

Nov. 29, 1949

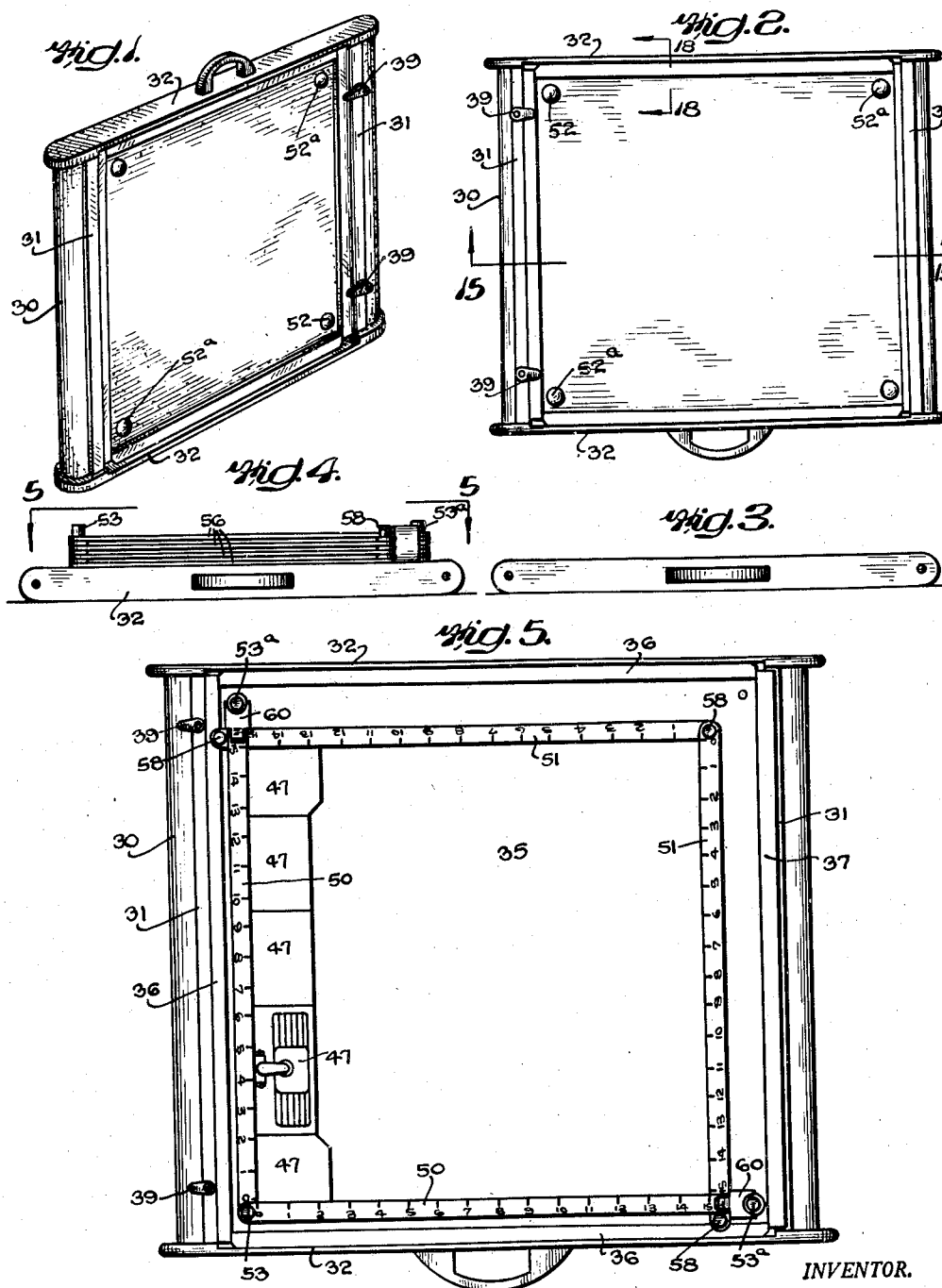
J. F. HORTON, JR., ET AL

2,489,779

DEMONSTRATION KIT

Filed Jan. 10, 1947

4 Sheets-Sheet 1



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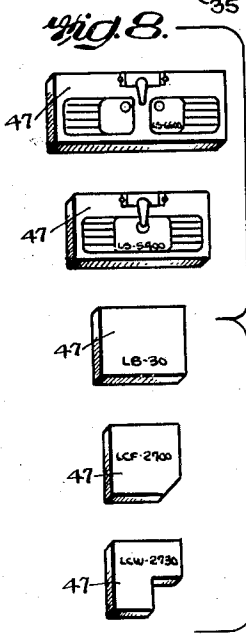
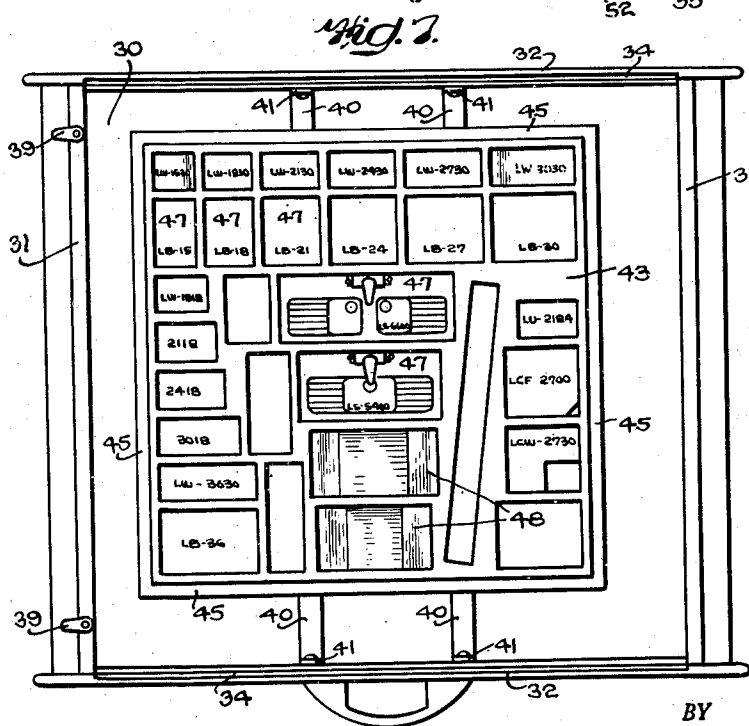
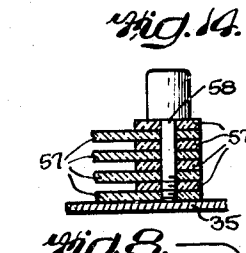
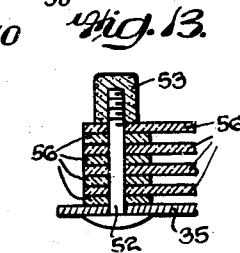
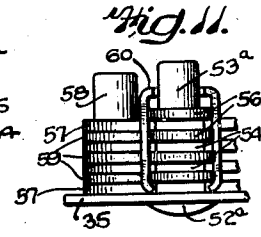
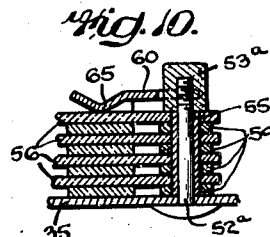
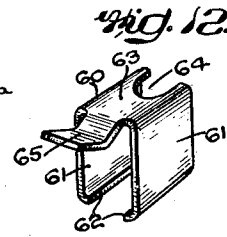
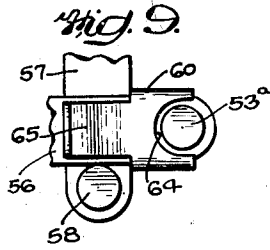
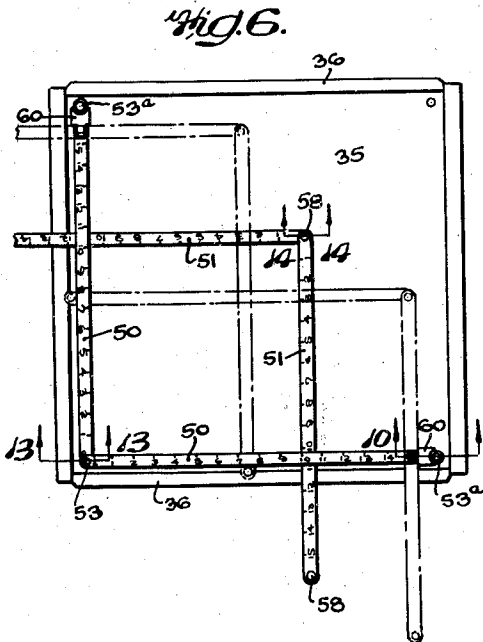
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4 Sheets-Sheet 2



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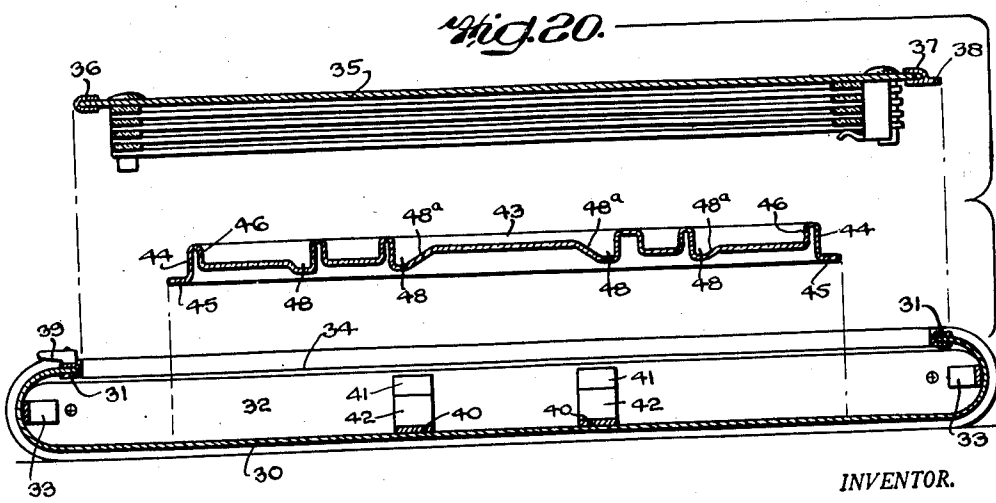
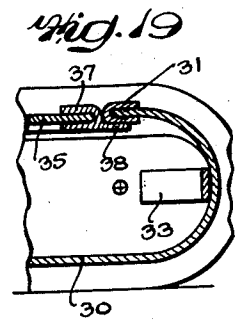
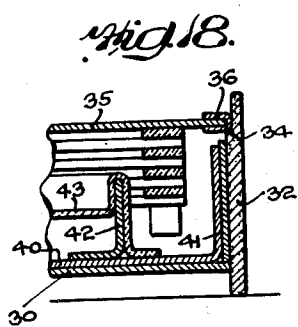
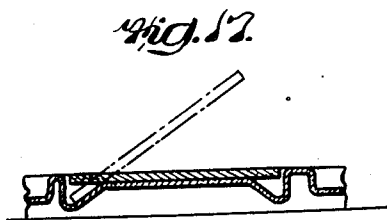
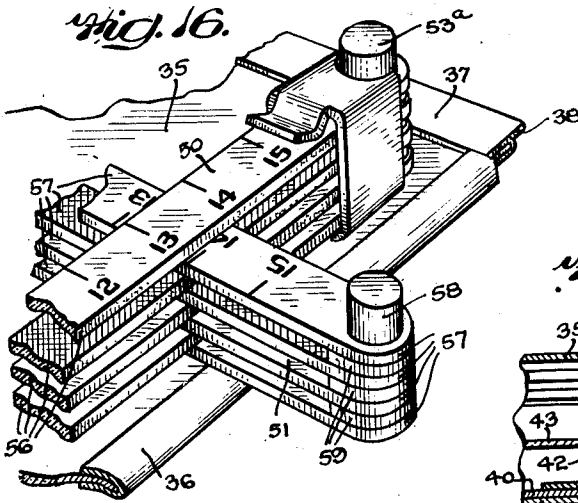
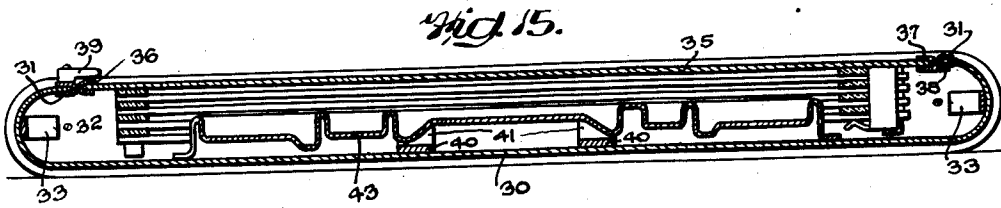
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4 Sheets-Sheet 3



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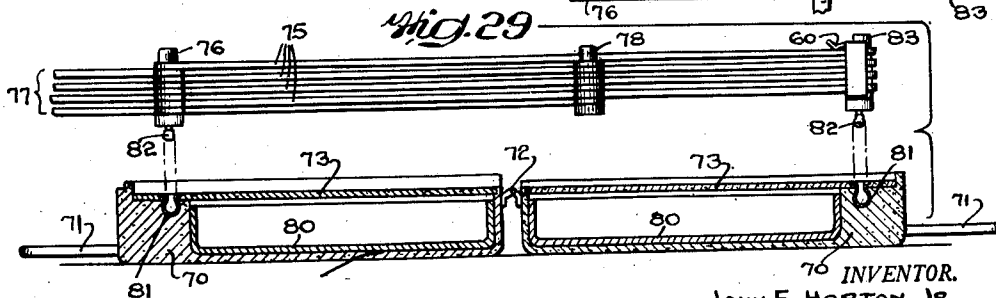
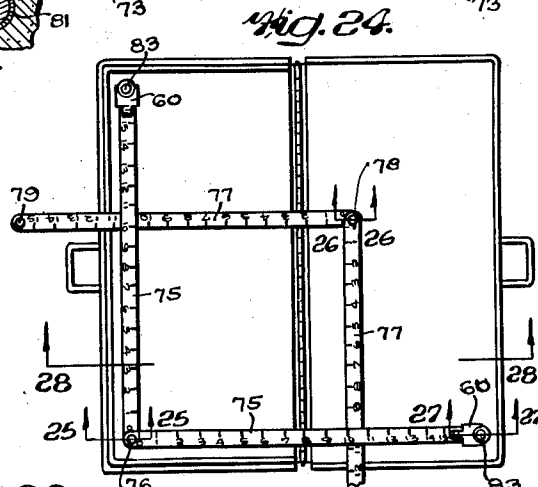
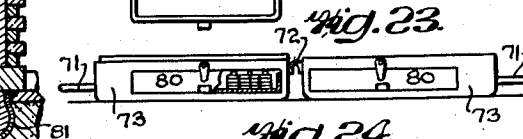
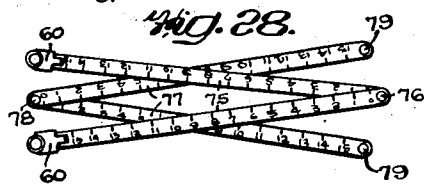
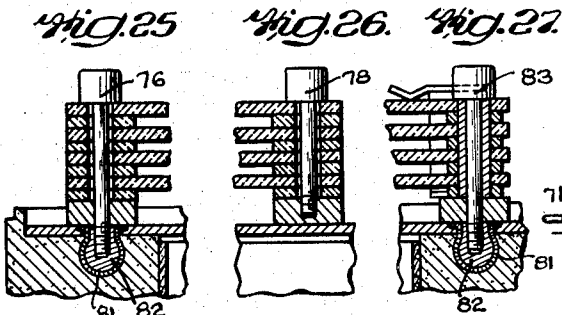
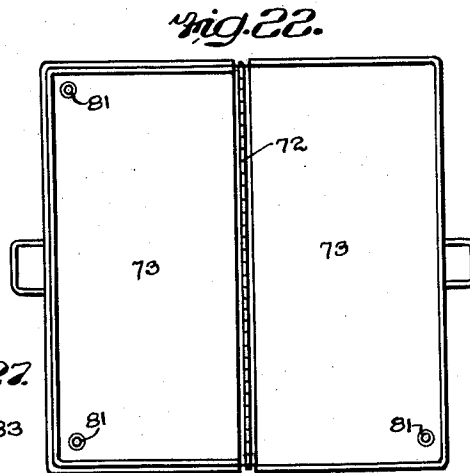
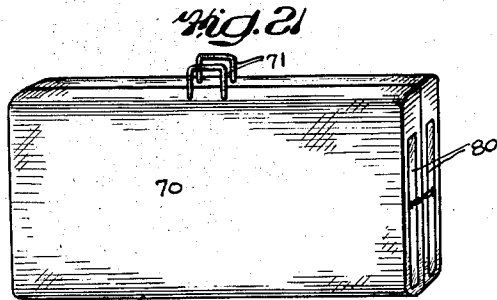
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4 Sheets-Sheet 4



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UNITED STATES PATENT OFFICE

2,489,779

DEMONSTRATION KIT

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Application January 10, 1947, Serial No. 721,266

8 Claims. (Cl. 35—53)

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The present invention relates generally to a relatively small portable unit which is particularly designed to aid and assist in the arrangement of a variety of units in a room and is more particularly intended for such use in connection with planning a kitchen and purchasing the several pieces of equipment which customarily go into a kitchen. It will be understood, of course, that this same unit may be employed for the planning and organizing of other rooms and spaces.

One of the aims of the present invention is to provide a unit of the type described which is inexpensive to manufacture, which is efficient and practicable in use and which presents a neat and attractive appearance.

Another object of the present invention is to provide a portable unit of the class described which may be manufactured of commonly available plastic sheet material and which presents a compact unit containing all of the necessary elements.

A further object of the present invention is to provide a unit of the type described which is in the form of a casing normally having disposed within it all of the operative elements, and also having a removable and reversible lid or cover which carries, normally on its inner face, a set of rails adjustable to the scale and dimensions of the room, the unit being further characterized by the provision of means whereby the lid or cover may be removed from the housing and employed with the adjustable rail exposed for manipulation and for the distribution within the selected space of a series of tiles which constitute miniature representations of the pieces of equipment.

A still further object of the invention is the provision in the casing of a removable compartmented tray for accommodating the miniature representations of the equipment in the form of suitably shaped tiles, said tray being designed and constructed to facilitate ready removal of the tiles from their respective compartments.

Another object of the present invention is to provide two pairs of area-defining relatively adjustable rails, each of which is preferably in the form of a plurality of vertically spaced parallel elements united at their ends, one pair of such rails being fixed in position upon the supporting platform and the other being so interfitted therewith as to be positionally movable upon said platform while restrained from separation therefrom.

Another object of the present invention is to

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provide relatively simple means for maintaining the rails firmly in adjusted position.

Other objects of the present invention will become apparent to persons skilled in the art, the invention being illustrated in the accompanying drawings and described in the following specification; it being understood, however, that these do not constitute a limitation upon the present invention and are merely illustrative and that variations of the embodiments shown herein will be apparent to persons skilled in the art.

In the drawings,

Figure 1 is a perspective view of one form of the invention;

Figure 2 is an elevational view thereof;

Figure 3 is an end view of Figure 2;

Figure 4 is an end view similar to Figure 3 with a lid or cover reversed and mounted on the housing or casing;

Figure 5 is a face view of the unit in the condition shown in Figure 4 and taken on line 5—5 of Figure 4;

Figure 6 is a more or less diagrammatic illustration of the manner in which the adjustable rails may be employed;

Figure 7 is a face view of the unit with the lid or cover removed and showing the disposition of the tile tray within the casing;

Figure 8 shows some of the tiles that may be employed;

Figure 9 is a plan view of a free end of one of the fixed rails and showing the adjustable clip;

Figure 10 is a sectional view on line 10—10 of Figure 6;

Figure 11 is an end view of one end of one of the fixed rails;

Figure 12 is a perspective view of the adjustable clip;

Figure 13 is a sectional view taken on line 12—13 of Figure 6;

Figure 14 is a sectional view taken on line 14—14 of Figure 6;

Figure 15 is a sectional view on line 15—15 of Figure 2;

Figure 16 is a fragmentary perspective view of one corner of the cover or lid;

Figure 17 is a fragmentary sectional view of a portion of the tile tray, particularly illustrating the manner in which the tiles are removed from the tray;

Figure 18 is a sectional view on line 18—18 of Figure 2;

Figure 19 is a fragmentary sectional view of the housing and cover or lid;

Figure 20 is an exploded view showing the housing tile tray and cover;

Figure 21 is a perspective view of a modified form of the invention;

Figure 22 shows the unit of Figure 21 in its open condition;

Figure 23 shows an end view of the unit in its open position;

Figure 24 shows the unit in its open position with the removable scale rails mounted thereon and ready for use;

Figure 25 is a fragmentary sectional view on line 25—25 of Figure 24;

Figure 26 is a fragmentary sectional view on line 26—26 of Figure 24;

Figure 27 is a fragmentary sectional view on line 27—27 of Figure 24;

Figure 28 is a plan view of the scaled rails in their collapsed position; and

Figure 29 shows the rails ready to be assembled with the casing.

In the planning of the disposition of the numerous items of equipment that go into a modern kitchen, it is desirable that the home owner should visualize the arrangement of the equipment in advance of its purchase and installation. For this purpose the present invention includes a plurality of small units preferably in the form of flat tiles which are shaped to correspond to the outer floor dimensions of each of the pieces of equipment. If desired, each of these tiles could also bear on its face a design which would correspond to the general appearance of the particular piece of equipment.

In accordance with the principles of the present invention a board or similar platform is provided upon which the adjustable rails are mounted, the rails bearing scale indicia, so that the rails may be adjusted to enclose within them the floor space of the kitchen under construction to scale. In addition, the unit of the present invention includes means for resiliently clamping the rails in their relatively adjusted position so as to minimize the possibility of displacement of the rails from their adjusted position during the demonstration planning when the tiles are being moved about within the space enclosed by the rails.

The present invention provides a portable unit which houses all the above elements and which is employed by the equipment salesman to demonstrate to the prospective purchaser the several possible arrangements of the several types of equipment, in the several sizes available, it being understood that with this unit the tiles may be shifted about from one position to another until the desired arrangement is obtained.

In one form of the present invention a casing is provided having a removable cover or lid, the adjustable rails being so mounted on one face of the cover that they may be normally disposed within the casing when the same is closed by its cover. In use the cover or lid is removed from the casing and reversed thereon, thus exposing the rails to view and permitting their manipulation.

Referring now more particularly to the drawings, it will be observed that the casing comprises a main body portion 30 having a flat bottom and rounded side walls, the edges of which latter may be finished off by the crimped U-shaped metal strips 31—31. The casing also includes opposite end walls 32—32 which are respectively fixed to the body portion 30 in any desired manner, as by angle elements 33. The end walls are preferably rabbeted as shown at 34 to provide a shoulder rest for the corresponding edges of the cover

or lid 35. The body 30 may be formed of any suitable material, preferably plastic sheet material.

The cover or lid 35, which is also made of plastic or other suitable sheet material, is finished on three edges thereof by marginally extending U-shaped strips 36, similar to the strips 31—31 on the marginal edges of the side walls of the casing body 30. The fourth edge of the cover 35 is marginally fitted with a U-shaped finishing strip 37 having a longitudinally extending flange 38. When the cover is placed on the casing in its normal position its flanged edge 38 is inserted under one edge 31 of the casing body 30 while its opposite edge is disposed flush with the opposite edge 31 of the casing body. The remaining two edges of the lid rest on the rabbeted shoulders 34—34 of the casing end walls. Pivoted latches 39 carried by one edge 31 of the casing serve to engage the adjacent edge of the lid to secure the latter in closing position upon the casing body 30.

A pair of straps 40, extend in parallel relation along the bottom of the casing body 30, these straps being secured in position by securing their opposite upturned ends 41—41 to the end walls 32 of the casing. Angle supports 42 are fixed to the straps 40, and serve to engage the tile tray 43 in the manner shown in Figure 18 so as to removably retain the tray in position within the casing.

The tray 43 is shaped as shown in Figure 20 and is provided with a downwardly dependent outer wall 44 having a flange 45 which rests on the bottom of the casing body 30. The wall 44 forms, with the side wall 46 of the adjacent compartment, a channel within which is frictionally retained the upstanding portions of the supports 42. The tray is thus held firmly in position within the casing.

The tray 43 is shaped to provide a plurality of different sized compartments to receive the different tiles 47, which latter are miniature reproductions, on the same scale as the scale of the rails, of the several pieces of equipment. The tiles may bear, if desired, suitable pictorial representations of various pieces of equipment and may also bear catalogue numbers specifically identifying the equipment.

The bottoms of the compartments are each provided at one or both ends with depressions 48 which extend the full width of the compartment, each depression being provided with a sloping wall 48^a against which one end of the tile may be depressed. By means of this device the tile in any compartment may be removed therefrom merely by depressing one end of the tile, causing the tile to assume the inclined position shown in dotted lines in Figure 17, so that it can be picked up by the other hand.

As has been stated earlier, the cover or lid 35 may be held in firm assembly on the casing as shown in Figures 1, 2, 3, and 15 to close the casing, but when the apparatus is to be used for the purpose intended the latches 39 are moved to open position, whereupon the cover 35 may be removed from the casing body and replaced thereon in inverted position, the tray 43 with its contained tiles 47 having first been removed from the interior of the casing and set aside within reach for subsequent use.

In such inverted position of the cover 35, the rails, which are mounted upon the inner face of the cover, become available for desired manipulation. In its preferred form, the unit of the

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present invention employs one pair of rails 50—50 fixedly secured to the cover in right-angular relation, and a second pair of rails 51—51 relatively movable with respect to the fixed rails.

Each of the rails consists of a plurality of vertically spaced, parallel elements, preferably in the form of flat strips, the topmost strip of each rail bearing suitable scale indicia. The fixed rails 50—50 each composed of the flat strips 56, are respectively disposed adjacent a pair of adjacent edges of the cover and so extend approximately at right angles to each other. Figure 13 shows the manner in which the two rails 50—50 are connected to each other and to the lid 35. It will be seen that the superposed strips 56 of one rail 50 serve as spacers for the strips 56 of the second rail 50, the ends of all these interdigitated strips being secured together for permanent assembly upon the lid by means of a headed bolt 52 having a nut or cap 53. The outer ends of each of the fixed rails 50 are secured to the cover or lid 35 as shown in Figure 10, a headed bolt 52^a being employed in cooperation with a nut 53^a for this purpose.

However, in the case of the outer end of each rail 50, spacers 54 are interposed between the several strips thereof, and, if desired, a tubular spacer 55 may be interposed between the cover 35 and the nut or cap 53^a in embracing relation with respect to the shank of the bolt 52^a.

The movable and adjustable rails 51—51, each of which is composed of the flat strips 57, are in substantially all respects identical with the fixed rails 50—50 and are assembled in substantially the same manner except that they are not immovably anchored to the cover. Moreover, before the assembly of the strips which constitute the rails 51—51 is completed they are first interdigitated with respect to the strips of the fixed rails 51—51 and their free ends are then secured together. Thus, the movable rails 51—51 which are captured by the fixed rails and held in assembly therewith, are nevertheless still free to be moved about to any desired position upon the cover or lid 35 so as to define a space between the four rails of any desired dimension.

Thus, as shown in Figure 14, the strips of one of the movable rails 51—51 serve as spacers for the strips of the other of said movable rails, the adjoining ends of both of said rails being secured together by means of a headed bolt 58, the shank of which is threaded into the lowermost strip 57 of the assembled rails. At their free ends, the leaves or strips of each of the movable rails 51—51 are held in assembly by the same type of device as that shown in Figure 14, except that spacers 59 are employed between the strips, these spacers being in the form of washers or the like embracing the shank of the screw bolt 58 and disposed between the leaves, as shown most clearly in Figure 16.

It will now be understood that the rails 51—51 may be moved with reference to the fixed rails 50—50 so as to define any desired space all as indicated by the dotted lines in Figure 6. The indicia on the topmost leaf in each of the rails gives the dimensions of the space which is defined or formed by the four rails, and facilitates lining up the two sets of rails to define any desired space having opposite parallel sides.

When the movable rails 51—51 are adjusted to positions that correspond to the dimensions of the room, it is desirable that the rails remain in this position. For this purpose a clip 60 is employed, which construction is best illustrated

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in Figure 12 of the drawings. Each of the fixed rails 50—50 is slidably fitted with one of these clips 60, the opposite sides 61—61 of which frictionally engage the opposite side edges of the rail upon which the clip is mounted. The opposite side portions 61—61 of each clip are provided at their lower edges with inturned flanges 62 which respectively engage the lower face of the fixed rail 50, while the top portion 63 of the clip, which overlies the upper face of the rail, is provided at its rear end with a recess 64 to accommodate the nut 53 of the bolt 52. The forward end of the upper portion 63 of the clip is provided with an extension 65 which presses firmly against the upper face of the rail 50. From the foregoing it will be apparent that when the movable rails are moved to any desired adjusted position relatively to the fixed rails, the clips 60 may be shifted along their associated fixed rails into positions wherein the forwardly extending tongues 65 thereof overlie the upper surfaces of the positionally adjusted movable rails, to thereby secure the interdigitated rails firmly together and so minimize the possibility of the rails accidentally being moved out of their proper relative position.

With the rails in their relatively adjusted position, the salesman proceeds to demonstrate to the prospective purchaser the several possible arrangements of the several pieces of equipment by the manipulation of the several tiles 47 until a suitable arrangement is obtained. The notations of the catalogue numbers appearing on the face of the tiles are then recorded.

Figures 21 to 29, inclusive, show another form of the invention which departs from the form thus far described in that the casing is made of two hinged parts and the two sets of rails are pre-assembled and removably mounted so that they may be collapsed and stored within the casing when not in use; and may be mounted on top of the casing when desired and be otherwise manipulated in the same manner as thus far described. This modified arrangement thus reduces substantially in half the size the casing required for a planning layout of the size illustrated in the arrangement of Figures 1 to 20.

In this modified arrangement, the casing 70, provided with handles 71, is made of two halves hinged together as shown at 72. When opened to the position shown in Figures 22 and 24 each half of the casing is provided with a fixed cover plate 73, these cover plates lying in the same plane and serving conjointly as a working platform for manipulating the tiles 47 in the same manner as in the previous form of the invention.

As in the previous form of the invention, one pair of rails 75, pivoted to each other as at 76, constitutes the fixed pair of rails, each of these rails being fitted with a slidable clip 60 as in the previously described arrangement. The other pair of rails 77 constituting the movable set, are pivotally connected together as at 78, and are interfitted with the rails 75, the free ends of the strips forming each of these movable rails being held together by means of bolts 79 or the like.

Thus the two pairs of interdigitated rails constitute a unitary assembly, which may be collapsed into compact form as shown in Figure 28.

Each half of the casing 70 is preferably provided with slidable drawers 80 which may be adapted to receive and house the collapsed rails 75 and 77 and also the tiles employed in this apparatus.

For the purpose of facilitating the mounting and ready detachment of the assembled rails relatively to their working platform, the rails and casing are provided with detachable fastening devices. Thus, the casing 70 is provided with female fastening elements 81 at each of three corners, these being respectively adapted to quick-detachably receive cooperating male fastening elements 82 suitably fitted upon the lower extremities of the pivot bolt 75 and the bolts 83 which are employed to secure together the outer free extremities of the elements which constitute each of the fixed rails 75—75.

It will be apparent that when it is desired to employ the apparatus shown in Figures 21 to 29 inclusive, the casing is opened into its condition shown in Figure 22, whereupon the rails are operatively secured thereto by the simple expedient of interengaging the snap-fastening elements 81 and 82 to secure the rails 75—75 in fixed position upon the expanded work platform. Thereafter the apparatus would be operative as in the case of the previously described modification.

It will be understood, of course, that the present invention is susceptible of various other changes and modifications which may be made from time to time without departing from the real spirit or general principles of the invention, and it is accordingly intended to claim the same broadly as well as specifically as indicated in the appended claims.

What is claimed as new and useful is:

1. In combination: a portmanteau adapted to be opened to present a flat surface of substantial area, two pairs of scaled rails disposed upon said flat surface, each rail being composed of a plurality of vertically spaced, flat members having their corresponding ends secured together, one of said pair of rails being fixed to said surface in right angular relation and the other pair of rails being connected together at their corresponding ends with the spaced members thereof interleaved with those of said fixed pair of rails whereby said second pair of rails is held captive by the fixed pair of rails while permitting relative movement between said pairs of rails, and a slidable clip carried by each fixed rail, said clip having a forwardly extending tongue adapted to overlie the interleaved fixed and movable rails in the zone of their crossing to press them firmly together and so prevent their accidental displacement from adjusted position, said clip being shiftable to and from said crossing zone.

2. In a device of the class described, two pairs of scale-bearing rails, each rail comprising a plurality of vertically spaced, flat members, each pair of said rails being connected together at corresponding ends thereof, the ends of the members of each rail serving as spacers for the members of the connected rail and one rail of each pair being interleaved with one rail of the other pair, means at the outer end of each rail uniting the ends of the members in permanent assembly, whereby one pair of rails is held captive by the other pair, said pairs thereby having relative movement to adjust the space enclosed by said rails to any desired dimensions, one of said pairs of rails being immovably fixed upon a supporting platform therefor and the other pair of said rails being movable about said platform relatively to said fixed pair of rails.

3. In a device of the class described, two pairs of scale-bearing rails, each rail comprising a plurality of vertically spaced, flat members, each pair of said rails being connected together at

corresponding ends thereof, the ends of the members of each rail serving as spacers for the members of the connected rail and one rail of each pair being interleaved with one rail of the other pair, means at the outer end of each rail uniting the ends of the members in permanent assembly, whereby one pair of rails is held captive by the other pair, said pairs thereby having relative movement to adjust the space enclosed by said rails to any desired dimensions, and slidable means associated with one pair of rails operative to secure the interleaved rails in positionally adjusted relation, said means being shiftable into and out of engagement with the other pair of rails.

4. In a device of the class described, two pairs of scale-bearing rails, each rail comprising a plurality of vertically-spaced flat members, each pair of said rails being connected together at corresponding ends thereof, the ends of the members of each rail serving as spacers for the members of the connected rail, one rail of each pair being interleaved with one rail of the other pair, means at the outer end of each rail uniting the ends of the members in permanent assembly, whereby one pair of rails is held captive by the other pair, said pairs thereby having relative movement to adjust the space enclosed by said rails to any desired dimensions, one of said rails being immovably fixed, and means for holding said rails in adjusted position, said means being slidable on one rail into and out of engagement with an interleaved rail.

5. In a device of the class described, a platform, two pairs of scale-bearing rails mounted upon said platform, each rail comprising a plurality of vertically spaced, parallel elements, each pair of said rails being connected together at corresponding ends thereof, the ends of the elements of each rail serving as spacers for the elements of the connected rail and one rail of each pair being interleaved with one rail of the other pair, means at the outer end of each rail uniting the ends of the elements thereof in permanent assembly, one of said pairs of rails being immovably fixed upon said platform in substantially right-angular relation and the other pair of said rails being held captive by said fixed pair for movement freely about the surface of said platform to positionally adjust the rails to define an area of a desired dimension, and means carried by one pair of rails and adjustable relatively to the other pair to press the interleaved elements together in the zone of their crossing whereby to prevent accidental displacement of the rails from their adjusted position relatively to each other, said means being shiftable to and from said crossing zone.

6. In a device of the class described, a platform, two pairs of scale-bearing rails mounted upon said platform, each rail comprising a plurality of vertically spaced, parallel elements, each pair of said rails being connected together at corresponding ends thereof, the ends of the elements of each rail serving as spacers for the elements of the connected rail and one rail of each pair being interleaved with one rail of the other pair, means at the outer end of each rail uniting the ends of the elements thereof in permanent assembly, whereby one pair of rails is held captive by the other pair, said pairs of rails thereby having relative movement to adjust the space enclosed by said rails to a desired dimension, and means for securing said interleaved rails upon said platform with one of said

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pairs of rails immovable and the other of said pairs of rails movable relatively to said platform.

7. In a device of the class described, two pairs of scale-bearing rails, each rail comprising a plurality of vertically spaced parallel elements, each pair of said rails being connected together at corresponding ends thereof, the ends of the elements of each rail serving as spacers for the elements of the connected rail and one rail of each pair being interleaved with one rail of the other pair, means at the outer end of each rail uniting the ends of the elements thereof in permanent assembly, whereby one pair of rails is held captive by the other pair, said pairs of rails thereby having relative movement to adjust the space enclosed by said rails to a desired dimension, a portmanteau adapted to be opened to provide a substantially flat surface to which one pair of said rails may be immovably fixed and upon which the other pair of rails is freely movable relatively to said fixed pair of rails.

8. In a device of the class described, two pairs of rails, each rail comprising a plurality of vertically spaced, parallel elements, each pair of said rails being pivotally connected together at corresponding ends thereof, the corresponding ends of the elements of each rail serving as spacers for the connected rail and one rail of each pair being interleaved with one rail of the other pair, means at the outer end of each rail uniting the

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ends of the elements thereof, each pair of rails thus being held captive by the other pair and providing for relative movement of said rails to adjust the space enclosed by the rails to a desired dimension, a platform for supporting said rails in operative position, and coacting means carried by the platform and one pair of said rails for securing said latter rails in fixed position upon said platform while permitting the other pair of rails to be freely movable relatively to said fixed rails.

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