...
these changes have represented practical improvements for the user and a better price, without sacrificing good looks.

The storage pieces presented a more difficult problem since the prize-winning design by two Englishmen, Clive Latimer and Robin Day, was based on an ingenious British manufacturing process not available in this country. The importation of semi-finished parts was investigated but did not prove economically feasible. Moreover the American manufacturer who agreed to make these pieces showed an exceptional spirit of enterprise on a large scale, for a variety of pieces was required, and consumers would necessarily buy groups of pieces rather than a single item. Extensive redesigning to suit American production facilities was undertaken by the English designers, with Edmond J. Spence as American consulting designer, resulting in a simple and ingenious series of storage cabinets the style and convenience of which represent an unusual achievement in their price range. By special agreement with the English designers and the Museum, this manufacturer has also brought out a series of adaptations which enjoy some of the features of the prize-winning designs but follow more closely conventional details usual in popular American bedroom suites. This device has not only enabled the manufacturer to reduce his costs in producing the prize-winning pieces and hence their retail price, but will also serve to bring some of the good style which marks the work of these Englishmen to those consumers who find it difficult to abandon deep-rooted preconceptions of "what a piece of furniture ought to look like." It is confidently expected that many people who prefer to buy the more cautious transformation of the original design will at a future date be convinced that the advantages of improved design deserve an even more whole-hearted support.

First prize in storage units:
Storage pieces designed by Clive Latimer and Robin Day of London, manufactured by Johnson-Carper Furniture Co., Inc., of Roanoke, Virginia:

Two outstanding features give this design its special value: first, the peaceful, uniform horizontal lines of the drawer faces, accented but not interrupted by the simple finger recesses backed with brushed brass plates; second, the unusual tubular brass supports from which
the cabinets hang at a height which makes for easy access to even the lowest drawer and facilitates cleaning. Another most unusual feature is the way in which both the cabinets and their supports taper back from a wide base to a narrow top. This line gives an air of great stability to the pieces and increases available storage space while seeming to occupy less space at the noticeable table-top level. Besides an ingenious variety of drawer units, a "highboy" with a drop-leaf front has been provided; behind the drop-leaf, which supplies excellent desk space, a number of simple, removable partitions are available but can be omitted if desired. Also, a special high side support has been designed to allow open book shelves on top of the 5-drawer chest unit or the desk unit. Besides emphasizing the unity of the storage space, the system of brass tube supports permits units to be rowed up in an orderly fashion and yet, because of the rhythmically repeated breaks, eliminates all sense of massiveness and avoids the difficulty of precisely matching wood colors.

Adaptations of the Latimer-Day design: These adaptations made by Edmond J. Spence, American consulting designer, enjoy two features which the average American consumer seems to find desirable: a projecting handle on each drawer, in this case gently tapered to provide a comfortable finger-hold; and separate recessed legs on each cabinet. These legs are vestigial reminders of the days when the main framework of the cabinet was exposed in order to raise the storage space off the ground. For generations, however, this has not been the practice, and the exposed legs are extra pieces rather than a part of the framework. This system of supporting the cabinets from underneath rather than up the sides allows them to be lined up cheek-by-jowl, which in some cases would be advantageous. Important accessory pieces of furniture have been supplied also: a variety of suitable mirrors, a dressing table and bench, a bed and bed table.

Both the original and the adaptation are made with a subtle two-tone effect; the tops are of light grey walnut and the face and ends are of light cream Korina. The 3-piece suite of the original design will retail for approximately $373. The same number of pieces in the adaptation will retail for approximately $245.
Co-winner of first prize in seating units:
Chair designed by Don K. Knorr of San Francisco, manufactured by Knoll Associates, New York:

Light, flexible and elegant, this chair develops one of the most ingenious structural schemes seen in modern furniture today. In order to provide the complicated curves which conform to human anatomy, a piece of flat sheet metal has been cut to the proper shape and bent around to meet itself in a seam in the seat of the chair. This structural feature and the simple shape and attachment of the legs, facilitates the manufacture and storage of the piece. A special flexible paint is used so that it will not spring when the sheet metal gives.

A simple rubber pad may be added to this chair for increased comfort, allowing a wide variety of upholstery material to be used. The legs of the chair are rubber tipped to provide stability and to prevent undue wear of floor coverings. The chair is available in red, black or yellow enamel with either black or white legs. It will retail for approximately $27.50 without pads.

Co-winner of the first prize in seating units:
Chair design by Georg Leowald of Berlin-Frohnau, not now being manufactured:

Among the many German entries in the competition, this one by Professor Leowald presented a most advanced concept of technology. He has envisaged a continuous seat and back form of molded plastic sliding in metal grooves into a variety of slab-like plastic side elements. The parts would thus become interchangeable, and shipping space could be reduced. Many technological details could not be solved with the limited facilities available in post-war Germany and would require further investigation along lines which have not yet been undertaken in this country. Professor Leowald envisaged his chairs in integrally colored plastic.

Co-winner of second prize in seating units:
Chair designed by Charles Eames and the University of California, Los Angeles Campus, group; manufactured by Herman Miller Furniture Company, Zeeland, Michigan:
This molded fibre glass chair is in many respects an astonishing fulfillment of the ideas developed by Charles Eames and his occasional associate Eero Saarinen in 1940 when similar designs of theirs won first prize in the Museum of Modern Art's Organic Design Competition. The 1940 chairs produced in laminated plywood were the point of departure for many interesting designs by both these men which are now on the market, but the chair presented here is closer to the original concept than any of the variations they have carried out during the 10-year interim. Now it has been possible to find a plastic substance and a molding process in which this kind of shape can be produced economically. Chairs with complicated molded curves like this have always presented a special problem in the attachment of legs, but this time the problem has been solved with unusual directness and neatness.

Perhaps the greatest advantage of this chair is the extraordinary lustre and soft, smooth surface of the plastic which, strengthened by the silky threads of glass imbedded within it, quickly absorb room temperatures. Never before used in furniture, this airplane plastic is virtually indestructable and withstands stains and mars. Both to the eye and to the touch this plastic is a most desirable addition to the gamut of materials available for modern rooms. Unlike similarly shaped chairs, this one permits many shifts of position which, it has been discovered, is a necessary characteristic of a chair that is to be comfortable. Besides a four-legged base, the chair is also available with a central supporting pedestal, as a rocker and with a wire cat's cradle base. The plastic is integrally colored off-white, medium grey, gun metal or a soft light grey-brown. The four-legged and cat's cradle versions will retail for about $32.50; the other 2 versions for about $39.50.

Co-winner of second prize in seating units:

Chair by Davis J. Pratt of Chicago; not now being manufactured:

One of the most important problems in furniture design is that of a really soft, comfortable chair. Few modern designers until now have chosen to try their hand at it. Davis Pratt went to one of the forms of cushioning most available in modern life - an inflated tube - particularly because the technical problems had in large part been solved by the automobile industry. After some experimentation, Mr. Pratt determined that maximum comfort could be secured by containing an inflated ring within a fairly heavy envelope which distributed
resilience over a large surface. He also determined that by separating the ring into two parts, one for the seat and the other for the back, comfort could be considerably increased. These procedures have allowed him to avoid the unnecessarily uniform resilience provided in air mattresses, for example, as well as the somewhat personal touch which anyone will remember who has sat within an inflated inner tube on some summer picnic.

The rubber-tipped metal legs devised by Mr. Pratt may be folded nearly flat for convenient shipping, which is also aided by the other collapsible features of the chair. Estimated retail price is about $30.

Third prize in seating units:
Chair designed by Alexey Brodovitch of New York City, not now being manufactured:

For many years Mr. Brodovitch has been working on the problem of inexpensive knock-down furniture with plastic covered resilient cord, flat plywood and dowel pins as the main ingredients. The plywood parts are shaped to be cut from standard sheets with a minimum of waste. Besides the exceptionally simple and comfortable rocker which was awarded third prize in this competition, Mr. Brodovitch submitted a rich variety of other models, some with legs. His presentation also indicated the possibility of weaving some sort of tape at right angles to the cord, thus providing a less transparent surface, and the possibility of using detachable pads for those who do not like the idea of sitting directly on the cord. Out of these simple elements, many of the pieces of furniture needed in the home could be supplied, and it is indeed Mr. Brodovitch's system as well as his individual designs which seems worthy of attention.

Honorable Mention in storage units:
Storage piece designed by Ernest Race of London, not now being manufactured:

Ernest Race's simple scheme for a wardrobe impressed the jury because of its neat structure and good looks. The fact that it did not present a solution to the storage problem that would be widely acceptable in this country did not make it suitable material for a prize. But the jury was unanimous in its desire to call attention to its virtues.
Honorable Mention in seating units:

Chair designed by John Q. Merrill and John B. McMorran of the Massachusetts Institute of Technology, not now being manufactured:

The ingenious little chair developed by these two young MIT students would seem to be one of the handiest ideas yet devised for the small home. In a single unit a chair is provided that is suitable for use at a table or, with the help of an extremely simple adjustment, for relaxed conversation. The basic idea could be developed in almost any material. A wide variety of appearance is feasible, and many different effects could be achieved.

Design-Research Team Entries:

In addition to the prize-winning pieces, a notable feature of the exhibition will be the furniture presented by five design-research teams (the sixth, the Eames-U.C.L.A. team, having been awarded a second prize for their chair).

The research team composed of Donald A. Wallance, designer, with the Midwest Research Institute in Kansas City and the Yale University School of Forestry was the one to focus in greatest detail on storage units. Long experience with the United States Army in developing durable mass-produced furniture for married officers' quarters all over the world gave Donald Wallance especially useful experience for this work. Together this designer and the organizations developed one of the most perfectly finished and rationally detailed storage units of all those entered in the competition. In this design a metal frame is fabricated in flat unit sections easily joined together to create cabinets of varying dimensions. These frames are closed in by special composition panels with wood veneer exteriors. When drawers or doors are opened, the metal slides and catches give an unusually smooth and quiet action. The drawers themselves are molded in one piece with rounded inside corners throughout for easy cleaning. At present these designs are being carefully studied by a manufacturer for possibility of production.

One of the Armour Research Institute teams was guided in its design by Harry Weese, who, with his brother-in-law Benjamin Baldwin, was a prize winner in the Museum of Modern Art's Organic Design Competition 10 years ago. In addition to a bureau, this group presented an idea for a bookcase which folds flat for transportation but the
various members of which are already joined at the corners by flexible sheet metal inserts acting as hinges. This device eliminates much labor and many of the unsatisfactory results that can occur when knock-down furniture is assembled by inexpert owners. Opened to its full size, this shelf unit is held rigid and true by means of welded metal rods prolonged to form the supports.

Marcel Breuer, assisted by expert technical advice from the United States Forest Products Laboratory, submitted a team entry which showed a further development of the theme of the resilient chair frame. A quarter of a century ago Mr. Breuer was among the first to develop this theme in tubular and strap metal, and for many years he has worked on developing the same idea for laminated wood. In this chair various sections of the frame are united by a concealed flexible rubber element giving the frame resilience even beyond that inherent in the thin laminated sections.

The team which won the prize for its research report with a most detailed and informative document was a second Armour Research Institute team whose chief designers were Robert E. Lewis and James Prestini. In its entry this group concentrated its effort on the development of a large, comfortable one-piece chair in molded plastic designed to issue from its mold fully finished with integral coloring and perfect surface. This ambitious program was carried out with a wealth of carefully checked devices resulting in an armchair which seemed somewhat overscaled for the average small home, a factor which in no way diminished its many other virtues.

Besides taking into account almost all the living problems of the home, the Massachusetts Institute of Technology design-research team, in which Carl Koch was the principle designer, devised several interesting items. Perhaps of special note is a folding chair with frame in T-shaped sections, designed to be made in some light weight rigid material such as metal or plastic. A comfortably resilient seat was designed to be constructed of flat metal springs creating a simple and slim effect quite unlike the usual thick box shapes which conceal coil springs.

Individual Entries:

In addition to the prize-winning and team entries already described, the exhibition will contain many interesting entries by competitors.
from this country and abroad whose ideas are strikingly good looking or inventive. Many of these will be presented in the form of drawings, frequently in bright colors, while others will be shown as full scale or quarter-scale models. Among the drawings shown, many represent an extraordinary skill and freedom of draftsmanship, and often introduce human figures in lively fashion to demonstrate the utility and adaptability of their concepts. Every conceivable technique is represented from the strictest mechanical drawing to brilliant kodachromes. An interesting example of parallel thinking on both sides of the Atlantic is presented by the reclining chair by Charles Eames and that by Willy and Emil Guhl of Switzerland, both developing the theme of a large molded shell. Among the more unexpected designs is a Norwegian laminated wood chair with a divided back which provides support for each shoulder blade, while the arms are bent over into 2 legs on each side. The entire construction is silhouetted out of one sheet before bending into shape.

On this side of the ocean, wood has been used in quite different fashion by Abel Sorensen. Wood slats are glued to canvas providing a flexible seat and back which is guyed to a frame that could be of wood or metal. Theodore Luderowski of Pontiac, Michigan, submitted an interesting idea which combines the principles of the rocking chair and the Morris chair with unusual directness and success.

Many other designs from many countries presenting additional ideas will be exhibited.