

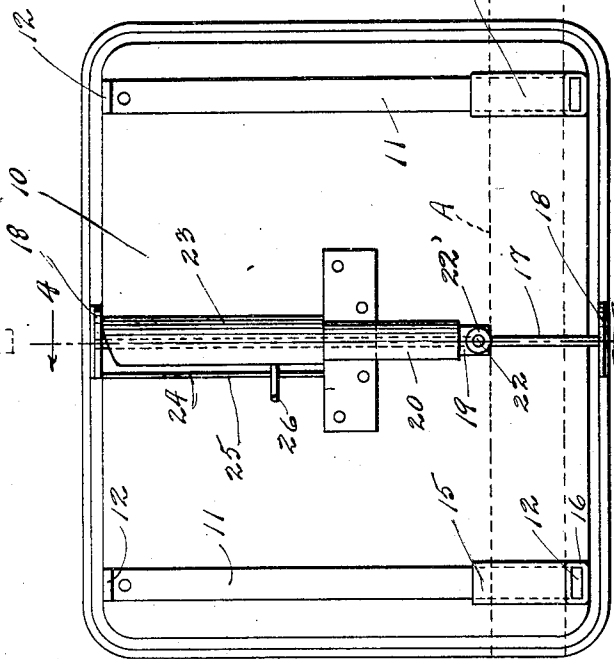
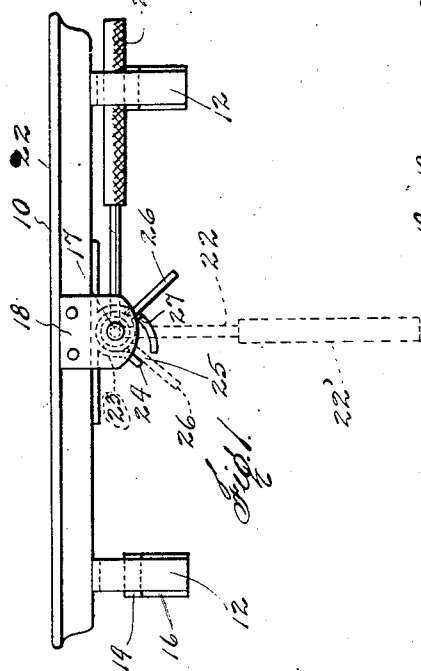
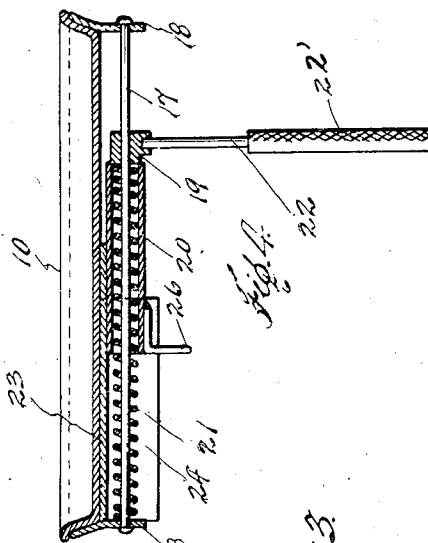
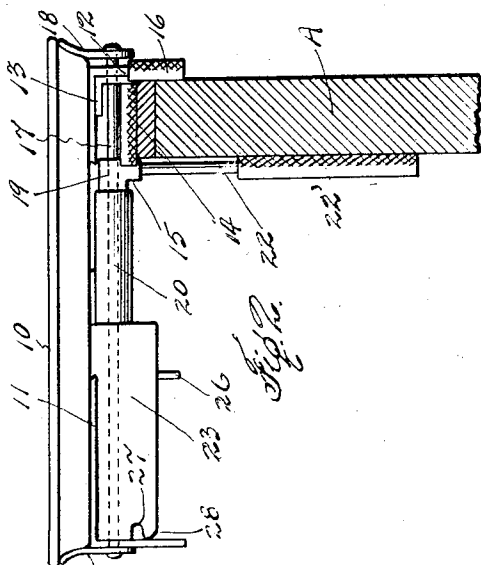
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SERVICE TRAY

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354

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UNITED STATES PATENT OFFICE.

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SERVICE TRAY.

Application filed August 4, 1927. Serial No. 210,521.

This invention relates to new and useful improvements in service trays.

One of the objects of the invention is to provide a service tray provided with a fastening member arranged to swing into a compact position under the bottom of the tray when the latter is not in use so that a number of said trays may be placed one upon the other in a comparatively small space.

A particular object of the invention is to provide a spring actuated fastening member arranged to be manipulated and brought into fastening position and permitting the operator to manipulate the parts with the same hand in which he carries the tray, thus leaving his other hand free for other duties.

A further object of the invention is to provide a service tray equipped with a spring actuated fastening member normally held in restraint and arranged to be tripped by the operator, whereby its fastening operation becomes semi-automatic.

A construction designed to carry out the invention will be hereinafter described, together with other features of the invention.

The invention will be more readily understood from a reading of the following specification and by reference to the accompanying drawings, in which an example of the invention is shown and wherein:

Fig. 1 is a front elevation of a tray constructed in accordance with my invention, the clamping member being shown in fastening position in dotted lines,

Fig. 2 is a side elevation of the same clamped on the door of a vehicle or other support, which is shown in section,

Fig. 3 is an underside view of the tray, and

Fig. 4 is a cross-sectional view taken on the line 4-4 of Fig. 3.

In the drawings the numeral 10 designates a service tray which may be of any suitable size, shape and material, the tray shown being selected merely to illustrate the invention. On the underside of the tray I secure supporting bars 11 having down-turned ends 12 forming legs or supports whereby the tray may be elevated above a counter or another tray on which it is placed. Angular supporting brackets 13 are secured to the bars 11 adjacent the front legs 12 and have inwardly directed arms 14 spaced below said bars. These arms may be equipped with sleeves 15 of rubber or other suitable material and sleeves 16 of like material are tele-

scoped onto the front legs 12. As is shown in Fig. 2, the sleeves 15 and 16 engage over the top portion of the vehicle door or other support A, the finish of which is protected by said sleeves.

A transverse rod 17 is suspended under the tray by front and back ears 18 depending from said tray. A clamp head 19 has a snug sliding fit on the rod and is free to swing laterally thereon. A tubular plunger 20 attached to the head surrounds the rod and receives a coiled spring 21 which bears against the head at one end and one of the ears 18 at the other end. The head has a depending clamp arm 22 provided with a protecting sleeve 22'.

The plunger 20 has a sliding fit in a housing 23 secured to the bottom of the tray and also receiving the spring. The housing is formed with depending lips 24 acting as guides for a slot 25 therebetween. The plunger 20 is provided with a finger lever 26 whereby the plunger may be drawn into the housing and the spring 21 placed under an increased tension.

At its outer end the housing has a notch 27 and an inclined edge 28 leading from the notch to the slot 25. When the plunger is retracted the lever 26 is swung along the edge 28 into the notch 27 whereby the arm 22 is swung to the position shown in full lines in Fig. 1. This fastens the clamp arm substantially parallel under the tray and permits the tray to rest on a counter or upon another tray, because all of the parts will be supported above the plane on which the legs rest.

When the tray is being used the operator grasps the same in one hand with his fingers about the housing 23 so that two of his fingers may straddle the lever 26. He carries the tray to the support A and engages the parts 12 and 14 over the upper edge of the support, as is shown in Fig. 2. While still holding the tray with the same hand, he manipulates the lever 26 with his fingers so as to withdraw it from the notch 27 and then swings it downwardly so that it will ride along the edge 28. As the lever is swung, the arm 22 is likewise swung so that when the lever 26 reaches the slot 25 the clamp arm will be in a vertical position as shown in dotted lines in Fig. 1.

When the lever 26 reaches the slot 25 the compressed spring 21 will impel the plunger 20 so that the head 19 will be slid along the

rod 17 until the sleeve 22' strikes the side of the support A. This portion of the operation will be automatic. When the operator releases the tray, it will tend to slightly incline owing to the fact that the greater portion of its width overhangs the support, but owing to the length of the arm 22 the head 19 will clamp on the rod 17, thus preventing appreciable tilting of the tray and also fastening the head against movement on the rod away from the support A.

It is obvious that this complete operation may be carried out with one hand. When the operator desires to remove the tray, he grasps the same with one hand and catching the lever 26 with one finger pulls the same rearwardly in the slot 25. This withdraws the clamp head 19 from the support A. When the lever has been withdrawn to the end of the slot 25, it may be swung along the edge 28 and into the notch 27, as is shown in Fig. 1, thereby swinging the arm 22 under the tray, as is shown in Fig. 1. It will be noted that the parts are comparatively few and compact. This type of tray has been found to have many advantages, particularly that of operation with one hand which permits the waiter to carry a tray in each hand and fasten them in place without setting down one of the trays. Various changes in the size and shape of the different parts, as well as modifications and alterations, may be made within the scope of the appended claims.

What I claim, is:

1. In a service tray, means on the tray for engaging over a support, a clamping member mounted on the tray for sliding and swinging movement, spring means carried by said member, and retaining means by which the spring is held under tension when said clamping member is swung substantially parallel to the tray and released for sliding the clamping member into position against the support.

2. In a service tray, means on the tray for engaging over a support, a clamping member slidable on the tray toward and from said engaging means and adapted to swing substantially parallel to the tray, a spring impelled plunger attached to the clamping member

and normally held in restraint, and means connected with the plunger for manipulating it and for holding it under tension when the clamping member is withdrawn from the support, said means being arranged to be tripped to release the plunger to project the clamping member into engagement with the support.

3. In a service tray, means on the tray for engaging over a support, a slidable and swinging clamping member, a spring actuated plunger attached to the clamping member, means for retracting the plunger against the tension of its spring and for partially rotating the plunger to swing the clamping member to a position substantially parallel with the bottom of the tray, and means for securing said plunger retracting means in position to hold the plunger spring under compression and to secure the clamping member in the position to which it is swung beneath the tray bottom.

4. In a service tray, means on the tray for engaging over a support, a slidable and swinging clamping member carried by the tray, a spring actuated plunger attached to the clamping member, retracting means carried by the plunger, and a housing receiving the plunger and having a guide for the retracting means and a fastening for receiving said means to retain the spring under tension and the clamping means when swung beneath the tray.

5. In a service tray, means on the tray for engaging over a support, a rod supported under the tray, a clamp head having a sliding and turning fit on the rod, a clamping arm extending from the head, a coiled spring mounted on the rod, a tubular plunger attached to the head and surrounding the spring and rod, a housing carried by the tray and receiving the spring and plunger, said housing having a longitudinal guide slot, a notch at one end and an inclined edge leading from the notch to the slot, and a lever attached to the plunger and adapted to slide through the slot of the housing and along the inclined edge and into the notch thereof.

In testimony whereof I affix my signature.

JAMES C. FARR.