

S. R. MILLER.
SHIPPING AND DISPLAY BOX FOR SEEDS.

No. 490,156.

Patented Jan. 17, 1893.

Fig. 1.

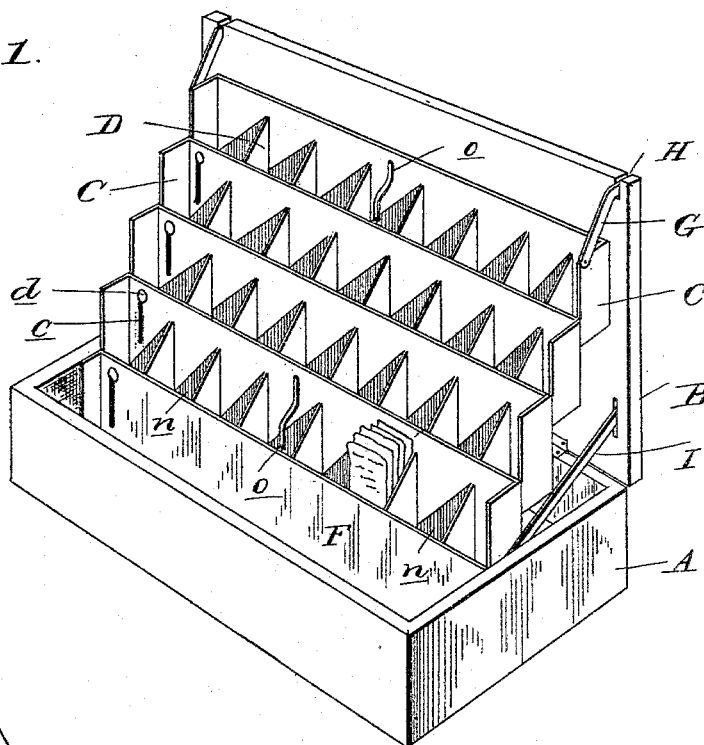


Fig. 2.

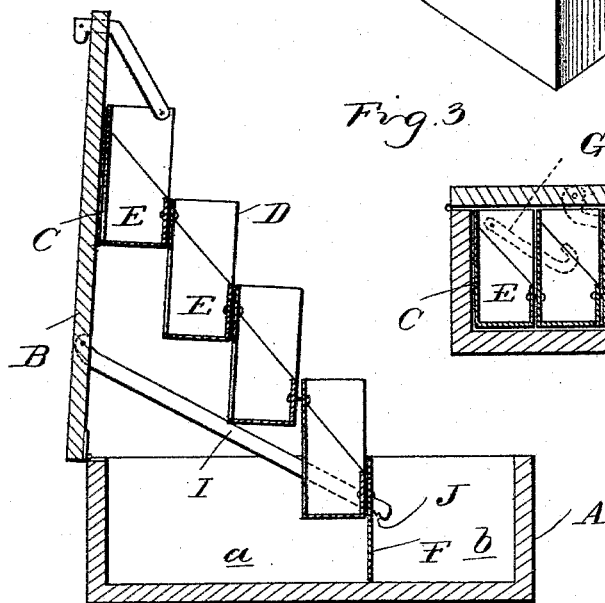
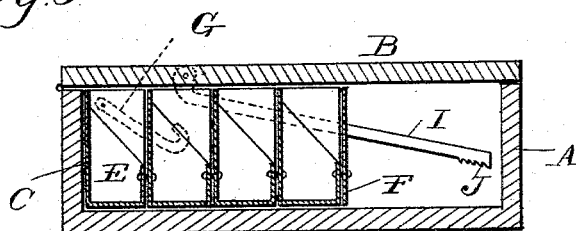


Fig. 3.



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Fig. 5.

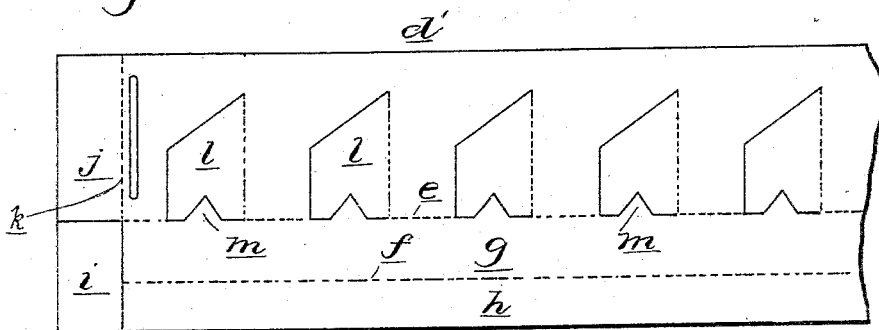
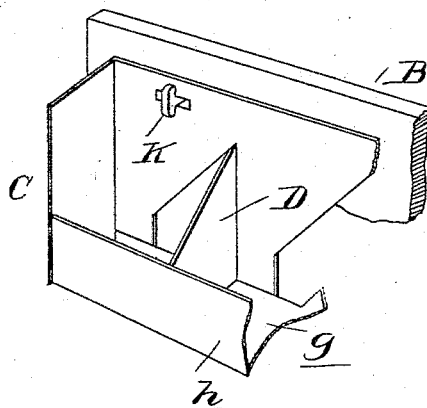


Fig. 1.



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UNITED STATES PATENT OFFICE.

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SHIPPING AND DISPLAY BOX FOR SEEDS.

SPECIFICATION forming part of Letters Patent No. 490,156, dated January 17, 1893.

Application filed June 27, 1892. Serial No. 438,154. (No model.)

To all whom it may concern:

Be it known that I, SHERMAN R. MILLER, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Shipping and Display Boxes for Seeds, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to new and useful improvements in shipping and display box for seeds, &c., and the invention consists in the peculiar construction of the box or frame having a series of trays therein, preferably
15 divided by partitions into compartments and so constructed that they may be arranged in an inclined series, one slightly above the other to display their contents and yet without detracting from the capacity of the box when
20 used in shipping.

The invention further consists in the peculiar construction, arrangement and combination of the various parts all as more fully hereinafter described.

25 In the drawings, Figure 1 is a perspective view showing my improved box with the trays arranged in an inclined series, as when used to display the contents. Fig. 2 is a vertical, central cross-section thereof. Fig. 3 is a similar cross-section showing the trays lowered
30 into the box and with the cover closed. Fig. 4 is a detached perspective view of a portion of one of the trays illustrating the manner of connection and the manner of supporting. Fig. 5 is a plan view showing the preferable
35 manner of forming the plate from a single piece of sheet metal.

In the shipping of seeds and similar articles a rectangular box such as A with the hinged
40 cover B is ordinarily employed divided into compartments by stationary cross partitions, each compartment designed to contain packages of certain kinds of seed. This kind of a box when open will display the tops of all
45 the packages but will not display the labels indicating the contents of said packages, which are placed upon the front of the package.

50 C is a series of two or more trays of suitable length to fit in the box and of any desired width, the trays being preferably so con-

structed that they will fill either all or a part of the box and also preferably constructed of thin sheet metal so as to take up as little room as possible, each tray being divided by parti-
55 tions D into a series of compartments E of any desired size and shape. Each tray preferably forms an open shaped box having the front side cut away a half or more of its length, the entire number of trays being adapted to
60 fill any desired space in the box and make a lateral series of trays therein, as shown in Fig. 3. In the construction I have herein illustrated I show the box divided by a stationary
65 partition F near the front to form the compartments a and b, the compartment a being filled by the trays and the compartments b being left for any other miscellaneous packages
70 it may be desired to ship. The trays C fill the entire compartment a, and when in horizontal arrangement form substantially the same construction in general appearance as the ordinary seed box with stationary partitions.

To move the trays into proper position to exhibit the contents I may make any loose
75 connection which will permit each tray to be slightly elevated above the forward adjoining tray in the series, preferably having the same movement in relation to the stationary partition, as plainly shown in Fig. 1. To effect
80 this loose connection many different devices may be employed, but that which I prefer and have shown consists of forming a slot c in the rear wall of the trays into which engages a headed rivet d which is secured in
85 the front wall of the adjoining tray, a similar sliding engagement being effected between the stationary partition and the front tray of the series. It is evident that with this construction if the operator lifted upon the rear
90 tray he would withdraw that tray first to the limit of its movement in relation to its forward adjoining tray which would next be lifted the same distance in relation to its forward adjoining tray and so on until the entire
95 series had been moved into an inclined series, as shown in the drawings. Any suitable support may be employed to hold the trays in this adjusted position. In Fig. 1 I have shown hooks G engaging in notches H,
100 formed in the cover, the cover being held in its vertical position by means of the braces

I, hinged to the cover and passing through an aperture in the stationary partition F and having the notched portion J adapted to engage said partition, as plainly shown in Fig.

1. To lower the trays into the box the hooks G are disengaged from the cover and they are allowed to fall by gravity into their horizontal position, the hooks G may be then turned into the box beside the trays, as shown in dotted lines in Fig. 3 and then by disengaging the notched portion J of the braces I from the partition F the cover may be closed.

In Fig. 4 I have shown as a modified form of support in place of the hooks G a turn button K, engaged in an aperture in the rear of the upper tray. Any other suitable device may be employed for this purpose.

In constructing these trays of sheet metal I preferably form them from a single piece, as shown in Fig. 5. *d'* represents a sheet of metal; this sheet I bend on the lines *e* and *f*, to form the bottom and front *g h*, the section *i* is struck out, the sections *j* bent on the line *k* to form the ends, and the sections *l* are struck out at right angles to the rear walls to form the partitions, leaving the lugs *m* vertically extending at the rear of the bottom, as plainly shown in Fig. 4 to prevent the possibility of the seed packages from escaping from the apertures *n* formed in striking out the partitions *l*. The front and bottom may be secured to the partitions and the ends if desired, by soldering or in any other desired manner.

o are springs secured to the rear wall of the tray in each department, adapted to press the seed packages to the front and hold them in vertical position, as shown in Fig. 1.

What I claim as my invention is:

1. The combination with a box, of a laterally arranged series of connected trays therein adapted to be moved into an inclined series, and a detachable support to hold them in such inclined position, substantially as described.

2. The combination with a box, of a laterally arranged series of trays therein, a limited sliding connection between the front and rear of the adjusting trays, whereby they may be moved to form an inclined series, and a detachable support to hold them in their adjusted position, substantially as described.

3. The combination with a box, of a laterally arranged series of open topped compartments, trays formed with low fronts, of a pin

in the front of each tray engaging in a slot in the back of the adjoining tray, a cover for the box, a support therefor in its open vertical position, and a connection between the upper tray and the cover, substantially as described.

4. The combination with a box, of trays therein, each formed of sheet metal, bent to form the sides, and ends, and of inclined partitions formed by sections struck out of the back, substantially as described.

5. The combination with a box, of trays therein, each formed of a single piece of sheet metal, bent as described, to form the sides and ends, the sections *l* struck out of the back to form partitions, and the lug *m* projecting above the bottom at the back, substantially as and for the purpose described.

6. In a display box, the combination with a box of a series of trays therein loosely united, and detached means for connecting the trays with a portion of the box for retaining the trays in an elevated position, substantially as described.

7. In a display box, the combination with a box and its cover of a series of vertically movable trays in the box loosely united and detached means for connecting the trays with the forward edge of the cover, substantially as described.

8. In a display box, the combination with a box, of a series of vertically movable trays therein loosely united with each other and with a fixed part of the box, and means for retaining the tray at different elevations with their respective upper ends above the plane of the box, substantially as described.

9. In a display box, the combination with a box, of a series of movable trays in the box, a hinged cover for the box, and a hook connection between the trays and cover, substantially as described.

10. In a display box, the combination with a box and its cover of a series of vertically movable trays, loosely united with each other, and a fixed portion of the box, a connection between the cover and rear most tray and a support for holding the cover in a vertical position, substantially as described.

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

SHERMAN R. MILLER.

Witnesses:

M. B. O'DOHERTY,

M. L. LINDOP.