

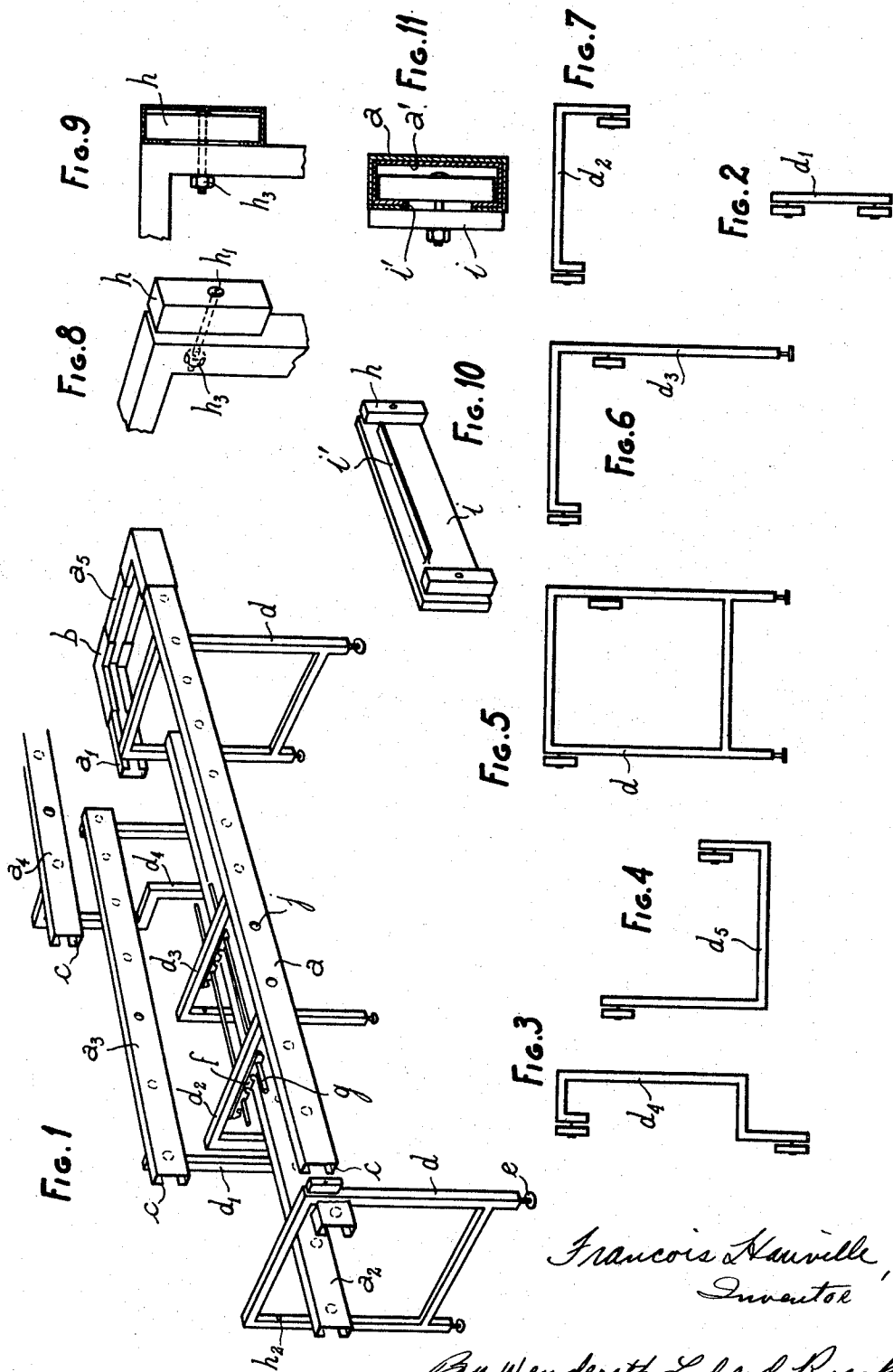
June 27, 1967

F. HAUVILLE
LABORATORY TABLE

3,327,657

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2 Sheets-Sheet 1



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FIG. 12

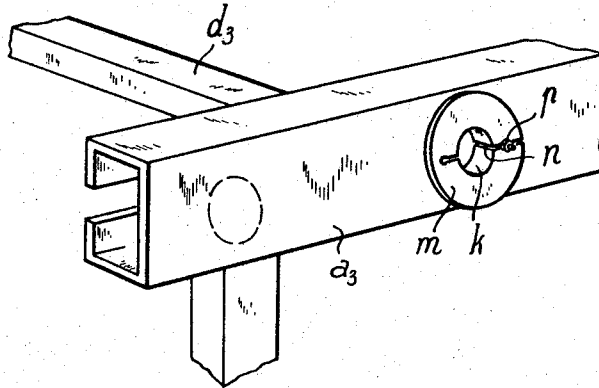


FIG. 13

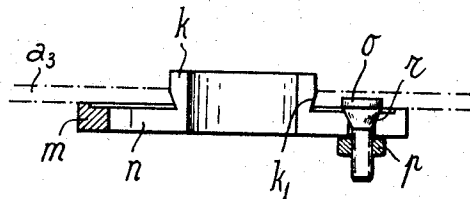
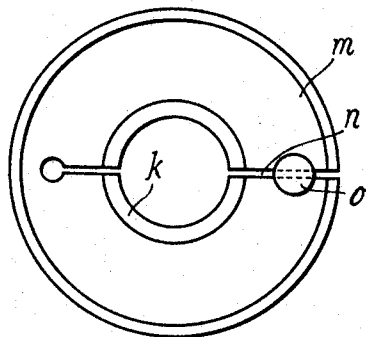


FIG. 14



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LABORATORY TABLE

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4 Claims. (Cl. 108—153)

ABSTRACT OF THE DISCLOSURE

A laboratory table constructed from prefabricated and interchangeable elements wherein certain elements are slide ways which may be secured by clamping to other elements. Certain elements are also telescopic and a block is used which may be set in various positions to clamp the elements together. Also means are provided whereby accessories may be easily mounted and dismounted at various positions upon the table.

This invention relates to a laboratory table consisting of an assembly of prefabricated elements, this table being adapted to be assembled in a quick and a simple manner on the spot, that is, in the room where the table is to be utilized, without requiring any special arrangement of this room, the structure of the table according to this invention lending itself to many modifications, especially with a view to adapt it to any desired changes in its conditions of use.

Tables and notably laboratory tables are already known wherein the frame structure consists of interchangeable, mass-produced standard elements of a shape consistent with their function contemplated in actual use, these elements being adapted to be disposed in any desired relative positions and fastened to one another by means of various assembly means.

However, known tables of the type broadly set forth hereinabove are frequently objectionable on account either of the complicated configuration of the component elements or of the considerable, redundant number of "models" or "types" of these elements; other inconveniences of known tables of this type are difficult assembly, or defects, or an insufficient sturdiness of the means provided for assembling these elements.

It is the essential object of the present invention to prove a table consisting of simple, easily assembled elements adapted to fit rapidly and easily into one another and which are rigidly fastened to one another by likewise simple, easily operated means.

The table according to this invention is essentially characterized in that its horizontal elements are shaped to constitute slideways adapted to be engaged by clamping members carried by its vertical elements, so that these vertical elements are fastened to the horizontal elements by simply locking said clamping members in the selected positions.

According to another feature characterizing this invention the horizontal elements constituting said slideways consist of C-sections formed with partially bent flanges.

According to a further feature of this invention the clamping member associated with the vertical elements consist of a block corresponding in shape to the inner contour of the slideways to be engaged thereby, the

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clamping action being obtained by simply screwing the block on the slideway.

According to a complementary feature of this invention, the slideway-forming horizontal elements are telescopic and assembled by means of a connecting member comprising two clamping blocks and having a projection adapted to engage the flanges of the slideways.

It is another feature of the present invention that the slideway-forming horizontal elements constitute the means for supporting the instruments, devices and equipments necessary for utilizing the table.

Furthermore, this invention is characterized by the feature that the slideway-forming horizontal elements have holes partially formed or prepared therein (preferably during the manufacture of these elements) in which the apparatus, devices, equipments, etc., can be anchored, mounted or fitted, this device consisting of a split socket formed with a similarly split plate and comprising means for clamping the socket in the hole engaged thereby, said means consisting of a screw formed with a tapered portion and co-acting with a nut adapted, when tightened, to expand the socket and thus lock same in the slideway-forming element, as a consequence of a tapered portion formed in its section engaging the wall of the selected hole.

The various features and advantages of this invention will appear more clearly from the following description given with reference to the accompanying drawings in which typical forms of embodiment of the invention are illustrated diagrammatically by way of example. In the drawings:

FIGURE 1 is a perspective view showing the frame structure of the table according to this invention, with parts removed to afford a clearer understanding of the arrangement;

FIGURES 2 to 7 inclusive are elevational views showing the various component elements of the table;

FIGURE 8 is a perspective view showing on a larger scale the assembly or clamping block;

FIGURE 9 is a fragmentary elevational and sectional view of an assembly;

FIGURE 10 is a perspective view showing a junction and reinforcing member;

FIGURE 11 illustrates an assembly obtained by using an element of the type shown in FIGURE 10;

FIGURE 12 is a perspective view showing a horizontal slideway-forming element provided with a device for fitting apparatus, equipment, etc. on said elements;

FIGURE 13 is a sectional view of the device, and

FIGURE 14 is a plane view of the device.

As shown in FIGURE 1, the frame structure of the table consists only of separate, mass-produced elements having a shape corresponding to their specific function, all these elements being adapted to be easily and rapidly assembled on the spot, as will be explained presently. The horizontal elements constituting slideways as shown at a , a_1 , a_2 , a_3 consist of preferably rectangular or C sections having bent flanges c . The slideways a , a_1 constitute the longer sides of the table of which the small sides consist of elements a_5 of similar configuration connected to the slideways by means of sliding brackets b . These various slideways are supported and/or braced by a series of elements d , d_1 . . . d_5 fitting on the slideways and consisting all of tubular sections of square or rectangular contour but having however a different shape according to their specific function in the finished table.

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The elements d and d_3 to be inserted (see also FIGURE 6) constitute the carrier legs provided preferably with leveling jacks e . Element d_2 (see also FIGURE 7) constitute a bridge bracing the slideways a and a_2 and acting, together with the insert elements, as means for supporting the table top. The elements d_2 and d_3 further comprise a horizontal portion on which racks f are secured, the purpose of these racks consisting in holding and guiding the piping g for delivering miscellaneous fluids to the table.

The elements d_1 and d_4 (see FIGURE 2) constitute the uprights fitting on the slideways a_2 and/or a_4 , to which the other slideways a_3 and a_4 acting as distributor ducts are fastened.

If desired, elements such as d_5 are also provided which when assembled with slideways a and a_2 and disposed in proper relative spacing to each other, constitute the frame structure of a complementary tray to be fitted underneath the table.

From the foregoing it is clear that any desired insert element adapted to fit on the slideways and to fulfil the scope contemplated may be designed.

The elements to be fitted or inserted, which are designated herein by the reference symbol d , are assembled in the following manner with the slideways a :

Each insert element d comprises at least one clamping member consisting, in the examples illustrated herein, of a block h (see FIGURE 8) secured at the proper location on said element by means of a bolt h_1 extending through a hole h_2 and engaged by a nut h_3 .

When assembling the elements the block h is slipped into the selected slideway and simply locked by tightening the nut h_3 at any desired position.

As a consequence of the configuration chosen for the various component elements, the relative binding of these elements is particularly efficient and reliable, as clearly shown in FIGURE 9.

It will be readily understood that the present invention affords a great versatility in the construction of a laboratory table. Thus, a table can be erected on the spot without difficulty by using extremely simple tools, for example a single spanner, and in addition the table structure may be modified at will as a function either of the operating conditions contemplated or of the room in which it is to be used, by removing or adding such or such elements. In this respect it may be advantageous to utilize telescopic sliding elements, were it only for varying at will the over-all or longitudinal dimensions of the table. In the case of an extension it is advantageous, in order to avoid any undesired sag while properly securing two sliding elements a and a_1 end to end (see FIGURE 11), to introduce between these two elements a connecting member i (FIGURE 10) provided with clamping blocks h and also with a longitudinally extending lip i_1 . Thus, a rigid fastening of the telescopic elements is obtained.

From the foregoing it is clear that the table may be rendered independent of the floor and walls of the room in which it is placed, whereby no preliminary arrangements or fitting of these floor and/or walls is required. Moreover, with a view to further increase the flexibility of utilization of the table constituting the subject-matter of this invention, the slideways such as a are provided with hole marks j formed at spaced intervals along these elements, these marks permitting the perforation of through holes by using simple tools for fitting therein the anchoring pins or rods of any desired apparatus or equipment.

All the piping may consist of flexible hoses carried by the elements themselves; some of these elements, such as, in the example illustrated, the slideway a_2 , being also adapted, as a consequence of their specific configuration, to house conduits such as electrical distributor conduits, junction boxes, etc.

FIGURES 12 to 14 illustrates by way of example the device of this invention for fitting apparatus, equip-

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ments and the like on the horizontal, slideway-forming elements.

As shown more particularly in FIGURE 12, this device consists of a socket k inserted in the selected hole of element a_3 . This socket k comprises an integral flange m engaging the outer face of the element. A diametral slot n is formed through the socket and flange assembly. In the portion of slot n extending radially through part of the flange m a countersunk hole is formed and adapted to receive a flat-headed screw o co-acting with a nut p and formed with a tapered portion r . The socket k is also formed with a female tapered portion k_1 .

After having inserted the socket k into the hole and positioned the screw, with the nut on the outer side, this nut is simply tightened whereby, as a consequence of the tapered portion of said screw and of the presence of said slot in the socket the latter is caused to expand so that the tapered portion k_1 of the socket will tend, as a function of the tightening action thus produced, to be strongly pressed against the walls of the hole. Thus, a particularly reliable tightening action is obtained on the element which is therefore ready to receive any desired equipment or apparatus.

Although the present invention has been described in conjunction with preferred embodiments, it is to be understood that modifications and variations may be resorted to without departing from the spirit and scope of the invention, as those skilled in the art will readily understand. Such modifications and variations are considered to be within the purview and scope of the invention and appended claims.

What I claim is:

1. A laboratory table consisting of mass-produced prefabricated and interchangeable elements comprising vertical and horizontal elements having a shape corresponding to the function which they are to fulfill in their assembled condition, and adapted to occupy a predetermined position in relation to one another, means for binding said elements rigidly to one another in the assembled condition of said table, said horizontal elements being slideways, a clamping member adjustably engageable by said slideways carried by said vertical elements, said slideways consisting of sections with partially bent flanges, said clamping member comprising a block, an axis carried by a vertical element having screwing means on which said block is mounted, said block being movable with relation to the vertical element upon which it is mounted and with relation to the slideway in which it is engaged, whereby said block may take as desired a horizontal position corresponding to the engagement position of said block at the interior of said slideway or a vertical position corresponding to the position of said clamping members in assembled condition.

2. A laboratory table as set forth in claim 1, wherein said slideways are telescopic and adapted to be assembled to one another by means of a binding element comprising two clamping blocks and a projecting lip engaging the flanges of said slideways.

3. A laboratory table as set forth in claim 1, wherein said slideways are provided with holes in said horizontal elements to receive mounting means for mounting devices, apparatus and equipments thereon, said mounting means comprising split sockets formed with a tapered portion engageable in one of said holes and with an integral and partially split flange carrying means for expanding and to lock a socket in the hole selected in the horizontal elements.

4. A laboratory table as set forth in claim 1, wherein said slideways are provided with holes in said horizontal elements to receive mounting means for mounting devices, apparatus and equipments thereon, said mounting means comprising split sockets formed with a tapered portion engageable in one of said holes and with an integral and partially split flange, provided with a screw for expanding and locking said socket in a selected hole in

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a horizontal element, said screw being formed with a tapered portion fitting in a plain hole formed with a corresponding tapered portion of said flange, and a nut engaging said screw and adapted, when tightened, to cause said tapered portion of said socket to expand and become locked in said hole.

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2,972,506	2/1961	Haag -----	108—153 X
2,981,577	4/1961	Trautmann -----	108—153 X
3,056,852	10/1962	Sachs.	
3,082,712	3/1963	Trautmann et al. --	248—419 X
3,258,250	6/1966	McMullin	256—13.

References Cited

UNITED STATES PATENTS

2,380,379	7/1945	Attwood -----	313—257 X
2,659,765	11/1953	Dunn -----	174—65

FOREIGN PATENTS

1,221,728 1/1960 France.

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JAMES T. McCALL, *Examiner*.