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FOLDING TRAY.

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1,138,156.

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Fig. 1.

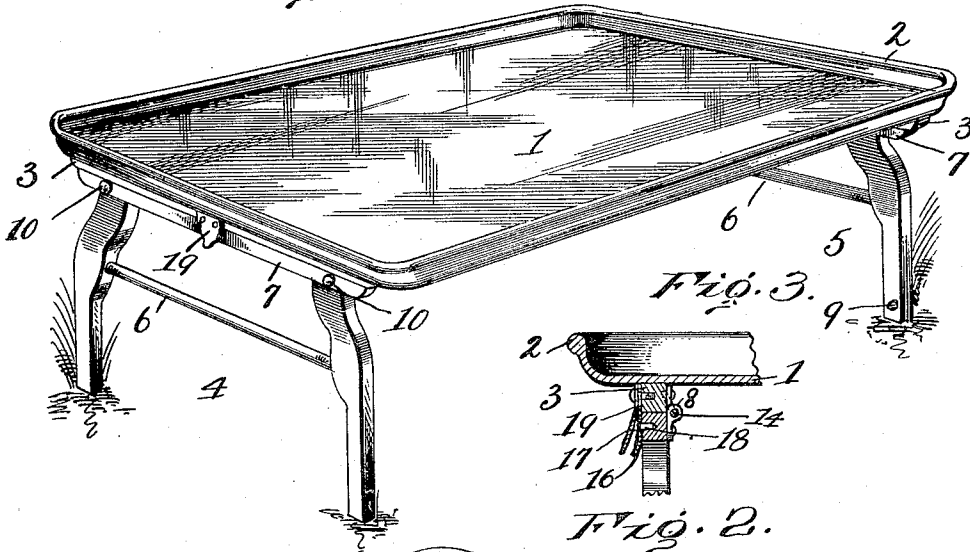


Fig. 3.

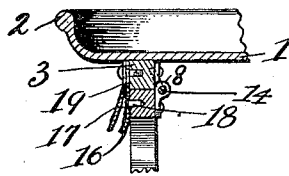


Fig. 2.

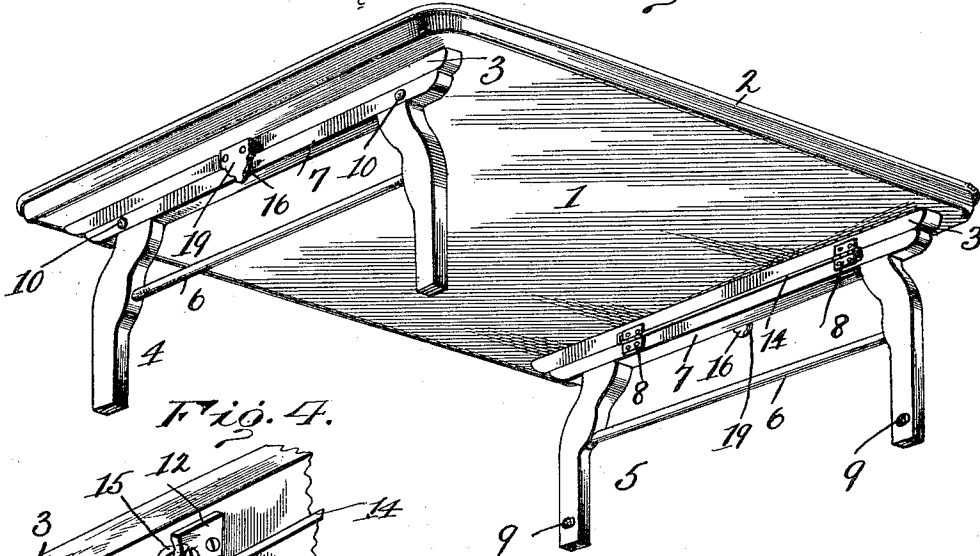
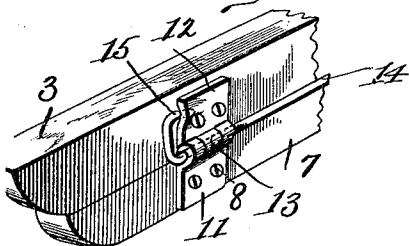


Fig. 4.



Witnesses

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FOLDING TRAY.

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To all whom it may concern:

Be it known that I, JOHN J. STROUD, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Folding Trays, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to certain new and useful improvements in folding trays and more particularly to that class of trays known as "invalid trays" especially adapted to be used in hospitals and sick rooms; the
15 object being to provide a tray with spring-actuated supporting legs normally held in folded position and provided with means for holding said legs in set-up position.

Another object of the invention is to provide a tray with novel forms of springs for holding the legs folded under the bottom thereof, a torsional wire being employed connecting the respective pairs of hinges connecting each leg frame to the tray.

25 Another and further object of the invention is to provide a tray in which the body thereof is formed of papier-mâché having a dished top in order to prevent the vessels placed thereon from sliding or moving in
30 any way; the same being formed upon curved lines in order to avoid corners so as to form a thoroughly sanitary tray.

Other and further objects and advantages of the invention will be hereinafter set forth and the novel features thereof defined by the
35 appended claim.

In the drawings—Figure 1, is a perspective of my improved construction of tray; Fig. 2, is a perspective looking from the under side of said tray; Fig. 3, is a detail section through a portion of the tray showing one of the catches for holding the leg frames in set-up position against the tension of the spring; and Fig. 4, is a detail enlarged
40 view of one of the spring members and the abutting members of the tray and leg frame.

Like numerals of reference refer to like parts in the several figures of the drawings.

In carrying out my invention, I employ a
50 dished top 1 formed rectangular in shape and preferably of papier-mâché or any other suitable fiber can be employed; the flange 2 thereof forming the dish having rounded corners and is preferably formed upon
55 curved lines as clearly shown in Fig. 3 in

order to avoid corners, so as to obtain a thoroughly sanitary tray and while I have shown the tray of this particular shape, it is of course understood that the same may be formed of any configuration desired; this
60 being the preferable form now in use in hospitals.

Connected to the bottom of the top 1 adjacent each end, is a cross bar 3 preferably rectangular in shape in cross section and provided with rounded ends as clearly shown in Fig. 2; said cross bars being secured to the bottom by any suitable means but preferably glue is employed in order to avoid
70 screws and the like passing through the top and forming rough places for the accumulation of dirt and foreign matter, as one of the main objects of this invention, is to provide a tray which will be thoroughly sanitary in use.

In connection with a top as previously described, I employ a pair of leg frames 4 and 5 for supporting the tray in the position shown in Fig. 1, and these leg frames are each formed of a pair of legs connected together by a round 6 and a cross bar 7 which is of substantially the same shape as the cross bar 3 carried by the top and are adapted to be connected thereto by spring hinges 8 for normally holding the leg frames in
85 folded position against the bottom of the tray.

The legs of the leg frames are provided with rubber buffers 9 which engage the under side of the tray when the frames are
90 swung into folded position by the springs. The cross bars 7 of the leg frames are provided with rubber feet members 10 for supporting the tray when the leg frames are in folded position so that when placed on a
95 smooth surface, the tray will be prevented from slipping or moving in any way.

The spring hinges 8 connecting the cross bars 7 of the leg frames to the cross bars 3 of the top of the tray, comprise spaced pairs of leaf members 11 and 12 connected respectively to the side edges of the cross bars 7 and 3 and provided with interlocking eyes 13 through which a pintle pin 14 extends which connects the respective pair of leaf
105 members together and each end of the pintle pin 14 is bent laterally having an angled end 15 which is arranged under the adjacent leaf member as clearly shown in Fig. 4; one end of said pintle pin 14 being bent in a
110

reverse direction to the other end in order to cause the same to be placed under a torsional stress when the leg frames are swung into set-up position so that when the leg frames are released, they will be swung into folded position. By this construction, it will be seen that a single pintle pin is employed for connecting the respective pairs of leaf members constituting the hinges for connecting the leg frames to the tray.

In order to provide means for holding the leg frames in set-up position, I provide each of the cross bars 3 with a spring catch 16 having an aperture 17 into which is adapted to extend a stud 18 carried by the cross bars 7 of the leg frames; said spring catch being protected by a guard member 19 so arranged that all danger of the spring catches being accidentally released by being struck by the patient using the tray is prevented, and the arrangement of these spring catches in connection with the guards is such that when it is desired to fold the legs, it is only necessary for the nurse or the person carrying the tray to place the fingers on the spring catches and by exerting a slight outward pressure thereon, they will be thrown from over the stud pins of the leg frames and the torsional springs will force the leg frames into folded position.

When it is desired to use the legs for supporting the tray, it is only necessary to swing the legs into set-up position and the studs will be engaged by the spring catches automatically and hold the same firmly.

From the foregoing description, it will be seen that I have provided a folding invalid tray which is so constructed that the

spring-actuated legs thereof will be easily and quickly placed into set-up position or folded position and one in which the members for securing the legs in set-up position are so formed that a positive fastener is formed so as to avoid accidental releasing of the means for holding the legs in set-up position. It will also be seen that the leg frames are connected to the tray top in such a manner that an exceedingly strong and durable tray is formed and one in which the spring connecting hinges are mounted in such a position that they are out of the way and do not interfere with any portion of the tray whether the tray is used with the legs in set-up position or in folded position.

I claim:

As a new article of manufacture, an invalid tray, comprising a top having a cross bar secured to its under side adjacent each end, spring-actuated leg frames pivotally mounted upon said cross bars normally held in folded position, laterally projecting pins carried by said leg frames, spring catches carried by the cross bar of the top arranged in the path of travel of said pins and adapted to hold said legs in set-up position against the tension of the spring-actuated means, and guards arranged over said catches for preventing the accidental displacement of said pins.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN J. STROUD.

Witnesses:

WM. H. DOWLING,
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents Washington, D. C."