No. 870,259. PATENTED NOV. 5, 1907.

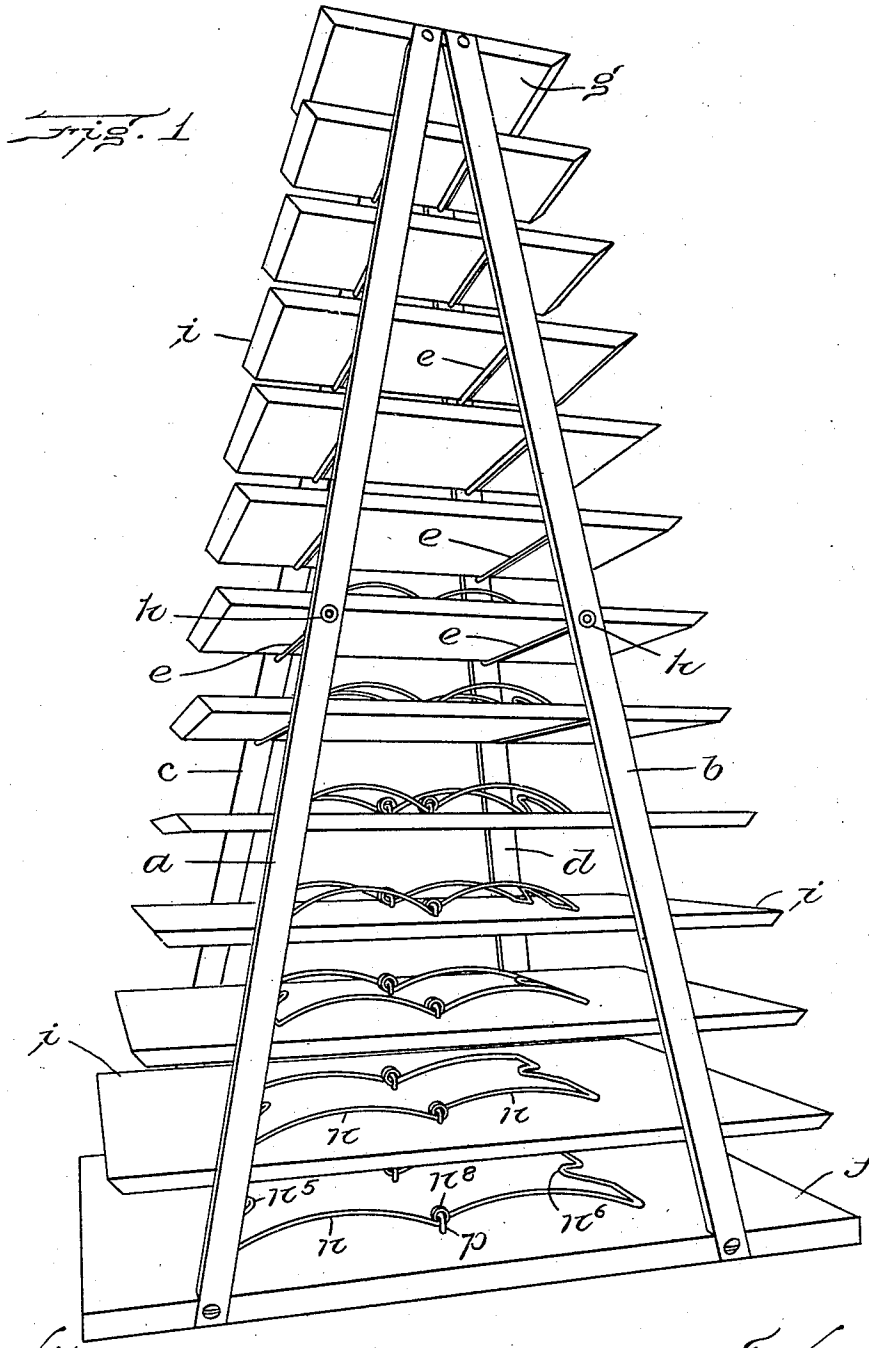
G. H. TENNEY.

BAG RACK.

APPLICATION FILED MAR. 16, 1907.

2 SHEETS—SHEET 1.

Fig. 1.



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2 SHEETS—SHEET 2.

Fig. 2

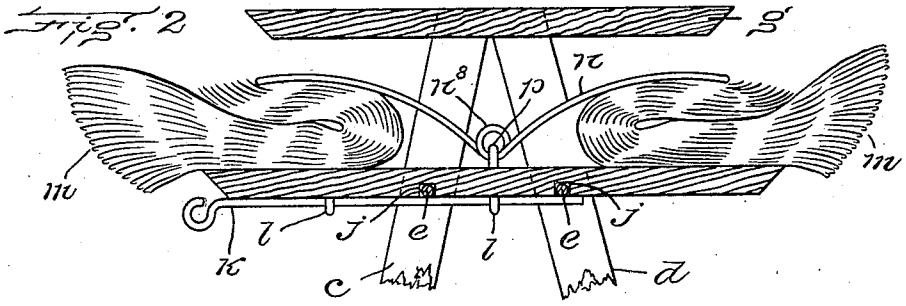


Fig. 3

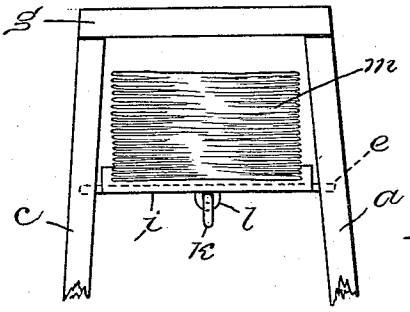


Fig. 4

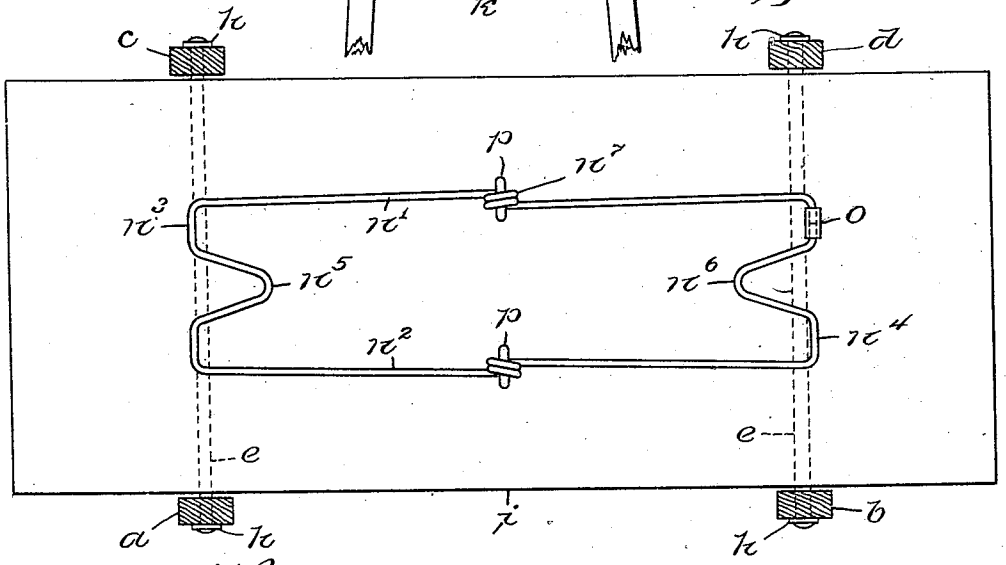
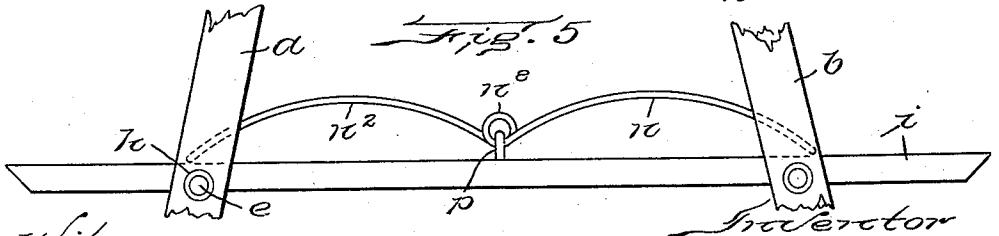


Fig. 5



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UNITED STATES PATENT OFFICE.

GEORGE H. TENNEY, OF WEST TOWNSEND, MASSACHUSETTS.

BAG-RACK.

No. 870,259. Specification of Letters Patent. Patented Nov. 5, 1907.

Application filed March 16, 1907. Serial No. 362,710.

To all whom it may concern:

Be it known that I, GEORGE H. TENNEY, of West Townsend, in the couney of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Bag-Racks, of which the following is a specification.

This invention consists of an article of store furniture in which paper bags may be retained for convenient access, so that a bag of any size may be conveniently obtained when needed. Its object is to construct a device of this character such that bags may be conveniently picked up from either side without dislodging more than the number needed, in which the remaining bags are retained as securely as before any had been removed, and to enable the several supporting shelves or plates to be readily removed for applying packages of bags thereto, but when once in place in the rack to be so securely held that no pull, however strong, in the direction in which the bags are removed, will be sufficient to displace the shelf. A further object is to provide an improved retaining device for yieldingly holding bundles of bags upon the shelves.

Of the accompanying drawings,—Figure 1 represents a perspective view of a bag rack embodying the principles of my invention. Fig. 2 represents in elevation the two upper shelves of the rack, illustrating the manner in which the bags are held thereon. Fig. 3 represents a side elevation of the same. Fig. 4 represents a plan view of one of the shelves, showing the bag-retaining device thereon, the frame being shown in section. Fig. 5 represents an elevation of the same shelf and fragments of the frame.

The same reference characters indicate the same parts in all the figures.

The preferred embodiment of my invention as illustrated in the drawings, consists in a frame composed of side members *a b c* and *d*, and transverse connecting cross bars or rods *e*. The members *a* and *b* on one side of the frame converge upwardly in the form of a letter A, while the members *c* and *d* are similarly convergent. Also the members *c* and *a*, *b* and *d* are respectively bent toward each other, being nearer together at the top than at the bottom. The lower ends of the side members are secured to a base plate *f*, while the upper ends are similarly fastened to a top plate *g*. They may be simply screwed to the outside edges of the plates, but preferably they are connected as shown, being both mortised and secured by screws.

Between each of the corresponding side members *a* and *c*, *b* and *d* respectively, extend equal numbers of cross bars or rods *e* which are evenly spaced. Thus the cross bars are arranged in pairs at different levels, and both bars of any one pair are at approximately the same distance from the base, so that when the base is horizontal, the cross bars of any one pair lie in a horizontal plane. Owing to the convergence of the side members the distances between the bars of the several pairs diminish in proportion to their distance from the base.

The cross bars which are located at about the middle of the length of the side members extend entirely through the latter, and their ends are upset outside of washers *h*, thereby preventing the side members from bowing outwardly and separating far enough to release the other cross bars, the ends of which are embedded in the side members and do not extend fully through the same. By reason of the fact that these cross bars do not pass completely through the side members, they serve to retain the latter at the proper distance apart and to preserve sufficient space between them for the insertion of the shelves *i* hereinafter described.

The above-mentioned shelves are of successively diminishing lengths and widths, and each is adapted to be set over one of the pairs of cross bars *e*. In their under surfaces they have parallel grooves *j* which are spaced apart to correspond with the distances between the rods with which they are engaged. The depth of the grooves is at least equal to the radius of the cross bars, and preferably greater so that a horizontal pull, that is a pull in the plane in which the shelf lies, will not dislodge it from the supporting cross bars, but in order to permit its removal the shelf must be lifted clear of the supporting bars.

The uppermost shelf or shelves of which the length is great compared with the distance between the supporting bars, is liable to be dislodged by an accidental pressure upon either end, causing it to tilt about one of the bars. Accordingly I provide additional retaining means for these shelves which is shown in Figs. 2 and 3. This consists of a pin or bolt *k* guided through staples *l* driven into the under side of the shelf so that when projected, it will cross the grooves and lie beneath the supporting bars *e*. When thus projected, dislodgment of the shelf is impossible.

The bags *m* are placed on the shelves in bundles which are folded over or doubled, as shown in Fig. 2, and are held in this folded condition by retainers *n*, there being one of these retainers for each shelf, as well as for the bottom and top plates *f* and *g*. These retainers are identical in form and vary only in size, being larger for the lower shelves on which the larger bags are held and smaller for the upper shelves.

As appears in Figs. 1 and 4, the retainer is made from a length of spring wire bent into generally rectangular form with its ends butting together, and retained by a tubular strap *o*. This formation of the retainer pro-

duces two longitudinal members n' and n^2 connected at their ends by transverse members n^3 and n^4. The latter are offset inward between the longitudinal members to form projections or tongues n^5 and n^6. Approximately midway of their length the longitudinal members are twisted to form short helical coils n^7 and n^8 through which are passed staples p which are driven into the upper side of the shelf approximately on the median line thereof. Between the coils and each of the ends of the retainer the longitudinal members are bowed or curved outward away from the surface of the shelf in the manner shown in Figs. 1, 2 and 5. Either end of the retainer may be raised, thereby bending the coils about the staples p, and a bundle of bags inserted. The resilience of the coils causes the end of the retainer to bear yieldingly against the bundle of bags while the inwardly-bent tongue, and the transverse curvature of the longitudinal members distribute this pressure over a considerable area, thereby holding the bags securely, but without too great pressure. In removing the bags one at a time, the uppermost one on the projecting end of the bundle, that is the one which is innermost in the fold, is grasped and withdrawn. As the only force resisting removal is the friction exerted by this bag against its neighbor, due to its own stiffness, and as this resistance is less than the friction between the other bags and the retainer, no other bags than the one grasped is disturbed. Both ends of each shelf are accessible, and the retainer extends symmetrically toward both ends from the coiled portions so that two bundles of bags may be held upon each shelf, and when the rack is placed upon a counter in a store, this arrangement enables bags of any size to be withdrawn from either side of the counter, thus rendering the bags easy of access from any position where the clerk would be likely to stand in filling an order.

The removable feature of the shelves enables them to be taken out when the supply of bags is exhausted, and a new bundle inserted. The insertion of a full supply of bags cannot be made without removing the shelves, since the retainers must be raised to a greater height than the thickness of the folded bundle in order to place the latter under them. After each shelf is filled, it is replaced in the rack, when its positive engagement with the supporting bars or rods e holds it securely in place against all liability of dislodgment by the pull necessary to remove a bag, and in fact by any pull in the plane of the shelf. Without having the shelves positively held in the manner described, they would be continually becoming dislodged when the bags are removed.

It is to be noted that the provisions for removal of the shelves to insert the bundles of bags enables the shelves to be held more closely together than would otherwise be possible, and also the folding over of the ends of the bags enables two bundles to be held on each shelf without covering any great superficial area. As a matter of fact, as many as one hundred bags may be carried on each of the shelves, and where, as in the present construction, there are thirteen shelves, including the top and bottom plates, thirteen hundred bags may be contained in one rack, which occupies hardly any more counter space than the area of the largest bag used. It will be evident that this economy of space is an important consideration in determining the value of the rack.

I claim:—

1. A bag-rack comprising a supporting frame, a series of flat supporting members, a part of which are removable and are retained against displacement, retaining means for so holding said members, automatically operative upon insertion of the members into the frame, and spring clips mounted on the surface of each member arranged to hold resiliently folded packages of bags.

2. A bag-rack comprising a supporting frame, a series of flat supporting members, a number of which are removable, interengaging portions on the frame and members automatically brought into locking engagement upon insertion of the members into the frame, whereby the members are supported and held from displacement in the planes which they respectively occupy, and spring clips mounted on the surface of each member arranged to hold resiliently folded packages of bags.

3. A bag-rack comprising a frame having lateral members and transverse rods or bars, removable shelves or plates adapted to extend across said rods between the side members and having shoulders adapted to embrace the rods to prevent lateral removal therefrom by a pull in the direction of withdrawal of a bag, and a yielding bag retainer mounted on each shelf for holding a folded package of bags against the upper surface thereof.

4. A bag-rack comprising a frame having lateral members and transverse rods or bars arranged in groups at different levels, the rods of any group being at approximately the same level, removable shelves or plates adapted to extend across said groupes of rods between the side members and having shoulders adapted to embrace the rods to prevent lateral removal therefrom by a pull in the direction of withdrawal of a bag, and a yielding bag retainer mounted on each shelf for holding a folded package of bags against the upper surface thereof.

5. A bag-rack comprising a frame having side members and cross bars or rods extending between opposite side members arranged in pairs at different levels, shelves or plates, each having parallel grooves in its under surface spaced to correspond with the bars of one of the pairs and of sufficient depth to receive the bars, whereby the shelves are retained in place until raised clear of the bars, and retaining devices for the bags on each of the shelves.

6. A bag-rack comprising a frame having upwardly converging side members and cross bars or rods extending between opposite side members arranged in pairs at different levels, the bars of each pair being at successively less distances apart as their distance from the base is increased, shelves or plates of different sizes, each having parallel grooves in its under surface spaced to correspond with the bars of one of the pairs and of sufficient depth to receive the bars, whereby the shelves are retained in place until raised clear of the bars, and retaining devices for the bags on each of the shelves.

7. A bag-rack comprising a frame having upwardly converging side members and cross bars or rods extending between opposite side members arranged in pairs at different levels, the bars of each pair being at successively less distances apart as their distance from the base is increased, shelves or plates of different sizes, each having parallel grooves in its under surface spaced to correspond with the bars of one of the pairs and of sufficient depth to receive the bars, a securing pin on one or more of the shelves passing through guides on the under side of the latter adapted to extend across the grooves and beneath the cross bars on which the shelf is supported, and a retaining device on each of the shelves for holding a folded bundle of bags on the upper surface thereof.

8. In connection with a bag-rack having a series of removable shelves, a bag retainer for each shelf consisting of a continuous spring wire bent to form two longitudinal members and transverse end members, the longitudinal members being coiled approximately at their

middle points and there secured to the upper surface of the shelf.

9. In connection with a bag-rack having a series of removable shelves, a bag retainer for each shelf consisting of a single length of wire bent to form a frame with longitudinal members coiled approximately at their middle points and transverse members inwardly offset, and fastenings securing the coiled portions of the retainer to the median line of the shelf, the parts of the longitudinal members between the coils and ends thereof being outwardly bowed from the shelf.

In testimony whereof I have affixed my signature, in presence of two witnesses.

GEORGE H. TENNEY.

Witnesses:
ARTHUR H. BROWN,
A. L. FOLSOM.