T. F. FAY.

COLLAPSIBLE FRAME PARCEL SACK.

APPLICATION FILED JULY 5, 1913.

1,155,475. Patented Oct. 5, 1915.

Fig. 1

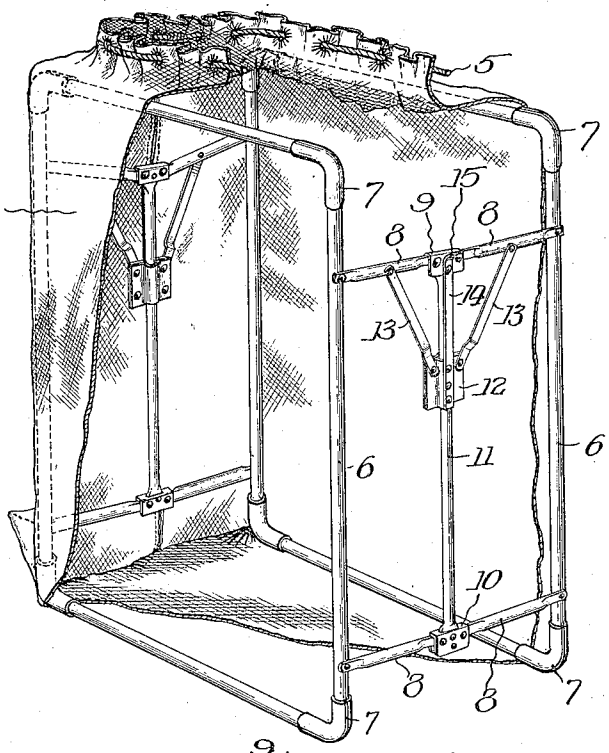
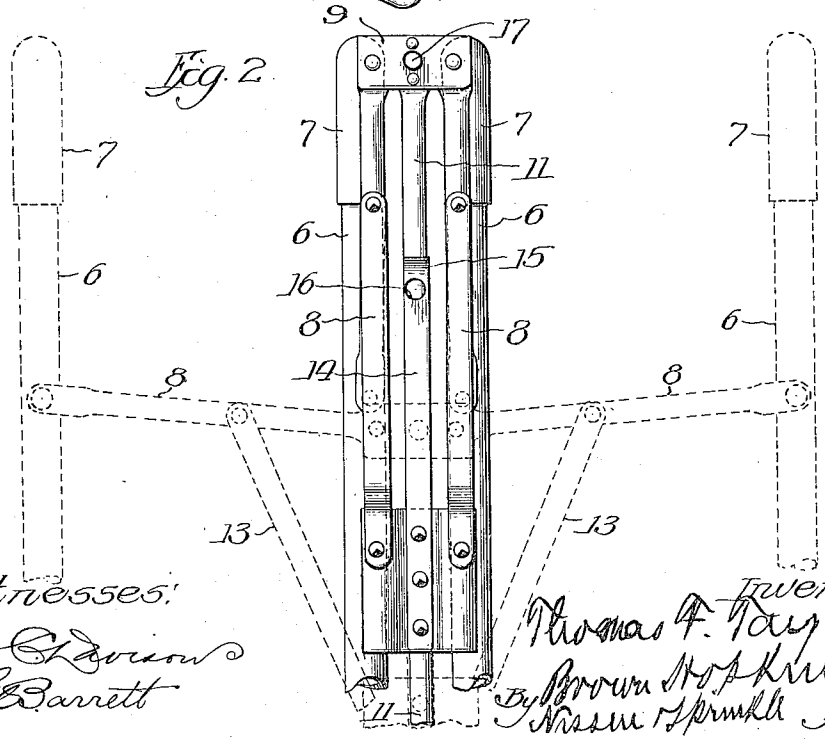


Fig. 2



Witnesses:
Geo. C. Dorsey
H. E. Barrett

Inventor:
Thomas F. Fay
By Brown Hopkins & Sprinkle
Attys

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

THOMAS F. FAY, OF CHICAGO, ILLINOIS, ASSIGNOR TO THOMAS J. FAY, OF ELKHART, INDIANA.

COLLAPSIBLE-FRAME PARCEL-SACK.

1,155,475. Specification of Letters Patent. Patented Oct. 5, 1915.

Application filed July 5, 1913. Serial No. 777,500.

To all whom it may concern:

Be it known that I, THOMAS F. FAY, 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 Collapsible-Frame Parcel-Sacks, of which the following is a specification.

This invention relates to a sack for containing fragile parcels or the like, and the principal object of the invention is to provide a device of the class described in which a sack may be distended by means of a collapsible metal frame which will hold the sack in distended position, so that there will be no danger of a sack becoming compressed whereby fragile parcels contained therein will be broken or destroyed.

A further object of the invention is to provide a collapsible metal frame which may be folded in compact form and which may be extended and locked in its extended position.

For the attainment of these ends and the accomplishment of other new and useful objects, as will appear, the invention consists in the features of novelty in the construction, combination and arrangement of the several parts generally shown in the accompanying drawings and described in the specification, but more particularly pointed out in the appended claims.

In the drawings:—Figure 1 is a perspective view of a frame constructed in accordance with the principles of my invention, and inserted within a sack, the sack being partly broken away to show the construction of the frame more clearly. Fig. 2 is a detail view of a portion of the frame when in collapsed position, the extended position being also indicated in dotted outline.

In handling a great many fragile parcels, it is convenient to place them in separate parcels or bags, and it is inconvenient to handle these bags or to transport them unless some means is provided for preventing the contents of one bag from being crushed when a number of bags are piled upon it.

The present invention contemplates a collapsible metal frame which may be inserted within a sack or secured thereto, and which is capable of forming a supporting structure for the bag by means of which the bag will stand alone, or when the bags are closed, a number of them may be piled one upon the other without danger of injuring the contents of any of the bags.

In carrying out this invention, a bag 4 of any suitable fabric or collapsible material is closed at one end and provided with a draw-string 5 for closing it at the other end. Disposed within the bag, either by inserting it through the opening of the bag or by inclosing it when the bag is constructed, is a collapsible frame which is secured to the bag at certain points. This frame comprises rectangular members 6, formed of any desired or suitable material but preferably constructed of light metal tubing with rounded corner connectors 7. These frames are constructed of tubular material, for the reason that they are light and strong and have the least tendency to wear, tear or injure the bags in which the frames are disposed.

Pivotally connected at one end to opposite sides of the frame 6 are a plurality of pairs of arms 8, the free extremities of which are also pivotally connected to folded clips 9 and 10. Connecting the folded clips is a rod 11, one of the clips 10 being provided with an opening in the top thereof, through which the rod 11 passes.

Slidable upon each of the rods 11, is a sleeve member 12, having lateral projections to which are pivoted the extremities of arms 13, the other extremities of the arms 13 being pivotally connected to the arms 8 of a corresponding pair, and intermediate the extremities of each of the arms 8. Also connected to the sleeve member 12 is a spring member 14, having a free curved extremity 15, and with a perforation 16 adjacent the free extremity. The uppermost clip member 9 is provided with a pin 17, which is adapted to be received by the perforation 16 of the resilient member 14, so that when the pin 17 is engaged by the perforation of the spring clip 15, the frame will be locked in distended position.

When the frame is locked in its distended position, the arms 8 are inclined slightly downward, as shown more clearly by the dotted outline in Fig. 2, and the locking device is in engagement when the arms 8 are in this position, so that there will be no tendency of the bag, or of the frame, to be collapsed even when considerable pressure is applied to the frame members 6.

In order to collapse the frame and the bag at any time, it is necessary only to insert

the hands within the bag and to grip the arms 8 on the opposite sides thereof about the uppermost clips 9 and to press the resilient clips 14 outwardly, so that they will become disengaged from the pins 17, whereupon a slight upward lift or pressure will be sufficient to fold the arms 8 upwardly, whereupon the frame may be collapsed to take the position, shown in Fig. 2.

What I claim is:

1. The combination with a bag, of a collapsible and removable metal frame within the bag to distend it, and an automatic locking device to lock the frame in distended position when the bag is distended by the frame.

2. The combination with a bag, of a removable collapsible frame disposed within the bag, and automatic locking devices for releasably clamping the frame after it is distended.

3. The combination with a bag open at one end, of a removable collapsible metal frame disposed therein, comprising rigid rectangular frame members, and means to space the frames apart within the bag, and a snap lock in connection with said means for holding the rectangular frame members releasably in relative spaced relation.

4. The combination with a bag, of a metal frame disposed therein, comprising rectangular frame members, arms connected at one end to one of the frame members, and members to which the other extremities of corresponding pairs of arms are pivotally connected, and means in connection with the arms for locking them in position with respect to the rectangular frames, when the bag and frames are distended.

5. The combination with a bag, of a metal frame disposed therein, comprising rectangular frame members, arms connected at one end to one of the frame members, and members to which the other extremities of corresponding pairs of arms are pivotally connected, and a locking device comprising a pair of arms connected to the arms of any corresponding pair intermediate of the ends of the latter, a second member to which the free extremities of the second pair of arms are connected, and a resilient member connected to the second said member having an extending tip adapted to engage the first said member for locking the arms in distended position.

6. In a device of the class described, a bag and a collapsible frame comprising rectangular frame members, a clip member, a pair of arms each connected at one end to one of the frame members and at the other end to the said clip member, a member having lateral projections, a second pair of arms each connected at one extremity to the projections of the second said member and connected at the other ends to the first-mentioned pair of arms intermediate of the ends thereof, a pin in connection with the clip member, and a resilient strip connected at one end to the member having the lateral projections and having a perforation at the free end thereof to engage the said pin, whereby the frame will be locked in distended position.

7. A collapsible frame for the inside of bags and the like comprising rectangular frame elements, clip members, arms pivotally connected in corresponding pairs to the frame elements and to the said clips, rods connecting clips on the same side of the frame elements, a sleeve member slidable on each of said rods, a pair of arms each pivotally connected at one end to the sleeve member and at the other end to one of the arms of a corresponding pair intermediate the ends thereof, and a snap lock in connection with the sleeve member and the uppermost clip member for releasably locking the arms in fixed relation with respect to each other, whereby the frame elements are spaced apart.

8. A collapsible frame for bags and the like comprising rectangular frame elements, clip members, arms pivotally connected in corresponding pairs to the frame elements and to the said clips, rods connecting clips on the same side of the frame elements, a sleeve member slidable on each of said rods, a pair of arms each pivotally connected at one end to the sleeve member and at the other end to one of the arms of a corresponding pair intermediate the end thereof, a resilient strip connected at one end to the sleeve member and curved outwardly and perforated at the free extremity thereof, and a projecting pin in connection with the uppermost clip member adapted to be engaged in the perforation of the resilient strip to lock the frame in extended position.

9. A collapsible frame for bags and the like, comprising tubular rectangular frame elements, arms pivotally connected at one end to the frame members in corresponding places, connecting members to which the other ends of corresponding arms are connected to join the frames, rods secured to the said connecting members on each side of the frame, a sleeve member slidable on each rod, a pair of arms each pivotally connected to the sleeve member at one end on opposite sides thereof and to a corresponding arm intermediate of its ends at the other extremity thereof, a pin projecting from the said connecting member on each side of the frame, and a resilient locking member secured at one end to each of the said sleeves, the free end extending in the direction of the said connecting member and provided with a bent extremity and a perforation adjacent the extremity; the said perforation being adapted to engage the pin to

lock the arms pivotally connected to the frame elements in fixed relation to each other and at an inclination to each other opposite their direction of collapsing movement.

10. The combination with a bag, of a pair of rectangular frame members removably disposed therein, a rod, arms connecting the rod with both of the members, and locking means in connection with the rod and arms to hold the frame members releasably spaced apart.

11. A removable collapsible frame for distending a bag comprising a pair of rectangular frame members adapted to be disposed within the bag, a rod, arms connecting the rod at its ends with both of the frame members, and a snap lock in connection with the rod and some of the arms for holding the frame members releasably in spaced-apart position whereby the bag will be distended.

12. The combination with a bag, of a pair of rectangular frame members removably disposed therein, a pair of rods positioned between the frame members at each side thereof, arms pivotally connected to the frame members and to the rods at the ends thereof whereby the frames may be collapsed with the arms and rods parallel with the frames, and a locking device in connection with the arms and rods at the top end thereof automatically operable when the frames are moved apart to lock the arms and rod together to hold the frames spaced apart and releasable from within the bag at the top to collapse the frame.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 2d day of July, A. D. 1913.

THOMAS F. FAY.

Witnesses:
HAROLD G. ROCKWELL,
ALLENA OFFUTT.

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