W. L. BUEDINGEN.

TRAY SUPPORT FOR BOXES.

APPLICATION FILED JULY 12, 1919.

1,428,500.

Patented Sept. 5, 1922.

2 SHEETS—SHEET 1.

Fig. 1

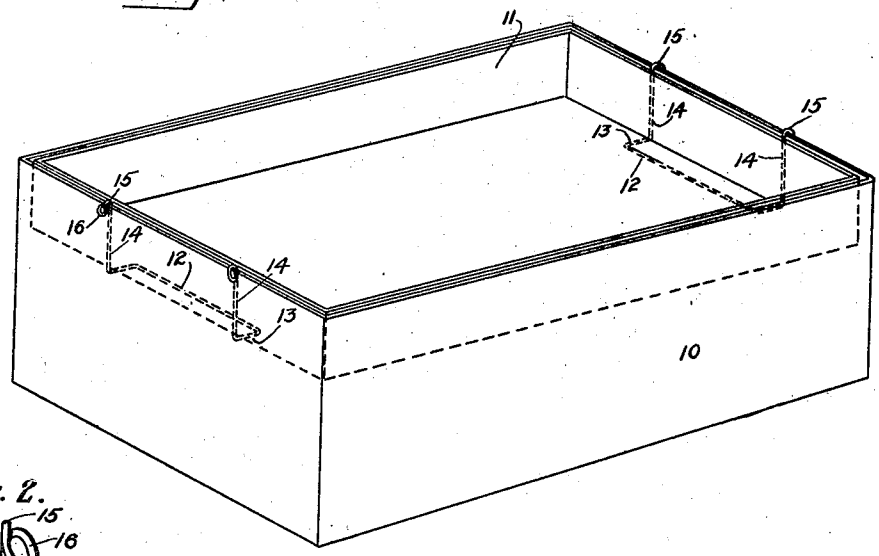


Fig. 2.

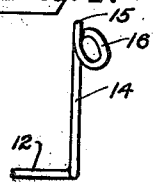
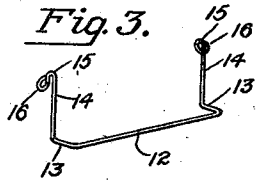


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 4.

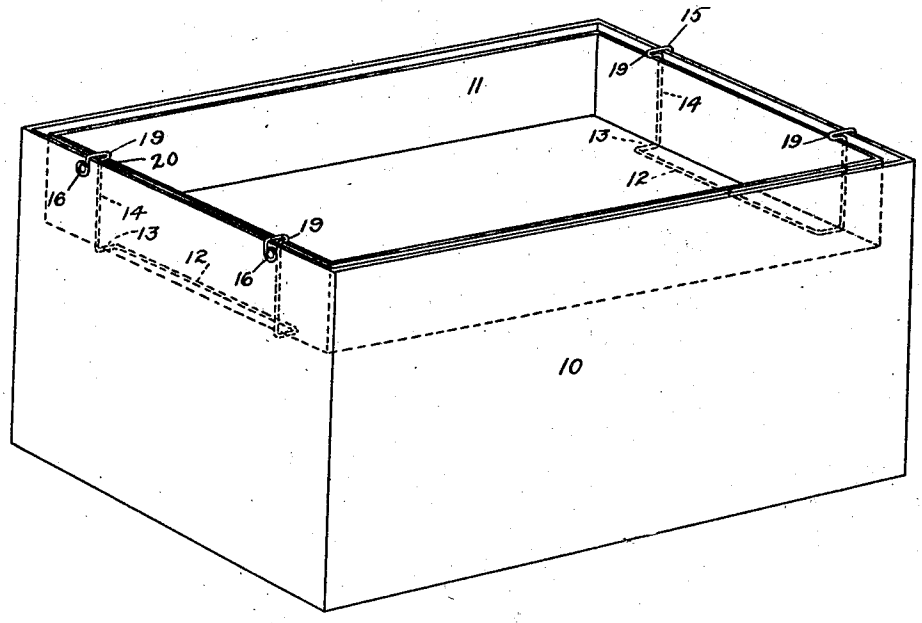


Fig. 5.

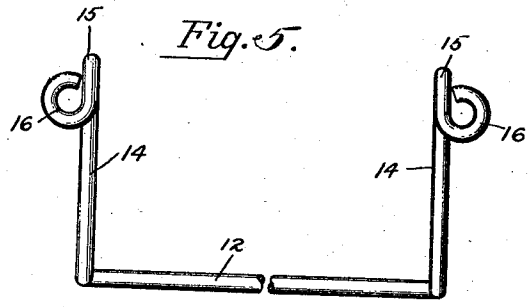
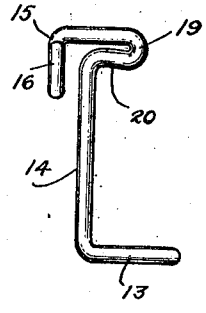


Fig. 6.



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UNITED STATES PATENT OFFICE.

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TRAY SUPPORT FOR BOXES.

Application filed July 12, 1919. Serial No. 310,377.

To all whom it may concern:

Be it known that I, WILLIAM L. BUEDINGEN, a citizen of the United States, and resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Tray Supports for Boxes, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

The present invention relates to certain new and useful improvements in tray supports for boxes. Heretofore it has been common practice to employ a cardboard form or insertion which is placed within a box and upon which the bottom of the box tray rests, but this method of supporting the tray has proven very unsatisfactory in that upon the placing of weight within the tray, one corner of the tray generally slips past the insertion and thus defeats the object of the support. This method has proven especially unsatisfactory when used in connection with candy boxes in that the candy in the portion of the box beneath the tray becomes damaged when the tray sinks or falls past its support.

With these inherent objections in mind, I have devised the tray support hereinafter described which has for one of its objects to provide means for positively supporting a tray within a box in which the tray will be capable of ready removal.

Another object of this invention is to provide a tray support of the class described having means engageable with the top edge of the tray to firmly secure the tray in position.

A further object of this invention is to provide a device of such simplicity that it cannot get out of order, and inexpensive enough to be applied to the cheapest box and at the same time, so complete that it may be used with the most elaborate and costly creation of the box maker's skill.

With the above and other objects in view which will appear as the description proceeds, my invention resides in the novel construction, combination and arrangement of parts substantially as hereinafter described and more particularly defined by the appended claims, it being understood that such changes in the precise embodiment of the hereindisclosed invention may be made as come within the scope of the claims.

In the accompanying drawing I have illustrated several complete examples of the physical embodiment of my invention constructed according to the best modes I have so far devised for the practical application of the principles thereof, and in which:

Fig. 1 is a perspective view of a box having a tray supported therein by means of a support constructed according to and embodying my invention, the box having its cover removed for the purpose of illustration.

Fig. 2 is a rear view of one end of the form of tray support depicted in Fig. 1.

Fig. 3 is a perspective view of one of the tray supports detached.

Fig. 4 is a perspective view of a box equipped with my tray support and illustrating a slightly modified form of tray support having means engaging the edge of the tray to secure the same in place.

Fig. 5 is a rear plan view of one of the tray supports detached, and

Fig. 6 is an end view thereof.

Referring now more particularly to Figures 1, 2 and 3 of the drawings, 10 designates a conventional form of box structure, and 11, a tray adapted to be supported therein and spaced from the bottom of the box by means of the tray support to be described. The support is preferably formed from a single length of wire and has its intermediate portion 12 disposed transversely of the box and its portions adjacent the ends thereof directed laterally and horizontally as at 13, and then directed upwardly as at 14 to form vertical suspending or supporting arms. The ends of the arms 14 are then hooked or bent upon themselves as at 15 and then bent in the form of an eye or loop as at 16 to form means for engaging the upper edge of the adjacent wall portion of the box.

As best shown in Fig. 1, one support is disposed at the opposed side walls of the box and has its arms 14 extending downwardly into the box and disposed adjacent the inner side of the adjacent end wall, the portions 12 and 13 engaging the bottom of the tray and supporting the same within the box. The loops or eyes 16 are adapted to have snug engagement against the adjacent portion of the side wall of the box to readily removably clamp the support to the adjacent side wall of the box. The loops 16 also serve to provide means to assist in removing the tray 11 from the box when the same is filled in that the finger nails can be engaged there-

under and bodily remove the tray supports and tray from the box.

In Figures 4, 5 and 6, I have illustrated a tray support provided, adjacent its bends 15, with inwardly extending loops 19 adapted to engage over the adjacent edge portions of the tray 11 as depicted in Fig. 4. The loops 19 have their under faces slightly inclined upwardly as at 20 to provide locking recesses for the tray edge and thus insure the locking of the tray on its supports. This form of my invention is especially adapted for use with the larger size boxes which generally have a layer of excelsior packing over the candy disposed therein, and the loops 19 hold the material beneath the tray firm.

From the foregoing description taken in connection with the accompanying drawing, it would be at once apparent that my tray support may be adapted for any size or style of box, and that the supporting arms 14 or 14′ are lengthened or shortened to adapt the same for use with trays of various depths. It will also be apparent that the shelf or tray engaging portions 12, 12′ or 17 may be lengthened or shortened according to the width of the tray with which it is adapted to be used.

What I claim as my invention is:

1. A box tray support comprising means for supporting a tray within a box, and means carried thereby and releasably engageable with the top edge of the tray to secure the same upon said support.

2. A device of the class described comprising vertical arms having means formed on their upper ends for engagement with the side wall of a box, a laterally projected tray engaging portion at the lower ends of the vertical arms, and means adjacent the upper ends of the vertical arms and engageable with the upper edges of a tray to secure the tray upon the tray engaging portion.

3. A device of the class described comprising vertical arms having means formed on their upper ends for engagement with the side wall of a box, a laterally projected tray engaging portion at the lower ends of the vertical arms, and locking loops formed on the vertical arms and adapted for detachable locking engagement with the adjacent edge portions of the tray disposed on said tray engaging portion.

4. The combination with a box and a tray seated therein, of disconnected supporting members removably supported within the box from the top edges thereof and loosely engaging beneath the bottom of the tray adjacent its opposite ends, said supporting members each consisting of a single length of wire bent to form an intermediate portion and horizontal supporting arms extending outwardly from the ends of the intermediate portion, the under side of the ends of the tray resting loosely upon said intermediate portion and upon said outwardly extending arms, and vertical supporting arms extending upwardly from the outer end of the horizontal supporting arms at substantially right angles thereto, and lying snugly intermediate of the ends of the tray and the end of the box, said vertical arms being formed at their upper ends with hooks for clampingly and detachably engaging over the adjacent upper edge portion of the box.

In testimony whereof, I affix my signature.

WILLIAM L. BUEDINGEN.