(No Model.)

W. T. CARY.

CONVERTIBLE BIN SUPPORT.

No. 470,037. Patented Mar. 1, 1892.

Fig. 1.

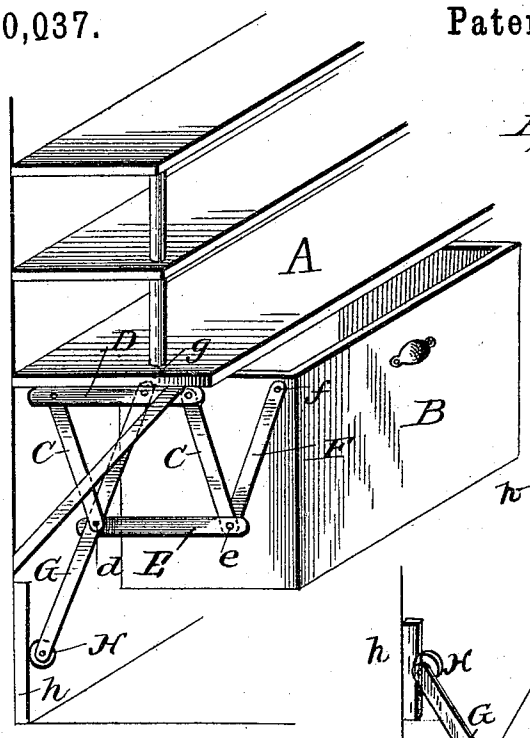


Fig. 2.

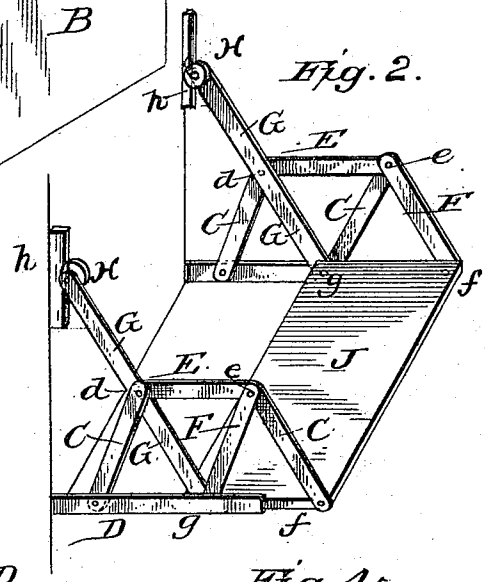


Fig. 3

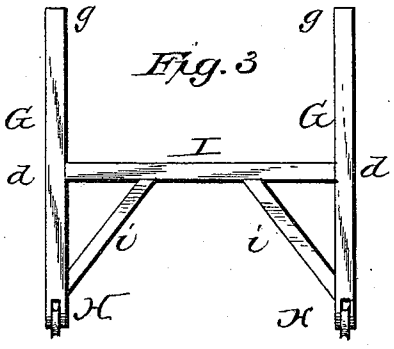
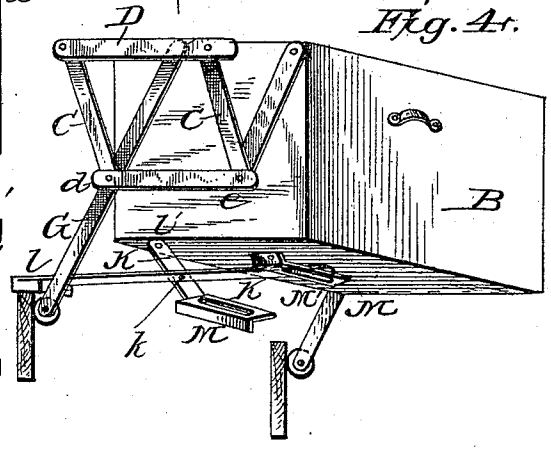


Fig. 4.



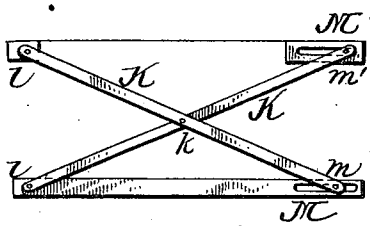


Fig. 5.

Witnesses
F. L. Ourand.
Emmett A. Jones.

Inventor:
Wm. T. Cary.
By his Attorneys,
Munn & Co.

UNITED STATES PATENT OFFICE.

WILLIAM THURSTON CARY, OF WAKENDA, MISSOURI.

CONVERTIBLE BIN-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 470,037, dated March 1, 1892.

Application filed July 22, 1891. Serial No. 400,349. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM THURSTON CARY, a citizen of the United States, and a resident of Wakenda, in the county of Carroll and State of Missouri, have invented certain new and useful Improvements in Convertible Bin-Supports; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of my device arranged as a support for a bin or drawer. Fig. 2 is a similar view of the device, but showing it arranged as a barrel-rack. Fig. 3 is a detail view of the hinged back frame and levers with their guide-rollers. Fig. 4 is a perspective view illustrating a somewhat modified arrangement of the device when used as a bin or drawer support; and Fig. 5 is a detail view of the jointed guide-bars or toggle-joint, introduced as an element in the modified construction and combination shown in Fig. 4.

Like letters of reference denote corresponding parts in all the figures.

This invention relates to devices for supporting the bins and drawers containing merchandise in stores and store-rooms, whereby the bin or drawer may be easily opened and closed even if it is of great capacity and weight; and my improvement consists in the novel construction and combination of parts of the device, which will be hereinafter more fully described and claimed, which is adapted to be converted to be used also as a barrel rack or support or as a movable platform or support for other heavy articles to which it is desired to gain occasional access.

Referring to the accompanying drawings, the letter A designates the bottom shelf along one of the walls of a store or store-room, and B a bin or drawer supported adjustably by my improved device. The latter consists of two sets or systems of levers, one at each end of the bin B, and both constructed and arranged precisely alike. Each set of levers comprises two arms C C, hinged at their upper ends in a cleat or bracket D, securely fastened in a horizontal position at right angles to the wall and at their lower ends in a connecting-bar E. At the point *e* where the outermost arm C is hinged to bar E is hinged or jointed another arm F, of the same length as arms C, and pivoted at its upper end *f* upon a stud inserted into the adjacent end of drawer B near its upper front corner. The opposite or rear corner of the drawer on the same side is similarly supported pivotally by a stud *g* in the upper end of an arm G of twice the length of the arms C, said arm G being pivoted at *d* to the horizontal connecting-bar E at the point where this is hinged to the rearmost arm C. The free or lower part of the long arm G is provided at its extreme end with a small friction-wheel H, which bears with its periphery against an upright track *h*, fastened to the wall back of the bin. The arrangement at the other end of the bin or drawer B is precisely the same, and to prevent the swaying or lateral displacement of the two systems of levers between which the drawer is suspended the long arms G G are connected to each other midway or at about the point *d*, where they are articulated to the rear arms C and cross-bars E by a longitudinal bar or brace I, connected by corner-braces *i i* to the lower ends of arms G G, as clearly illustrated in Fig. 3.

By simply inverting the lever systems, as shown in Fig. 2, with the cleat or bracket D resting upon the floor instead of being suspended above it, and then connecting the lower ends of the levers pivotally to the opposite ends of a platform J, this platform may be used as a swinging rack or support for barrels and other heavy articles, the operation of the duplicated lever systems being precisely the same in both cases.

If desired, the construction illustrated in Fig. 1 may be modified by the addition of the horizontal toggle-joint, consisting of the two bars K K, (see Figs. 4 and 5,) pivoted together at their middle *k*, and at their inner ends pivoted on one side *l* in a cleat fastened to the wall and having a stud or button *m* at the other end sliding in a slotted cleat or bearing M. Similarly the other or outer end of this toggle-joint is pivoted at *l'* to the under side of the bin, and at *m'* it slides in a slotted cleat M', secured to the under side of the bin, thus extending the toggle-joint when the bin

or drawer is pulled out, and pushing it together again when the drawer is pushed in, the levers comprising the joint causing both ends of the bin to move evenly and simultaneously, so that the end levers cannot become twisted or "bind" against one another.

The operation is as follows: When the bin is shut or pushed under the shelf A, the arms C C and F G will occupy nearly perpendicular positions, the upper ends of arms F and G being in close proximity to the upper stationary ends of arms C C and the lower end of arm G at the bottom of track *h*. As the bin or drawer is pulled out the upper ends of arms F G, which are pivoted thereto, will also move outward, while the lower end of arm G will move upwardly along the track *h*. At the same time the bar E and the lower ends of the arms C C will move upwardly and outwardly, the operation being similar to that of the ordinary "lazy-tongs." In the construction shown in Fig. 2 the operation is identically the same, the only difference being that the parts are inverted. In Fig. 4 the bin or drawer is connected with diagonal bars K K, pivoted together at their centers and also connected with the wall, the object being to prevent wabbling of the bin. Otherwise the construction and operation are similar to that above described.

By this device the bin, drawer, or platform, as the case may be, may be moved in and out with very slight effort. There is little or no friction to overcome, no wear of parts sliding upon each other, and the device is so simple that it may be constructed by any person of ordinary mechanical skill and with the aid of only such tools and materials as are found in every country store.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

The herein-described convertible bin and drawer support, comprising two systems of levers, one at each end of the bin, each system consisting of the upright levers C C and F G, the levers F G adapted to be pivoted to the bin or drawer with their upper ends, stationary cleats or supports D, to which the upper ends of the levers C are pivoted, and a movable cross-bar E, to which the lower ends of levers C C and F G are pivoted.

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

WILLIAM THURSTON CARY.

Witnesses:
J. P. WEBB,
L. D. FARR.