

No. 764,354.

PATENTED JULY 5, 1904.

J. S. DUNCAN.
TRAY.

APPLICATION FILED APR. 27, 1903.

NO MODEL.

Fig. 1.

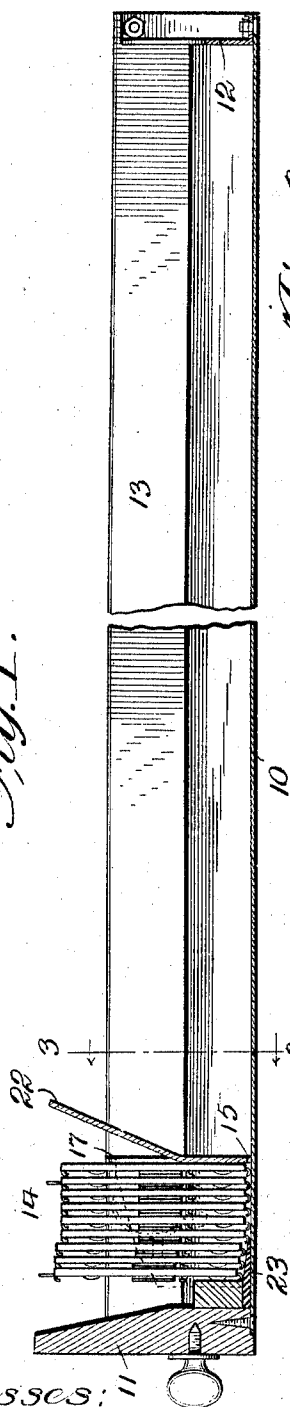


Fig. 3.

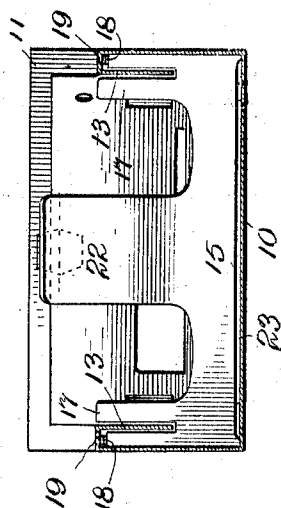
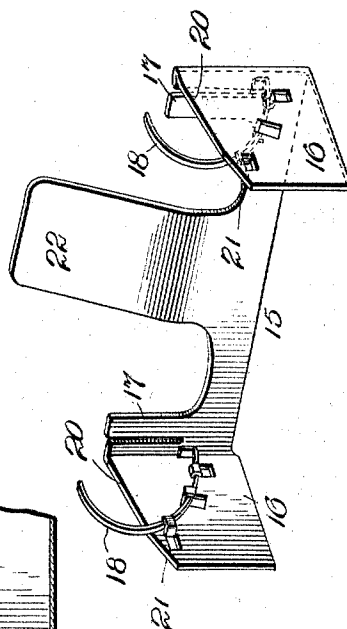
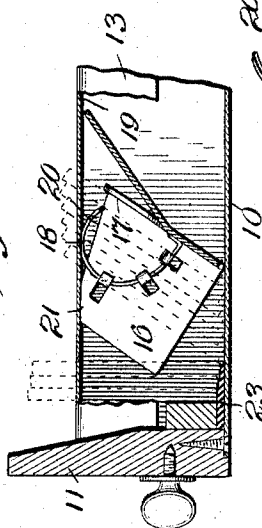


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOSEPH S. DUNCAN, OF CHICAGO, ILLINOIS, ASSIGNOR TO ADDRESSOGRAPH COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

TRAY.

SPECIFICATION forming part of Letters Patent No. 764,354, dated July 5, 1904.

Application filed April 27, 1903. Serial No. 154,519. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH S. DUNCAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Trays, of which the following is a specification.

This invention relates to novel improvements in trays for holding cards, printing-plate holders, stencil-frames, or other articles in the manner now commonly employed in card-index systems; and its object is to hold the cards, &c., compactly together and securely in place in the tray and also permit of their ready inspection and examination.

I have chosen to illustrate my improved tray with a number of card-index printing-plate holders therein of the character covered by Letters Patent No. 692,994, dated February 11, 1902; but the tray is adapted to hold stencil-frames of the character covered by Letters Patent No. 692,995 of the same date or holders or frames of other kinds or the ordinary cards of card-index systems.

In the drawings, which illustrate one embodiment of the invention, Figure 1 is a longitudinal sectional view of a tray embodying my invention and showing a few printing-plate holders therein. Fig. 2 is also a longitudinal sectional view of one end of the tray, showing the guide-flange broken away and the follower in tilted position to permit inspection of the holders. Fig. 3 is a transverse sectional view on the line 3-3 of Fig. 1. Fig. 4 is a perspective view of the follower.

Like numerals of reference indicate corresponding parts in the several figures of the drawings, and referring thereto 10 designates the tray, which is preferably made by shaping a piece of sheet metal to form the bottom and sides and provided with a wood front 11 and a removable back end 12. The tray will generally be adapted to form a drawer of a cabinet, and the front will be constructed to correspond with the cabinet. The follower 15, Fig. 4, is also preferably made of a piece of sheet metal and is provided with ends 16, which are arranged to slide in guideways formed by the overhanging flanges 13. Posts

17 project upward alongside of the flanges for the purpose of engaging and holding the printing-plate holders in 14 upright position in the tray; but these posts are not absolutely essential and may be dispensed with, but are preferably provided. On one or both of the ends of the follower I secure a spring 18, which in its specific form is fastened at one end to the end of the follower and projects upward above said end and curves rearwardly to frictionally engage the top of the guideway in which it travels. I preferably employ a spring on each end of the follower to hold the follower rigidly in its adjusted position; but one spring may be found sufficient in some cases. The upper edge of each end of the follower is inclined at 20 from its rear end to a point between its ends and also at 21 from the forward end of said inclination at a greater angle to the front edge of the end. The follower is provided with a finger-piece 22, by means of which it can be adjusted lengthwise of the tray by exerting sufficient pressure to overcome the friction of the springs 18 and carried up into engagement with the holders in the tray to secure them compactly together in upright position. To enable these holders to be examined without disarranging or changing their position in the tray, I provide for tilting the follower in the manner shown in Fig. 2 by cutting down and inclining the top edge of the ends of the follower in the manner shown and described. It will be apparent that the follower may tilt to the extent of the inclined edge 20, whereupon the inclined edge 21 will positively engage the top wall of the guideway and securely lock the follower rigidly in position against movement in either direction. In this way the pressure of the follower against the lower edges of the holders is constantly maintained, while the pressure on the upper part of the holders is released to permit of their being tilted in the manner indicated in broken lines in Fig. 2. In this tilted position the holders can be inspected and examined without in any way disarranging them in the tray.

I contemplate using my improved tray simply for card-index purposes and also in con-

nection with a machine for printing from printing-plates in holders or from stencils. In such machine the tray will be arranged in a convenient position to receive the holders or stencils one by one after the printing operation. I therefore provide a rubber cushion 23 at the front of the tray, upon which the holders or stencils fall from the machine.

Without limiting myself to the exact construction and arrangement of parts herein shown and described, what I claim, and desire to secure by Letters Patent, is—

1. The combination of a tray and a tiltable sheet-metal follower guided in the tray and provided with forwardly-projecting ends extending parallel with and adjacent to the sides of the tray.

2. The combination of a tray and a tiltable sheet-metal follower guided in the tray and provided with forwardly-projecting ends constructed to interlock with the tray when tilted and prevent forward or backward movement of the follower.

3. The combination of a tray having vertical guideways within its sides, and a follower provided with ends extending at right angles thereto and guided in said guideways.

4. The combination of a tray having its sides provided with overhanging flanges forming vertical guideways within the tray, and a follower having ends arranged to travel in said guideways.

5. A tray of the character described having its bottom and sides formed of a piece of sheet metal shaped to provide vertical guideways within the tray, and a follower formed of a piece of sheet metal and provided with ends projecting at right angles thereto to travel in said guideways.

6. The combination of a tray of the character described provided with guideways; a follower having forwardly-projecting ends arranged to travel in said guideways, and means for yieldingly holding the follower in its adjusted position.

7. The combination of a tray having overhanging flanges along its sides forming guideways, a follower having ends arranged to travel in said guideways, and yielding means carried by the ends in said guideways for securing the follower in adjusted position.

8. The combination of a tray having overhanging flanges along its sides forming guideways, a follower having ends guided in said guideways, and curved springs carried by said ends, and arranged to engage the top of the guideways to hold the follower in adjusted position.

9. The combination of a tray of the character described provided with guideways along its sides, a follower having forwardly-project-

ing ends arranged to travel in said guideways, and a spring carried by an end and arranged to engage the tray to hold the follower in its adjusted position.

10. The combination of a tray of the character described provided with guideways along its sides, a follower having forwardly-projecting ends arranged to travel in said guideways, and a spring fastened to an end and curving upwardly and rearwardly to engage the top wall of the guideway to hold the follower in its adjusted position.

11. The combination of a tray of the character described provided with guideways along its sides, and a follower having angularly-directed ends arranged to travel in said guideways and constructed at their top edges to permit the follower to be tilted backward from the perpendicular at any position in the tray.

12. The combination of a tray of the character described provided with guideways along its sides, and a follower having angularly-directed ends arranged to travel in said guideways and inclined at their top edges to permit the follower to be tilted backward from the perpendicular a limited distance at any position in the tray.

13. The combination of a tray of the character described provided with guideways along its sides, and a follower having angularly-directed ends arranged to travel in said guideways and constructed to be tilted backward from the perpendicular and locked rigidly in tilted position at any position in the tray.

14. The combination of a tray of the character described, provided with guideways along its sides, a follower having ends arranged to travel in said guideways and provided at their top edges with locking inclined portions.

15. The combination of a tray of the character described provided with guideways along its sides, a follower having ends arranged to travel in said guideways and provided at their top edges with inclined portions to permit the follower to be tilted and inclined portions to make locking engagement with the tray.

16. A tray of the character described provided with overhanging flanges along the top of its sides and extending down within the tray to form guideways, and a follower operating in the tray and guided in said guideways.

17. A tray of the character described provided with overhanging flanges along the top of its sides forming guideways, a follower guided in said guideways, and posts on the follower arranged adjacent to said flanges.

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