Jan. 7, 1964 J. A. GLASSMAN 3,116,828

SURGICAL INSTRUMENT TRAYS

Filed Aug. 30, 1961

Fig. 1.

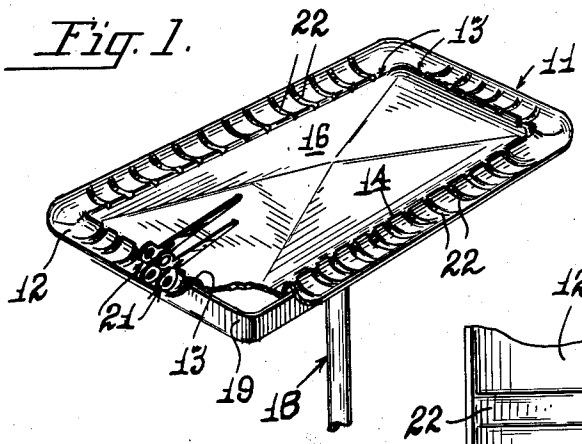


Fig. 2.

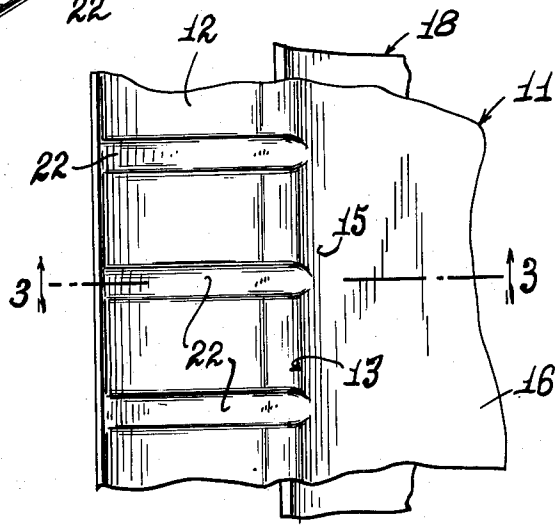
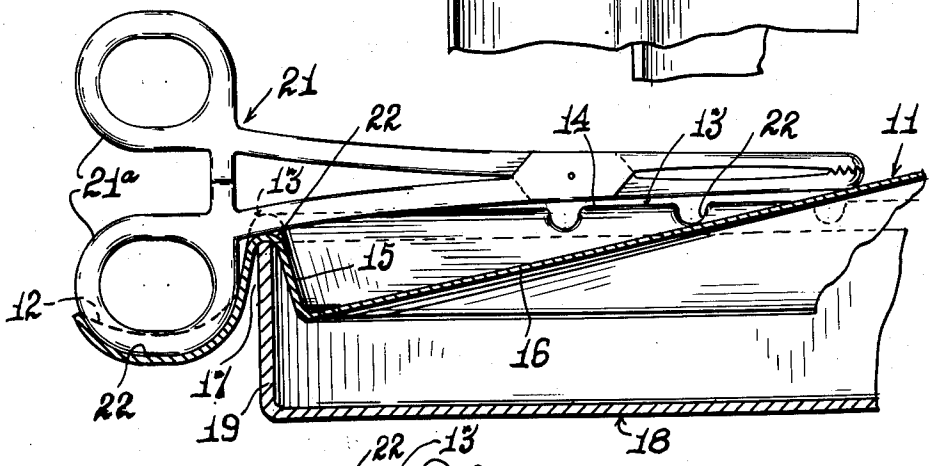


Fig. 3.



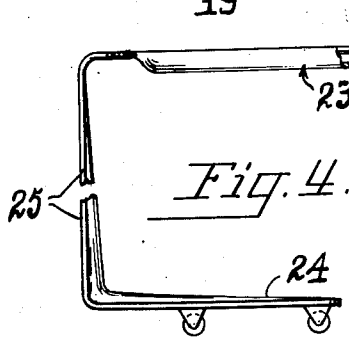


Fig. 4.

INVENTOR.
JACOB A. GLASSMAN
BY
Elmer L. Jaecke
Attorney

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SURGICAL INSTRUMENT TRAYS

Jacob A. Glassman, 1680 Meridian Ave., Miami Beach, Fla.

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The invention relates to improvements in surgical instrument trays and is particularly concerned with the novel construction of a tray having novel integrally formed means for maintaining surgical instruments, such as, for example, hemostats, in a readily accessible position thereon and in a manner to prevent them from falling off the tray before or during surgery.

In surgery a set of surgical instruments is arranged on a tray in a manner to permit each instrument to be individually selected and removed by grasping same by the handle portions thereof. This requires that they be positioned with their handle portions in a substantially vertical plane and overhanging the margin of the tray. The instruments and tray are sterilized as a unit. Any material disturbance of the sterilized instruments or of the tray may, and frequently does, result in one or more of the instruments falling therefrom, as while the tray is being moved around the operating room. When this occurs the tray and remaining instruments are no longer serviceable and they must be replaced with a complete sterilized set. This occasions great inconvenience and delay and in some instances such delay may result in danger to the patient who must be kept under anesthesia until the new set is brought in.

The instrument tray herein disclosed is constructed in a manner to prevent displacement of the set of instruments on the tray and, more important, to prevent an instrument from falling off. This is accomplished by providing a trough around the tray perimeter. The trough is shaped to receive and afford a firm support for said handle portions and to retain the instruments in an accessible or upright position. A support ridge or flange forms the inner perimeter of the trough and both said trough and ridge, or either of them, have spaced undulations along their length, each to accommodate an instrument seated therein. The tray may be mounted upon a conventional type of stand, such as the well known Mayo stand, or it may have a stand unit integrally connected thereto.

It is therefore an object of the invention to provide a novel tray for surgical instruments.

Another object is to provide an instrument tray with novel means to prevent instruments positioned thereon from falling therefrom.

Another object is to provide a stand with a surgical instrument tray integral therewith.

Another object is to provide a one-piece tray having novel means integral therewith for supporting and retaining surgical instruments in selected positions thereon.

With the foregoing and such other objects in view, which will appear as the description proceeds, the invention consists of certain novel features of construction, arrangement and combination of parts hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in form, proportion, size and minor details of the structure may be made without departing from the spirit of the invention.

Referring to the drawings in which the same characters of reference are employed to identify corresponding parts:

FIG. 1 is a perspective view of a tray embodying the invention and showing it seated on a stand, and several instruments in place thereon.

FIG. 2 is an enlarged plan view of a fragmentary portion of the tray.

FIG. 3 is a vertical sectional view, taken on line 3—3 of FIG. 2, showing an instrument in place thereon.

FIG. 4 is an end elevational view of a tray embodying the invention, and formed integral with support means.

Referring particularly to the exemplary disclosure of the invention shown in FIGURES 1–3, the tray 11, which is fabricated from sheet material, such as steel, plastic, or porcelain; suitably molded, die-stamped or otherwise formed to provide a shallow perimeter trough 12 that is substantially U-shaped in section. The inner wall of said trough terminates in an upstanding ridge 13. The ridge 13 has its apex 14 rounded and its inwardly disposed wall 15 extends downwardly and merges with the bottom or main body 16 of the tray. The bottom 16 may be flat or it may be inclined upwardly and inwardly from all sides as shown. Formation of ridge 13 provides a perimeter recess 17 on the underside of the tray. Trays of this character are adapted when in use, to be seated on a mobile stand, such as the Mayo stand 18 shown, which has an upstanding perimeter flange 19 adapted to nest in the recess 17 to prevent displacement of the tray.

A set of surgical instruments, such as hemostats 21, only several of which are illustrated, is carried on the tray and it is essential that each instrument be retained in the substantially vertical position illustrated to afford ready grasping of the handle portions 21*a* thereof when their use is required.

In order to retain the instruments in the desired positions, both the ridge 13 and the trough 12, or either of them are formed with a series of mutually spaced undulations or depressions 22 each of a size to receive the edge portion of an instrument seated therein. Depressions 22 function not only to support the instruments in a substantially vertical position as aforesaid, but also serve to maintain them spaced apart to facilitate their being selectively grasped and removed without disturbing the next adjacent instruments.

It is important to note that trough 12 affords adequate support for the handle portions 21*a* of the instrument which heretofore projected beyond the edge of the conventional tray and were unsupported. Because of this present support for the handle portions, which in many instances constitute the greatest weight of the instrument, said instruments are prevented from falling off of the tray.

Obviously the trough 12 and the undulations 22 therein and in the ridge have smooth contours so as to avoid the presence of any areas which might be difficult to keep clean and hygienically sterile.

The tray 23 illustrated in FIG. 4 is like the one described hereinabove except that it has formed, integral therewith, a stand which may comprise a mobile base 24 having an upstanding standard 25 which is integrally connected with one edge of said tray.

As many possible embodiments may be made in the invention, and as many changes might be made in the embodiments above set forth, it is to be understood that all matters hereinbefore set forth or shown in the accompanying drawings are to be interpreted as illustrative and not in a limiting sense.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent of the United States is:

1. An instrument tray comprising a substantially planar body of sheet material having an upstanding ridge inwardly of its perimeter edge, a trough formed in the area of said body between said ridge and perimeter edge, and a plurality of undulations on said ridge and in said trough

to support instruments in predetermined positions thereon.

2. An instrument tray comprising a planar body of sheet material, an upstanding ridge in said body inwardly of its perimeter edge, a trough outwardly of said ridge, and means in said trough and on said ridge to support instruments in predetermined positions with their handle portions seated in the trough.

3. The tray recited in claim 2, in which the tray has a recess on its under surface adapted to be engaged by a support stand.

4. An instrument tray comprising a planar body of sheet material, an upstanding ridge in said body inwardly of its perimeter edge, a trough outwardly of said ridge, and a plurality of recesses in said trough and on said ridge to receive and support instruments in predetermined positions with their handle portions seated in the trough.

5. An instrument tray comprising a planar body of sheet material, an upstanding ridge in said body inwardly of at least one of its edges, a trough outwardly of said ridge, and means in said trough and on said ridge to support instruments in predetermined positions with their handle portions seated in the trough.

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