

Aug. 13, 1946.

H. A. ARMBRIGHT

2,405,808

DEMONSTRATION LAYOUT PLANNER

Filed April 17, 1944

2 Sheets-Sheet 1

Fig. 1.

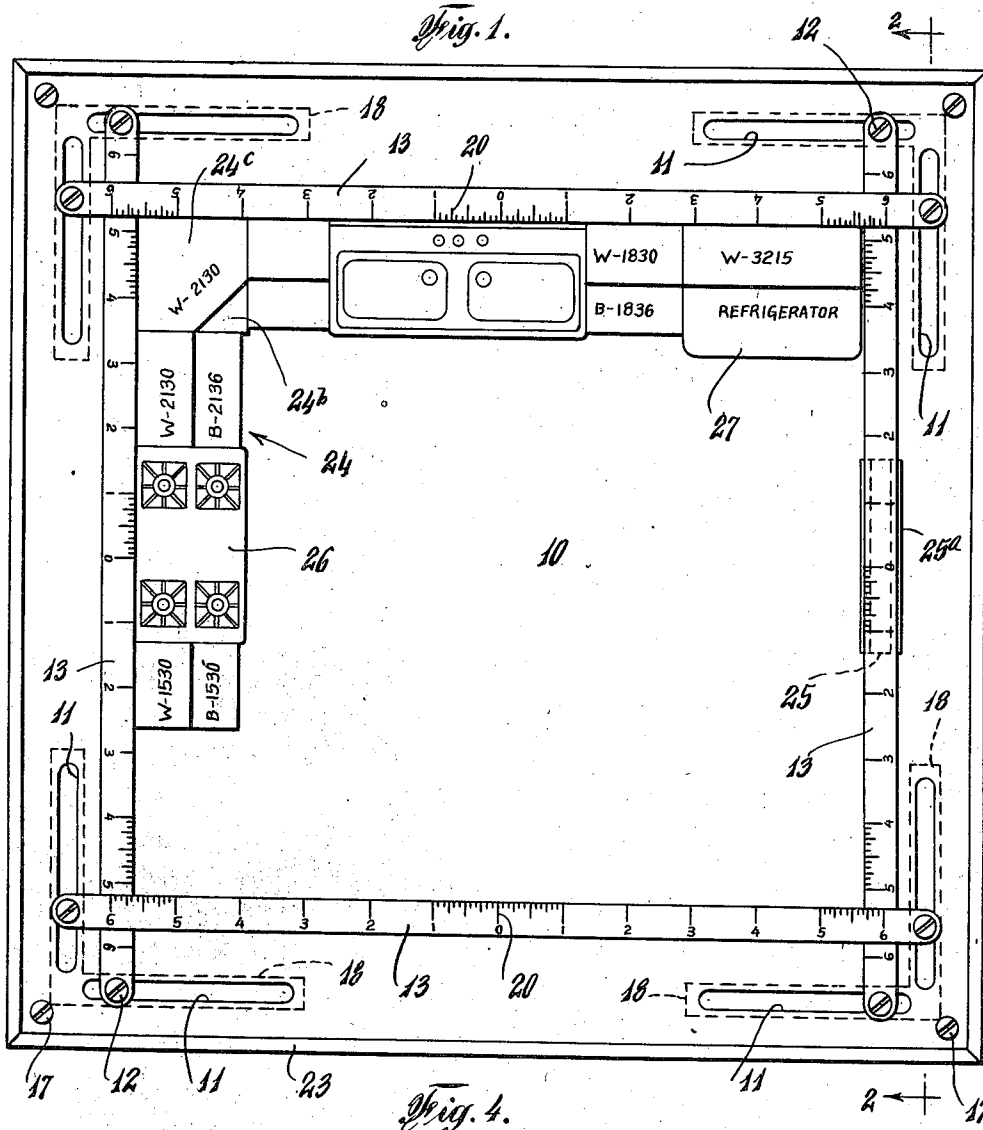
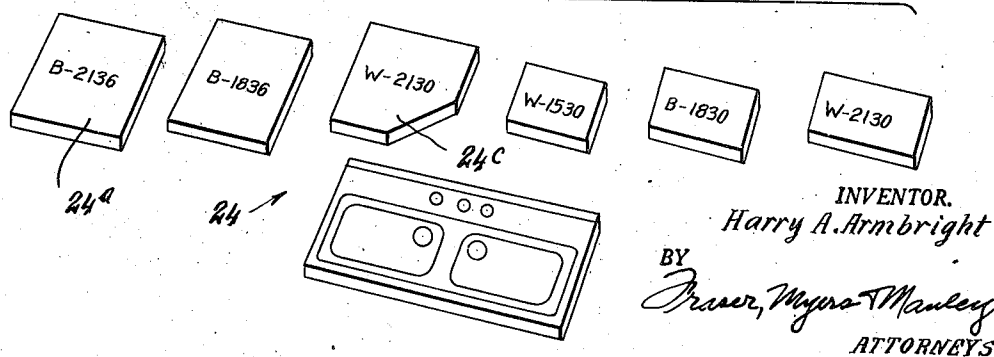


Fig. 4.



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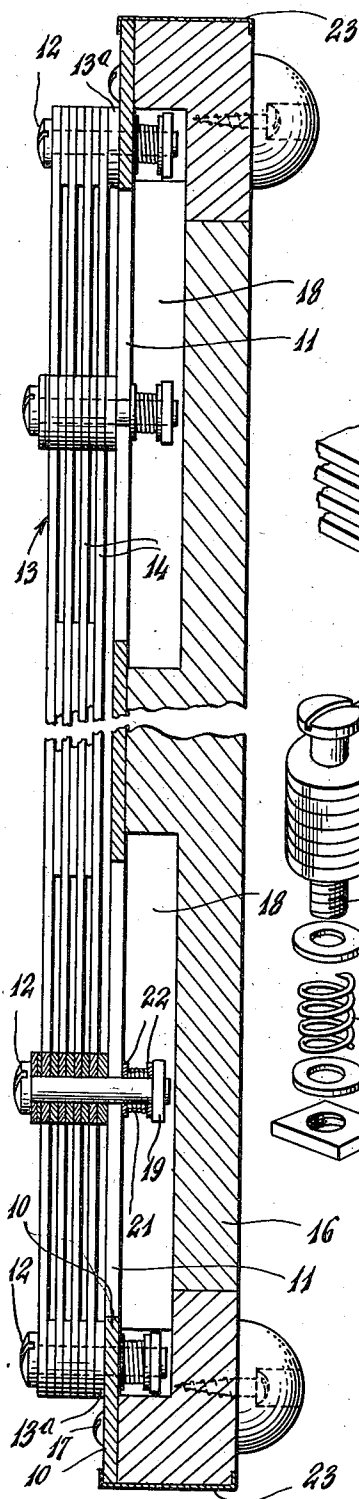


Fig. 2.

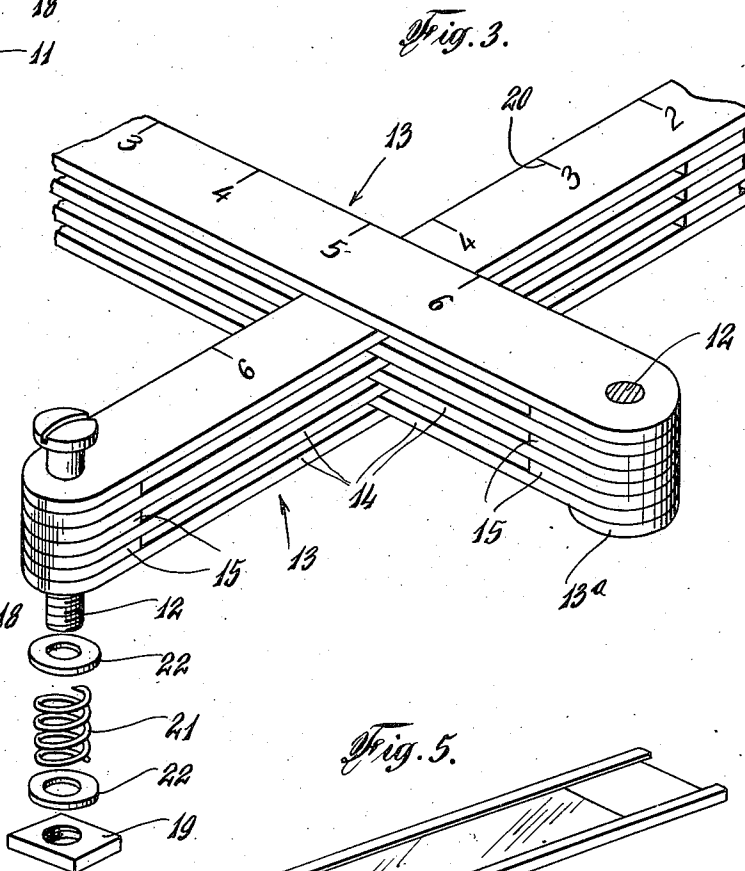


Fig. 3.

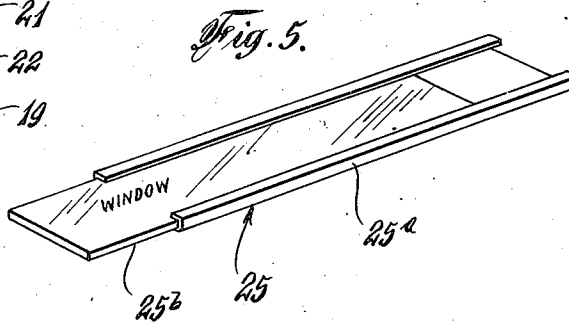


Fig. 5.

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UNITED STATES PATENT OFFICE

2,405,808

DEMONSTRATION LAYOUT PLANNER

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Application April 17, 1944, Serial No. 531,407

4 Claims. (Cl. 35-7)

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My invention relates to a demonstration layout planner adapted for use in demonstrating and facilitating the making of layouts of equipment, articles of furniture and the like, in a room of definite dimensions, so that a lay person can readily visualize the precise arrangement and location that such articles will occupy when installed or set in place in such room. More specifically it relates to a modern kitchen planner whereby a salesman can demonstrate to a prospective purchaser of kitchen equipment units, just how the kitchen would look with the various units installed in place.

The modernization of kitchens and other rooms, for example, playrooms, in a home with standard equipment and articles of furniture is at the present time proceeding at an accelerated rate. Kitchen equipment and articles of furniture for such purposes are now being manufactured in units of various sizes and packaged for direct shipment to the purchaser who, independently of, or with the aid of a salesman, chooses and orders the desired equipment which, upon being received, must be installed or set in place. Of course, to arrive at a fair idea of how the various articles will fit into a particular room, the purchaser or salesman, after measuring the room and deciding what articles are to be placed therein, must make numerous calculations to ascertain just how said articles will best fit into the available space. It is apparent that such procedure is not only time-consuming, but it also fails to present to the purchaser either a clear picture of the proposed arrangement or insure that said arrangement and disposition of the articles, when installed, will be the best possible. Moreover, errors are liable to be made in the calculations and should they occur, will give rise to considerable annoyance and its attendant expense and loss of time in exchanging the articles.

My present invention has been designed to overcome all of the aforementioned objections in that it eliminates all calculations, provides for freedom of re-arrangement of the articles until the preferred arrangement is decided upon, and enables the salesman or the demonstrator to quickly prepare a scale drawing of the approved arrangement, thereby enabling the purchaser, upon receiving the individually packaged articles, to have them installed according to the scale drawing. More specifically, my invention consists of a platform having two pairs of relatively movable parallel rail members having scaled measurements thereon, adapted to be adjusted to correspond to the four walls of the room to be equipped or fur-

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nished, and for cooperation with said platform and walls there is provided a set of tiles or blocks made to the same scale as the measurements on the rail members, each tile corresponding to a particular article of equipment, furniture or filler piece and bearing an index marking for identification, so that by positioning these tiles on the platform against the rail members and by superimposing certain tiles upon one another, any desired plan or arrangement of equipment may be arrived at. And where it is desired to make a diagram or sketch of the arrangement decided upon, it is merely necessary to place a sheet of paper on the platform beneath the rail members and the tiles and use the rail members and individual tiles as templets for drawing on the paper the room outline and the arrangement of the separate pieces of equipment disposed therein. The invention will be better understood from a consideration of the detailed description which follows, when considered in connection with the accompanying drawings, wherein:

Figure 1 is a top plan view of a demonstration layout planner embodying my invention.

Fig. 2 is a section taken substantially along the plane of the line 2-2 of Fig. 1.

Fig. 3 is a perspective view of the crossed ends of one pair of rail members showing their interdigitated relationship.

Fig. 4 is a perspective view of a plurality of the tile members forming part of my invention.

Fig. 5 is a perspective view of a window strip usable with my invention.

Referring to the drawings, the reference character 10 represents a flat, substantially rectangular platform of any suitable material such as wood, plastic, indurated fibre or the like, having formed therein, preferably adjacent the corners thereof, slots 11 disposed parallel to the sides of the platform and adapted to receive therethrough bolts 12 which serve to hold rail members 13, each consisting of a plurality of superposed elements 14, in assembled relation. To hold the elements 14 in properly spaced relation, there are provided washers or spacing members 15 of a thickness substantially equal to or slightly greater than the elements 14. There are two pairs of rail members 13 mounted to form a rectangle, with the elements of each rail member interdigitated with the elements of another rail member whereby the rail members are adapted to be movable relatively to one another at right angles to each other to provide substantially rectangular areas of varying dimensions on the platform, it being understood that the relative movements

are controlled by the movements of the bolts 12 in the slots 11. The platform 10 is preferably mounted upon a rectangular frame 16 by any suitable securing means, such as wood screws 17, the frame having grooves 18 therein in underlying relation to the slots 11 in the platform, the width of said grooves 18 being such as to accommodate nuts 19 adapted to engage on the bolts 12 in a manner to be slidable, but non-rotatable, in the grooves 18. The topmost element 14 of each of the rail members 13 is preferably formed of transparent plastic material and each rail member has scale measurements 20 thereon visible through the topmost element 14, whereby the rail members may be adjusted relatively to each other to correspond to the longitudinal dimensions of the four walls of a room which the rail members in adjusted position are intended to represent. For holding the rail members in such adjusted position while at the same time to permit of their movement across the platform, the bolts 12 by which the rail members are held onto the platform, are provided with spring-tensioning means such as coil-springs 21 mounted between the holding nut 19 and the rear face of the platform. To compensate for the overlapping relation of the bottommost elements of the rail members, filler washers 13a are provided. For convenience, washers 22 are disposed at the opposite ends of the springs 21 to provide proper bearing surfaces therefor. In view of the construction and arrangement of the rail members on the platform as hereinabove described, it will be apparent that the rail members are first assembled on the platform and the latter is then mounted on the frame 16 with the nut-engaging ends of the bolts slidably disposed in the grooves 18. After assembly, the device may be mounted in a suitable finishing frame indicated by the reference numeral 24.

For cooperative engagement with the rail members, there are provided a plurality of tiles or blocks collectively represented by the reference character 24, each of said tiles being preferably of rectangular form and made to the same scale as the measurements on the rail members, and each tile corresponding to a particular article of equipment, furniture, or filler piece, which is to be disposed within a room, the layout of which is to be planned. Each tile also carries an index 24a thereon for identifying the particular article of equipment or furniture which it represents. For example, the base cabinet tiles may have an index including the letter B, a wall cabinet may have an index including the letter W and tiles representing a refrigerator, a stove or a sink may have arbitrary indexes. Certain of the tiles, however, do not represent articles of equipment or furniture but are used as filler pieces for disposition in the layout to take care of corners or other locations in the room where standard articles of equipment are not available, for example, tile designated 24b represents a corner filler piece. The tiles 24 are of various sizes, corresponding to the dimensions of standard articles of equipment which are available for installation and said tiles are preferably made of greater thickness than the individual elements 14 constituting a rail member 13, but of less thickness than the total thickness of the rail members, so that at least two tiles, for example, W-1830 and B-1836 in Fig. 1, may be superimposed on one another when placed in abutting relation to a rail member, without danger of passing under or between the spaced elements of the rail member.

If desired, the location of doors and windows in the room may be represented and definitely located on my device, and in Fig. 5 I have shown an adjustable member 25 consisting of a pair of telescopic elements 25a and 25b dimensioned to be inserted between two superposed elements 14 of a rail member 13 as shown in Fig. 1, to definitely locate such window in the room layout being planned. Of course, similar members may be employed to locate other windows or doors in the room.

In the use of my demonstration layout planner let it be assumed that it is desired to modernize a kitchen measuring approximately 11' 4" by 10' 6" and that it is desired to use and retain the stove 26 and the refrigerator 27 now contained in the kitchen, either in the locations that they now occupy or in a preferred rearrangement thereof. The salesman or demonstrator will first set his rails on the platform so that they will correspond to a room having the desired dimensions. He will then take tiles corresponding in size to the basic elements of equipment such as the stove, the sink and the refrigerator, and dispose them along the rail members at the positions where it is desired that they be located. Then, through the use of B-indexed tiles representing base cabinets, the remaining space along one or more walls may be filled in to locate the positions of such cabinets and then W-indexed tiles may be superposed upon these base tiles to represent the location of wall cabinets to be located in the kitchen. In this connection it will be apparent that, inasmuch as the wall cabinets are of less depth than the base cabinets, by placing the corresponding wall cabinet tiles in superposed relation to the base cabinet tiles, the relationship of the base and wall cabinets will stand out quite prominently. With respect to taking care of a corner of the room whereat it is not convenient or desirable to place a base cabinet, a filler piece such as tile 24b may be inserted thereat, and, if desired, a corner wall cabinet such as 24c may be superimposed upon the tile 24b representing the filler piece. Inasmuch as kitchen equipment is now manufactured and packaged in standard sizes for direct shipment to the purchaser, it will be appreciated that by locating the definite positions that various articles of equipment will occupy in a given room by the use of my invention, a prospective purchaser will obtain a definite idea and visual picture of the final arrangement of such equipment in the kitchen. It will also be apparent that by the use of my demonstration layout planner, the tiles may be rearranged to represent various layouts until a preferred one is decided upon. When such preferred layout is chosen a permanent record thereof may be readily obtained by placing a sheet of paper on the platform and extending under the rail members and then using the rail members and the individual tiles as templates, a diagram of the room and the various articles of equipment to be disposed therein can be readily drawn in outline and suitably notated to provide a ready reference for both the purchaser and the installer, when the packaged equipment is delivered.

For convenience, my demonstration layout planner may be mounted and carried in a suitable container (not shown) which may have compartments for the tiles to facilitate their use.

It will be apparent that my present invention, although primarily designed for planning and demonstrating the layout in modernizing kitchens, is equally applicable in demonstrating the

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layout of other rooms of a home, such as a play-room which may employ standard equipment, and for demonstrating and planning the layout of showrooms, stockrooms and the like. Accordingly, it is to be understood that my invention is not limited to the precise structure and arrangement of parts hereinbefore described, but may be varied within the range of mechanical skill without departing from the spirit of my invention, as defined in the accompanying claims.

What I claim is:

1. A device of the character described comprising a platform, two complementary pairs of rail members on said platform, each pair having its individual members disposed substantially at a right-angle to one another and to a complementary member of the other pair, at least one complementary pair of said rail members having its members relatively movable and adjustable to each other while maintaining the substantially right-angular relationship therebetween and having scaled measurements thereon whereby a substantially rectangular space provided by the adjustment of said movable rail members on said platform may be made to correspond to the measurements of a given room, cooperating parts on the platform and on the movable rail members for guiding said rail members in their movements, each of the rail members of the pair of movable rail members consisting of a plurality of spaced superposed elements with the superposed elements of one rail member being interdigitated with the elements of the other rail member, and a plurality of rectangular tiles, dimensioned to the same scale as the rail members and adapted to represent articles of equipment, removably positionable on said platform in engagement with at least one rail member and with one another.

2. A device of the character described comprising a platform, two complementary pairs of rail members on said platform, each pair having its individual members disposed substantially at a right-angle to one another and to a comple-

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mental member of the other pair, at least one complementary pair of said rail members having its members relatively movable and adjustable to each other while maintaining the substantially right-angular relationship therebetween and having scaled measurements thereon whereby a substantially rectangular space provided by the adjustment of said movable rail members on said platform may be made to correspond to the measurements of a given room, cooperating parts on the platform and one the movable rail members for guiding said rail members in their movements, each of the rail members of the pair of movable rail members consisting of a plurality of spaced superposed elements with the superposed elements of one rail member being interdigitated with the elements of the other rail member, and a plurality of rectangular tiles, dimensioned to the same scale as the rail members and adapted to represent articles of equipment, removably positionable on said platform in engagement with a rail member, said tiles being of less thickness than the total thickness of a rail member whereby at least two tiles may be superimposed on one another in engagement with at least one rail member without passing under or between the interdigitated elements of the rail members to represent the relationship of articles of equipment to be demonstrated by the device.

3. A device according to claim 2, wherein both complementary pairs of rail members are movable relatively to each other and each rail member consists of a plurality of spaced superposed elements which are interdigitated with the elements of the adjacent rail members.

4. A device according to claim 2, wherein a longitudinally adjustable member consisting of a pair of telescoping elements and representing an opening is adapted to be mounted and frictionally held on a rail member to locate the position and width of such opening in the representation of the given room.

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