W. L. DEMING.

DOCUMENTARY DISTRIBUTING DEVICE.

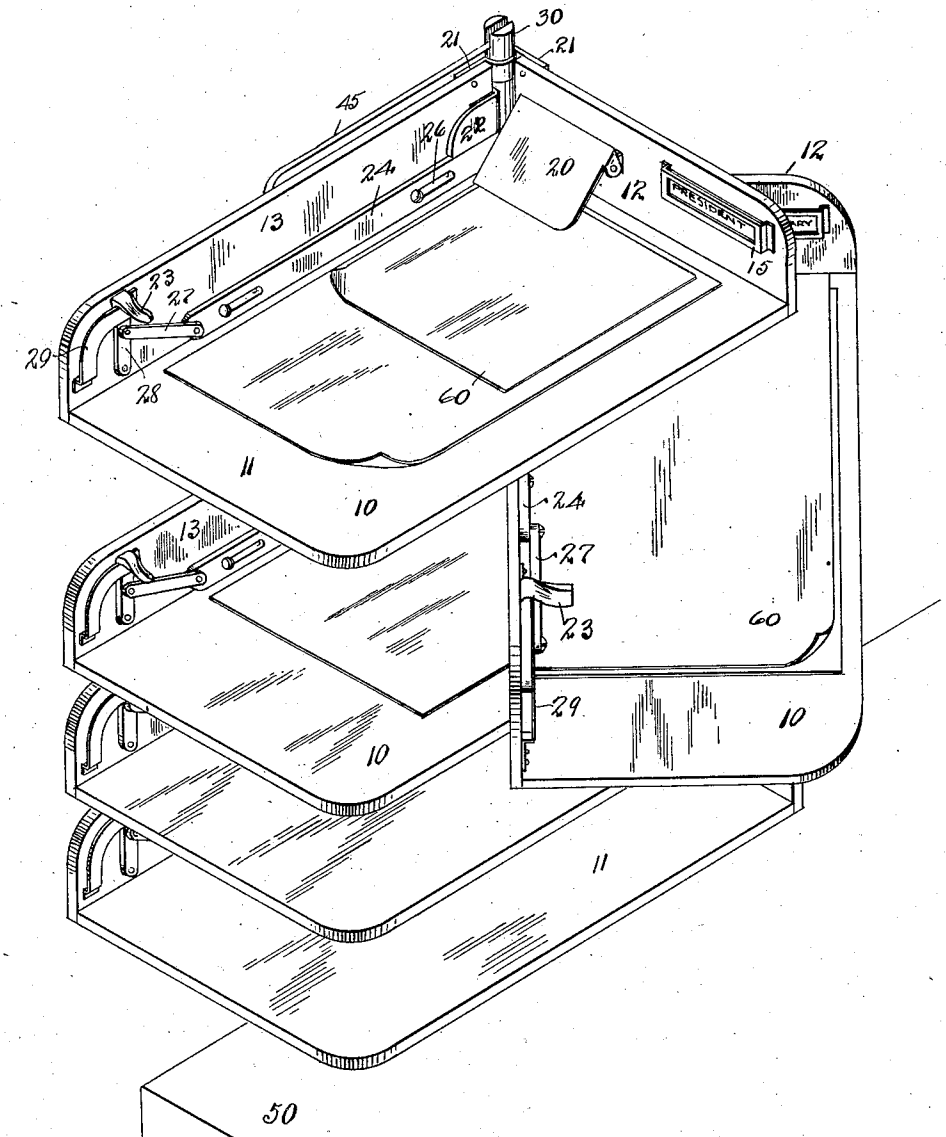
APPLICATION FILED JUNE 14, 1911.

1,027,701.

Patented May 28, 1912.

3 SHEETS—SHEET 1.

FIG-1



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3 SHEETS—SHEET 2.

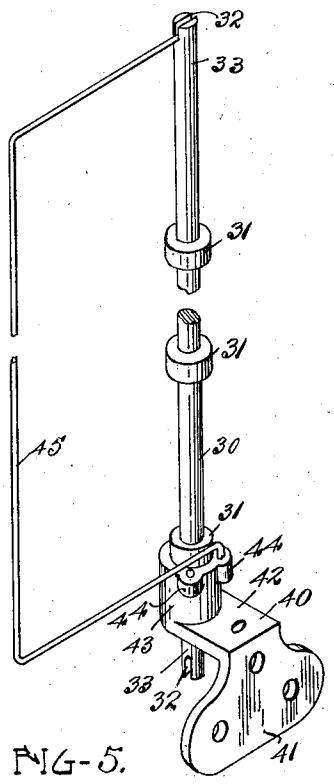


FIG-5.

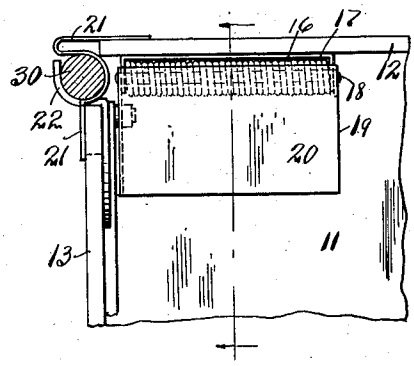


FIG-2-

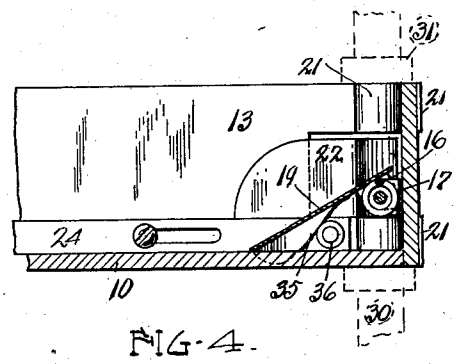


FIG-4.

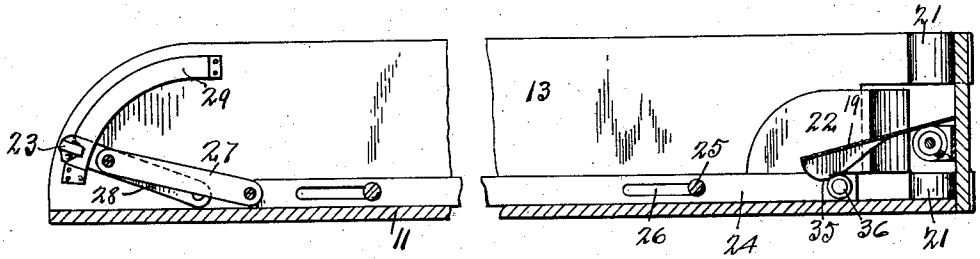


FIG-3.

WITNESSES

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3 SHEETS—SHEET 3.

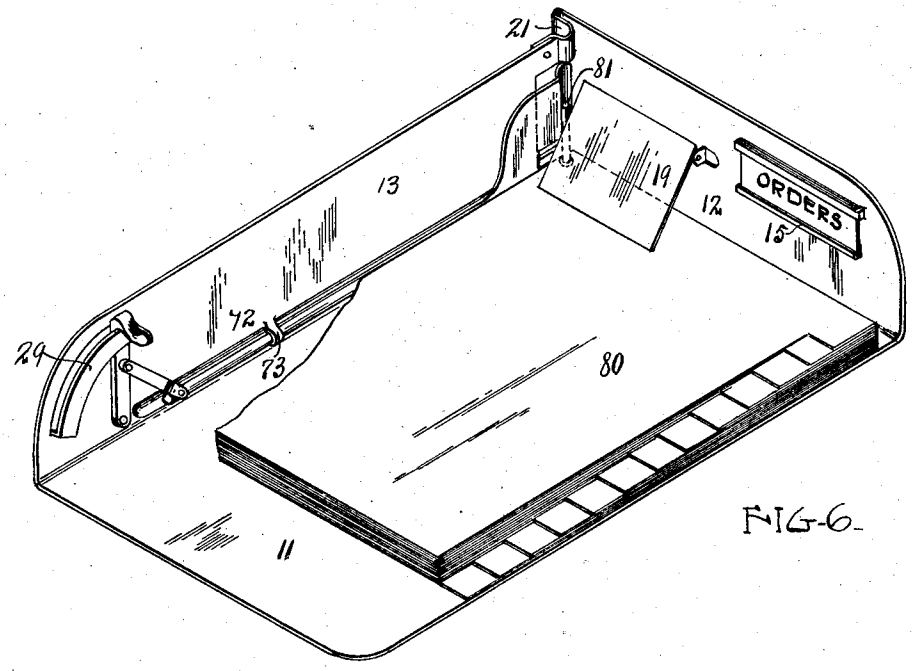


FIG-6.

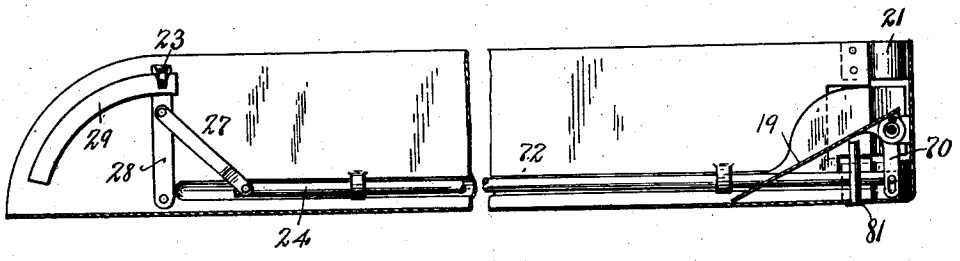


FIG-7.

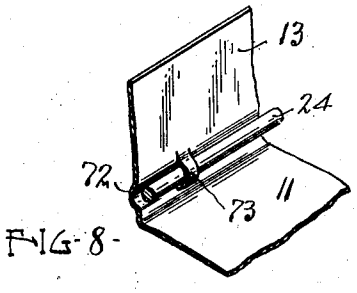


FIG-8.

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UNITED STATES PATENT OFFICE.

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DOCUMENTARY DISTRIBUTING DEVICE.

1,027,701. Specification of Letters Patent. Patented May 28, 1912.

Application filed June 14, 1911. Serial No. 633,184.

To all whom it may concern:

Be it known that I, WILLIAM L. DEMING, a citizen of the United States, residing at Salem, in the county of Columbiana and State of Ohio, have invented a certain new and useful Improvement in Documentary Distributing Devices, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

The object of this invention is to provide a desk attachment adapted for use in the assorting of departmental documents, distribution of mail, etc. To this end I have provided a series of trays and a standard adapted to be carried by a desk or wall in convenient position and removably supporting the trays. Each tray is provided with a clip adapted to retain the documents in the tray, so that, in distributing letters or other matter may be simply thrown into the proper trays and then the trays removed from the standard and the documents held by the clip in the tray. This enables each tray, with its contents, to be passed to the proper officer or department. These trays may also be retained conveniently on the standard and used for holding various current papers properly assorted. For this use removable indexing separating sheets may be employed in the trays, such sheets, with their contents, being held by the clip.

The invention is hereinafter more fully described and its essential characteristics are set out in the claims.

The drawings illustrate my invention in an approved form.

Figure 1 is a perspective view of my distributing device attached to and supported by a suitable desk; Fig. 2 is a plan of the corner portion of one of the distributing trays, showing the supporting rod in section; Fig. 3 is a vertical section through one of the distributing trays looking toward the side which carries the clamping mechanism and with the retaining clip open; Fig. 4 is a similar view of a portion of the tray with the retaining clip closed; Fig. 5 is a perspective of the supporting bracket and standard; Fig. 6 is a perspective of a tray made of sheet metal and equipped with a modified form of clamp operating mechanism. This view also shows the indexing separators. Fig. 7 is a vertical section of a portion of the tray shown in Fig. 6, and Fig. 8 is a detail thereof.

As shown in Fig. 1, there are a series of trays, designated 10, one above the other, each having a retaining clip 20. These trays are removably carried by a rod 30 which rises vertically from a bracket 40 (Fig. 5) secured to a suitable support, as for example the desk or table 50. Such being the general characteristic of the invention, I will now proceed to describe the specific features of each portion thereof.

The trays are duplicates of each other. Each tray may be made of thin wood, sheet metal or other suitable material. As shown, the tray has a bottom 11, a back 12 and a side 13. The tray is preferably open at the two edges opposite the back and side 12 and 13. Each tray is preferably provided with a suitable label holder to carry a label indicative of the department or officer to whom the tray belongs or the subject to which it relates. Such label holder is shown in the drawings at 15 and is conveniently secured to the front face of the rear wall 12.

The trays are removably clamped to the vertical rod 30 at the corner of the tray by means of the coöperating stationary and movable clamps 21 and 22 (Fig. 2) carried by the tray and operating to embrace the rod. The stationary clamp is preferably made in two portions, secured to the rear wall of the tray near its top and bottom and then extending beyond the wall and bending inwardly into the space provided by the cut-away corner of the tray and then continuing along the outer side of the wall 13, as shown clearly in Figs. 2, 3 and 4. These stationary clamping portions lie against the inner side of the rod 30. The movable clamp 22 which lies against the outer side embraces a portion of the rod between that embraced by the stationary clamps. This movable clamp, when in active position, may stand between the end portions of the stationary clamps, as shown in Fig. 2. The movable clamp 22 is shown as a plate secured to the longitudinal bar 24 which is slidably guided along the tray wall 13. This guiding is shown in Figs. 1 and 3 as accomplished by pins 25 extending through slots 26 in the bar. Near its outer end the bar 24 is connected by a link 27 with the finger lever 28. This lever is pivoted at its lower end to the side of the

tray and is guided near its upper end between the side wall of the plate and a segmental guard 29, while the end of the lever is turned over into a thumb piece 23. By this means the thumb piece may operate to withdraw the movable clamp 22 from the rod to release the tray.

As heretofore mentioned, 20 indicates a spring clip carried by the tray and adapted to clamp the letters therein. This clip is shown as consisting of a clamping plate 19 mounted on a rod 18 carried in a bracket 17 secured to the tray wall 12. A suitable spring 16 surrounding the rod 18 and connected at one end with the plate 19 and at the other with the bracket 17, tends to force the plate toward the tray bottom 10 and clamp papers between them. The clamping plate is connected by suitable mechanism with the operating link 24, so that when this link is retracted, to release the hold on the rod, the same movement automatically opens the clip to allow the documents to be passed into it.

In the form shown in Figs. 3 and 4, the plate 19 is provided with the down-turned cam-shaped edge 35 which coacts with a roller 36 on the slidable bar 24. Accordingly, whenever the finger lever 28 is operated to release the tray from the rod, the same movement, by means of the roller 36 and cam 35, raises the clamping plate 19.

In the form shown in Figs. 6 and 7, the rod 24 is connected with the clamping plate 19 by means of a bell crank arm 70 depending from one edge of the plate adjacent to the shaft on which it is journaled. This makes a very simple connection and enables simultaneous operation of both the clamp 22 and the clip 20. This connecting mechanism is shown in Figs. 6 and 7 as applied to a sheet metal tray, though it is to be understood, of course, that it is equally applicable to the wooden tray. The mechanism shown in the wooden tray is also applicable to a sheet metal tray. When the tray is made of sheet metal, as illustrated in Figs. 6 and 7, I prefer to make the releasing rod 24 round and seated in a longitudinal recess 72 provided by a bowed-out portion where the vertical wall 13 joins the bottom 11 of the tray. This rod may be slidably retained in the recess by suitable straps 73 formed of the metal of the vertical wall 13 and pressed oppositely to the recess. In this sheet metal construction the segmental guard 29 may conveniently be pressed from the metal of the side wall, which is slit accordingly. Likewise, the label holder 15 may be pressed from the rear wall 12.

In operation, the letters, as placed in the tray, will be lying loose on the tray bottom. When the tray is removed from its standard and held in the hand of the operator, it may be tipped, or swung downwardly, while the operator's finger is on the thumb piece 23, so that the corner of the letters slide into the clip. Then, when the thumb is removed from the thumb piece, the letters are clamped in place by the action of the spring 16, so that the tray, with its letters, may be distributed to the proper officer or department. The same spring 16 may operate to depress the clamp plate 19 and retract the sliding bar 24 to hold the clamp 22 in engagement with the rod. Or, if desired, an additional spring may be provided acting directly on the rod 24 or other part of the mechanism.

For many uses in the proper assorting of documents it may be convenient to have an index within the tray composed of separating cards or sheets. This is illustrated in Fig. 6. The index sheets 80 surmount each other and have eyelets in one corner which pass over the stationary pin 81 rising from the bottom of the tray near the innermost corner. The top separating sheet is preferably of heavier material, constituting a usual press board. This arrangement enables properly classified matters to be placed in the trays, increasing the advantage of the trays when they are used as holders for current matters on a desk. Each tray may then be labeled according to the subject matter contained, and that subject matter properly subdivided by the index sheets, so that the officer at a desk may have before him, at a glance, properly classified, the various documents relating to any transaction in hand. In connection with this use of the tray it should be noted that the operation of the finger lever and rod raises the plate 19 to open the clip before the release is completed from the supporting rod, and, accordingly, this opening of the clip may be effected, as desired, while leaving the tray on the rod as if it were a permanent part of the desk equipment. When the clip is fully open the index sheets may be lifted off over the top of the pin 81.

As shown, the rod 30 is provided with suitable collars 31 properly spaced to allow the tray clamps to engage the rod between the collars. These collars thus hold the trays in position when placed on the rod. The rod is suitably carried by the bracket 40, which is adapted to be secured to a desk or table or wall. This bracket, as shown in Fig. 5, has a vertical securing plate 41, an out-turned arm 42 and a hub 43 on the arm occupied by the rod 30, one of the collars on the rod resting on the upper face of the hub. The plate 40 may abut the side surface of the desk and the adjacent portion of the arm 42 abut the under face of the overhanging desk top, while the hub stands close alongside of such desk top. Accordingly, the desk is not marred by my attachment. The rod, whenever desired, may be removed entirely from the bracket, leaving only the

hub portion of the bracket visible from above, which is not objectionable. The bracket may also be secured to a wall, if desired.

To provide a suitable swing limit for the trays, preventing their swinging out of reach or too far over the edge of a desk, I may secure a suitable wire frame or bail 45 to the standard and bracket in such way as to limit the movement of the trays, as shown in Figs. 1 and 5. This frame, at its upper end, occupies a notch 32 in the standard 30 and projects axially into the standard, and the lower end projects into an opening in a boss 44 on the side of the hub 43, and the bail so held bears, at its lower end, against the side of the lowermost collar 31 on the rod. This limits the position of the bail and the bail limits the swing of the trays. To make the position of this wire frame adjustable I provide two or more bosses 44, as shown, having openings which the lower end of the frame may occupy. Obviously, the frame could extend from either opening in each of two directions at substantially right angles to each other along the sides of the collar 31, so that four positions of the frame are thus provided, the rod 30 being turned to bring its slot in alinement with the upper arm of the frame. This adjustment of the swing limit enables the device to be installed equally well on the right hand end or left hand end or back of a table or desk, or against a wall or in other position, as desired. The wire frame is removable by being simply lifted out. The rod is removable from the bracket, as heretofore stated, so that the whole equipment, except the bracket, may be taken off, whenever desired. The rod is preferably formed with a notch 32 and hole 33 in each end, so that it is reversible and it is immaterial which end is uppermost. The collars not only properly position the trays, but prevent their sagging or descending when the clamp is partially released to operate the clip.

It will be seen from the above description that my system of trays may be easily installed on an office desk, or in other place as desired; that when in place they are very neat in appearance and are very effective in assisting in the distribution of the documents, as well as in insuring letters reaching the proper department.

In Fig. 1, 60 designates various sheets or letters clamped in the trays, though it is to be understood that, as the letters are being placed in the trays, they may occupy various indefinite positions as they happen to be rapidly pitched into place, the letters becoming clamped after the trays have been removed and letters allowed to settle by gravity into the corner by a downward swing of the tray.

My construction is of particular value, both in saving time and in promoting accuracy in the distribution of office mail and the proper assortment of various documents. In fact, this device may have a wide variety of effective uses, being varied in position and size, as well as in the index, which may be carried, according to the use desired. Accordingly, I do not intend to limit myself to any particular use of the invention. Moreover, it should be noted that various modifications may be made in the embodiment of the device without departing from the spirit of my invention as hereinafter claimed.

Having thus described my invention, what I claim is:—

1. The combination, with a standard, of a series of trays, a clamp at the corner of each tray for removably holding the same on the standard, finger mechanism near the front of the tray for operating the clamp, and a retaining clip on each tray.

2. The combination, with a standard, of a tray having a bottom, a back and a side, the front and other side being omitted, and means at the corner where the side and back meet for clamping the tray to the standard and allowing the removal of any tray independently of the others.

3. The combination of a standard, a series of trays, clips carried by the trays, means carried by the trays for clamping them to the standard, and a common operating device for both the clips and the clamping means.

4. The combination of a standard, a series of trays, spring clips carried by the trays, means carried by the trays for clamping the standard, and a common rod device for both the spring clips and the clamping means.

5. The combination of a vertical rod, a series of trays provided with clamps at one corner adapted to engage the rod, and mechanism for operating the clamps to release the hold on the rod.

6. The combination of a vertical rod, a tray provided with a clamp at one corner adapted to engage the rod, and mechanism having a finger piece adjacent to the front of the tray for operating the clamp to release the hold on the rod.

7. The combination of a standard, a series of trays, each tray being provided with a clamp adapted to engage the standard, a clip for holding the contents of the tray, and mechanism terminating in a finger piece near the front of the tray for operating both the clamp and the clip.

8. The combination, of a rod, a series of trays, each tray being provided with a clamp at its corner adapted to engage the rod, a spring clip within the tray near its corner, and mechanism terminating in a finger piece near the front of the tray for operating both the clamp and the clip.

9. In a device of the character described, the combination of an upright rod, a series of trays removably carried thereby and adapted to swing about the rod, and a bail-like frame for limiting the swing.

10. In a device of the character described, the combination of a bracket, a rod carried thereby, a bail-like frame carried by the bracket and rod, and trays mounted on the rod and adapted to swing thereon.

11. The combination, with a rod having spaced collars thereon, and trays adapted to engage the rod between the collars and substantially abut the top surface of the collar below the tray and the bottom surface of the collar above the tray, whereby the position of the tray is accurately defined and slippage down the rod is prevented, and clamps for holding the trays on the rod.

12. The combination, with a supporting rod, of a tray having a stationary clamp to engage one side of the rod, and a movable clamp to engage the other side, a spring to seat the movable clamp, and means for withdrawing it.

13. The combination, with a round supporting rod, of a tray having a pair of curved stationary straps adapted to embrace one side of the rod, and a movable clamping plate curved to embrace the other side of the rod and stand between the two straps, whereby the tray may swing about the rod while clamped.

14. In a device of the character described, the combination of a tray, a clamp carried thereby, a rod extending along the tray and operating the clamp, a pivoted finger lever near the forward end of the tray, and means connecting the finger lever with the rod.

15. The combination, with a tray, of a clamp for supporting it, a clip for holding papers in the tray, a rod extending along the tray connected for operation with both the clamp and clip, a finger lever near the forward end of the tray, and a connection between the same and said rod and serving to raise the clip before the clamp releases the tray.

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

WILLIAM L. DEMING.

Witnesses:
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J. B. HULL.

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