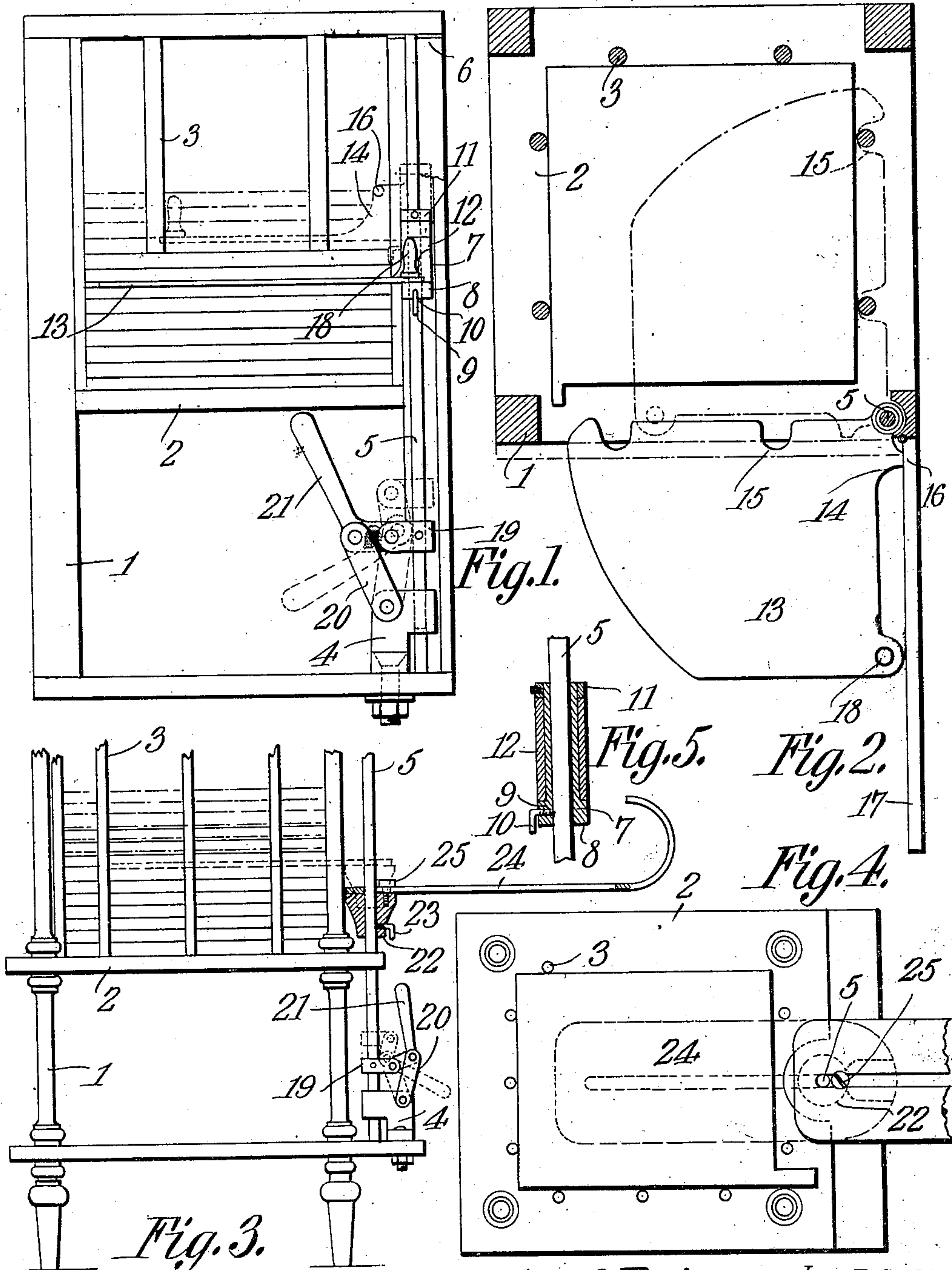


No. 859,247.

PATENTED JULY 9, 1907.

J. Q. PRIMM.  
LIFTING ATTACHMENT FOR SHELVES, &c.  
APPLICATION FILED AUG. 16, 1906.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JOHN Q. PRIMM, OF LINCOLN, ILLINOIS.

## LIFTING ATTACHMENT FOR SHELVES, &c.

No. 859,247.

Specification of Letters Patent.

Patented July 9, 1907.

Application filed August 16, 1906, Serial No. 330,921.

*To all whom it may concern:*

Be it known that I, JOHN Q. PRIMM, a citizen of the United States, residing at Lincoln, in the county of Logan and State of Illinois, have invented a new and useful Lifting Attachment for Shelves, &c., of which the following is a specification.

This invention relates to lifting devices for use in connection with document files, store shelves, etc., and its object is to provide a simple and inexpensive device of this character which can be readily attached to shelves, etc., and by the use of which a portion of a stack of articles can be lifted so as to facilitate the removal of one or more articles from the stack without danger of disarrangement.

Another object is to provide a device of this character which is compact and which does not detract from the appearance of shelves, etc. to which it may be secured.

With the above and other objects in view the invention consists of a vertically movable supporting rod on which a shelf or lifting plate is movably mounted. Means are provided whereby the rod can be raised or lowered manually and by adjusting the plate to a desired point upon the rod, moving it into position directly above the article to be removed, and then raising the rod, the upper portion of a stack of articles can be readily raised and a desired article removed without disarranging the parts.

The invention also consists of certain other novel features of construction and combinations of parts which will be hereinafter more fully described and pointed out in the claims.

In the accompanying drawings is shown the preferred form of the invention.

In said drawings Figure 1 is a front elevation of a case having this improved lifter connected thereto, said lifter being shown raised by dotted lines; Fig. 2 is a horizontal section through the device shown in Fig. 1, said section being taken above the movable plate; Fig. 3 is a side elevation showing a modified form of lifter connected to a case; Fig. 4 is a horizontal section through the device shown in Fig. 3, said section being taken above the movable plate; and Fig. 5 is an enlarged section through the sleeves shown in Fig. 1.

Referring to the figures by numerals of reference, 1, 1 are corner standards of a case supporting one or more shelves 2 and three sides of the case are preferably closed by means of upright rods 3 or in any other desired manner. A base bracket 4, preferably L-shaped in form, is secured to the bottom of the case and constitutes a guide for a longitudinally movable rod 5 the upper portion of which is mounted in a bracket 6, secured to the top of the case, or in any other suitable manner.

A sleeve 7 is arranged on the rod 5 and has a collar 8 at its lower end in which is arranged a set screw 9 pro-

vided with a handle 10 whereby the same can be easily turned so as to bind the sleeve in any position to which it may be adjusted. Another collar 11 is secured to the other end of the sleeve and mounted on the sleeve between these collars is another sleeve 12 from which extends a lifting plate 13 formed of sheet steel or of any other thin, strong material. A web 14 serves to reinforce the junction between sleeve 12 and the plate 13. Recesses 15 are formed in one edge of the plate to receive some of the rods 3 when the plate 13 is in position within the case and a stop 16 is arranged on another edge of the plate so as to be contacted by the door 17 of the case when the same is closed. This stop may be covered with a suitable soft material so as to prevent injury to the door. A grip 18 is connected to one corner of plate 13 to facilitate swinging it upon the sleeve 7.

An ear 19 is secured to the lower portion of rod 5 and a link 20 is pivoted to the base bracket 4. A bell crank lever 21 is fulcrumed upon the link and its end is pivoted to the ear 19. The connections between the lever and the link 20 and ear 19 are so located that when the lever is pulled down the fulcrum thereof passes under the pivoted end, as shown by dotted lines in Fig. 1 and the rod 5 is raised and held supported.

In using this lifter the lever 21 is raised so as to lower the rod 5 and the plate 13 is of course swung outward as shown by full lines in Figs. 1 and 2. The sleeve 12 is then released from the rod and moved vertically until the plate 13 reaches a level between the article to be removed from the stack and the article directly above it. The plate is then swung toward the stack by means of the grip 18 and forced between the two articles. By locking the sleeve 12 upon the rod 5 and pressing downward upon the lever 21, said plate, and the articles thereabove, will be raised and the article directly beneath it can be easily removed therefrom. The parts can then be replaced by reversing the operation above described. When the plate 13 is not in use it can be swung into the case above the stack and the door closed, as shown by dotted lines in Fig. 2.

Instead of employing a swinging plate as shown in Figs. 1 and 2 a sliding plate may be used as shown in Figs. 3 and 4. In this construction a collar 22 is adapted to be adjusted to any desired point upon the rod 5 and to be locked by a set screw 23. A longitudinally slotted plate 24 is mounted on the collar and the rod 5 extends through the slot. A screw 25 also extends through the slot and into the collar and said plate is therefore held against rotation. When the plate has been adjusted to a desired point on the rod it is pressed into the stack and by raising the rod 5 in the manner hereinbefore described a desired article or articles can be removed.

What is claimed is:—

1. A device of the character described comprising a longitudinally movable rod, a horizontally movable lifting



plate adjustably connected to the rod, and means for actuating the rod.

2. A device of the character described comprising a longitudinally movable rod, combined actuating and supporting means for the rod, and a horizontally movable plate adjustably connected to the rod.
3. A device of the character described comprising a longitudinally movable rod, guides therefor, combined lifting and supporting means for the rod, and a horizontally movable plate or shelf adjustably connected to the rod.
4. A device of the character described comprising a longitudinally movable rod, combined actuating and supporting means for the rod, a horizontally movable plate slidably mounted upon the rod, and means for securing said plate in adjusted position on the rod.
5. A device of the character described comprising a longitudinally movable rod, combined lifting and supporting means for the rod, a horizontally movable shelf or plate slidably mounted upon the rod, and means adjustably secured upon the rod for supporting a shelf or plate at a desired elevation thereon.
6. A device of the character described comprising a base bracket, a rod longitudinally movable therein, an ear upon the rod, a link pivoted upon the bracket, a lever pivotally connected to the link and ear, and a shelf or plate movable in a horizontal plane upon the rod.
7. A device of the character described comprising a base

bracket, a rod longitudinally movable therein, an ear upon the rod, a link pivoted upon the bracket, a lever pivotally connected to the link and ear, a shelf or plate movable in a horizontal plane upon the rod, and means for adjustably supporting the shelf or plate upon the rod.

8. The combination with a structure having a shelf for supporting articles; of a vertically movable support, and means movable horizontally upon the support for insertion between any articles upon the shelf.

9. The combination with a structure having a shelf for supporting articles; of a vertically movable support, means movable horizontally upon the support for insertion between any articles upon the shelf, and means for securing said insertible means in adjusted position upon the support.

10. A device of the character described comprising a vertically movable support, a horizontally movable article engaging device movable longitudinally upon the support, and means for locking said device in adjusted position upon the support.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOHN Q. PRIMM.

Witnesses:

CHAS. A. RATHBONE,  
OSCAR K. MOHR.