

1,060,697.

Patented May 6, 1913.

3 SHEETS—SHEET 1.

Fig. 1.

Fig. 2.

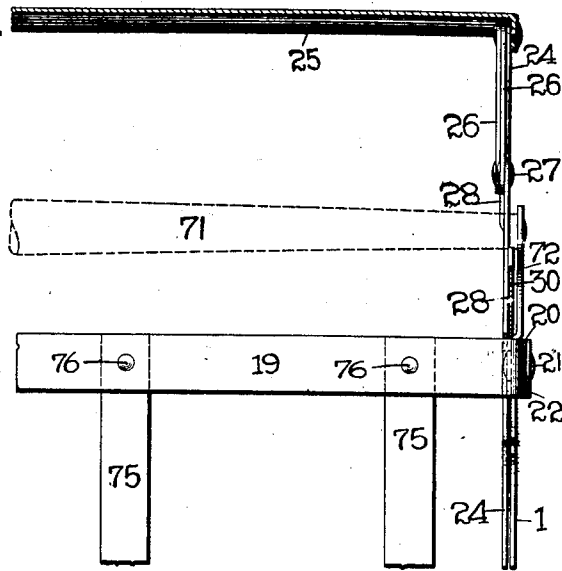


Fig. 3.

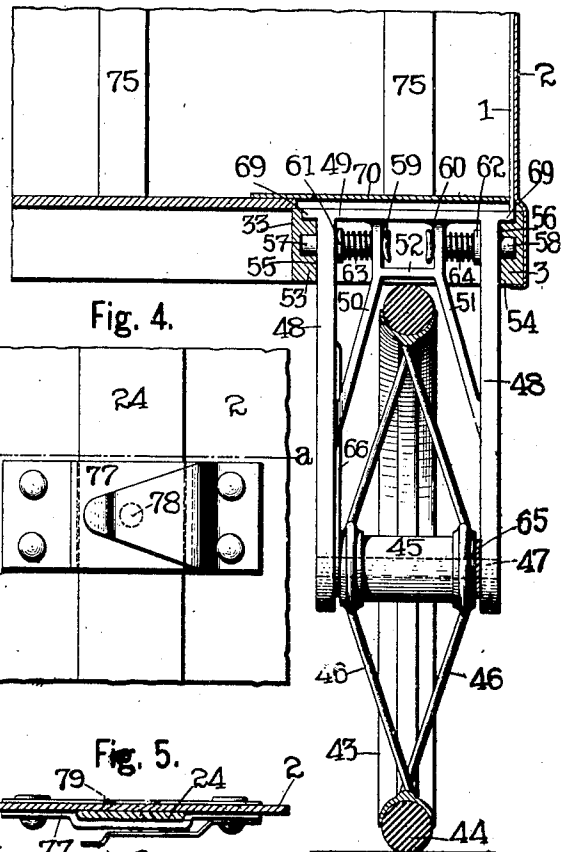


Fig. 4.

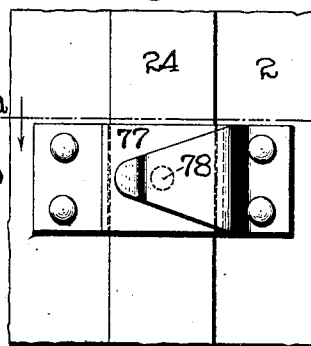
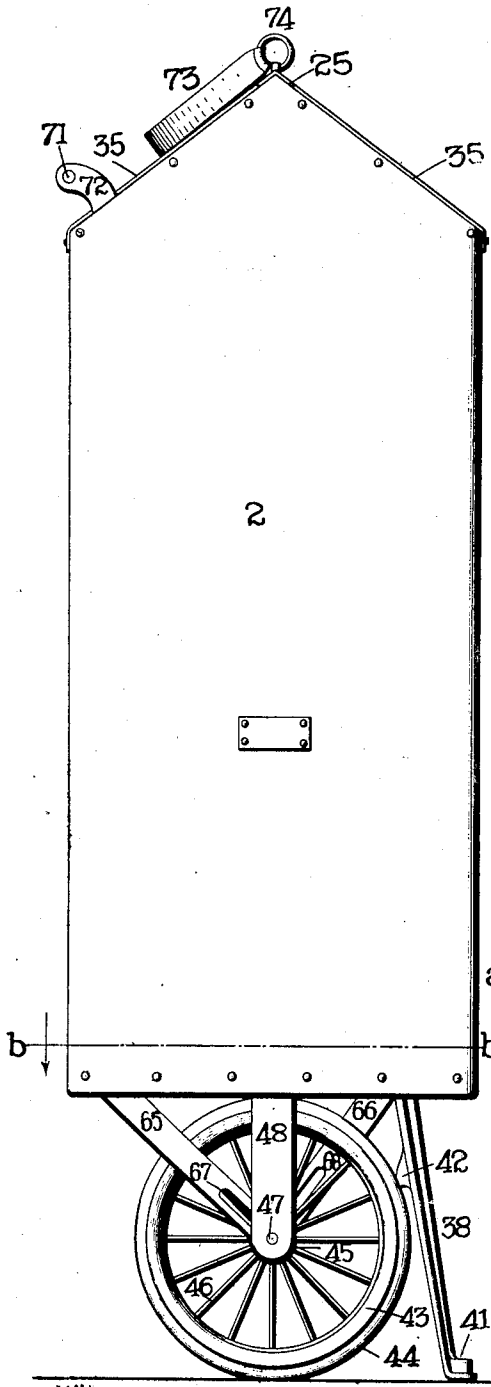


Fig. 5.



Witnesses.

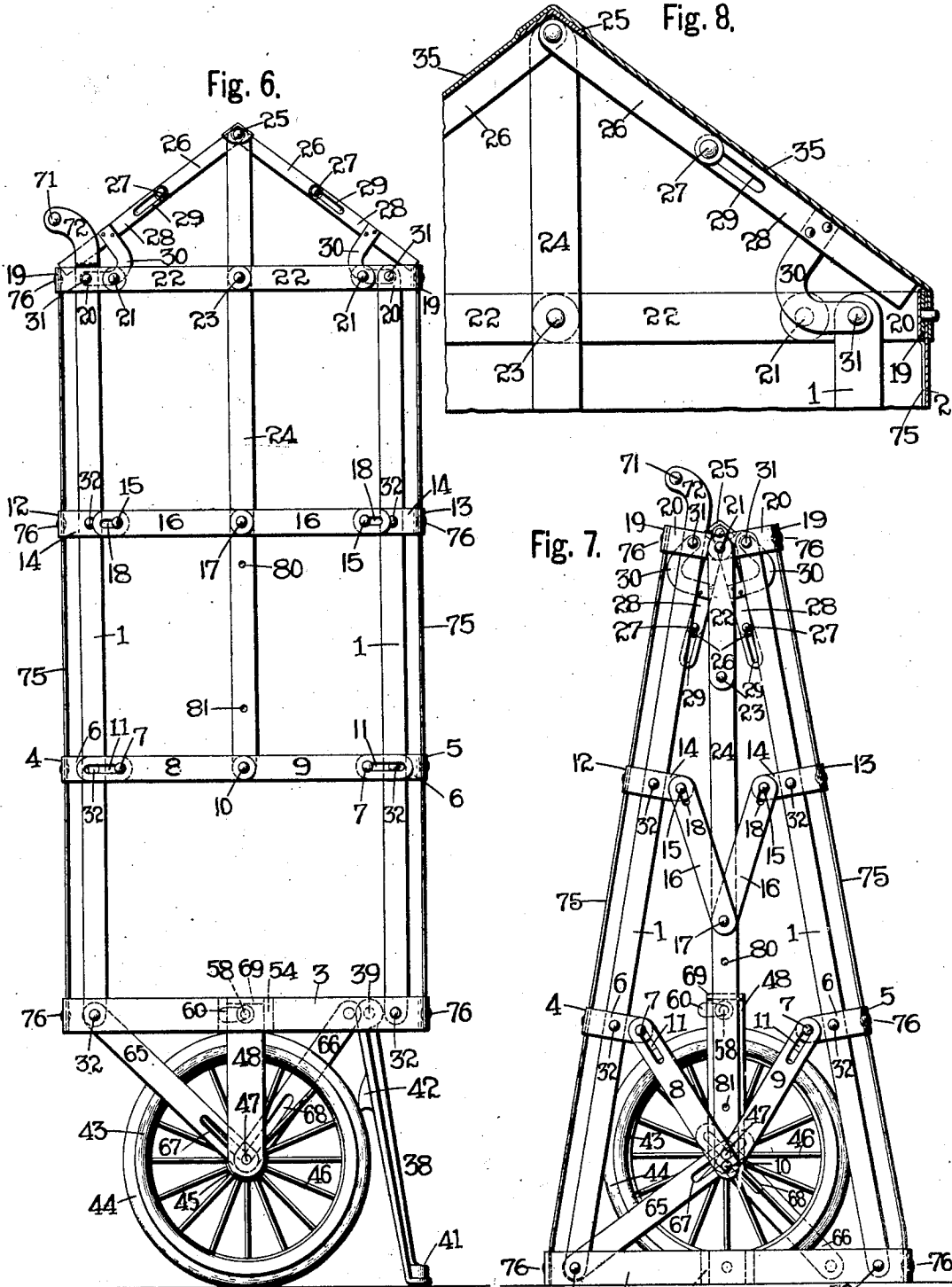
R. B. Aronson.
George A. Neubauer

Inventor.
Nicholas C. Newerf
By *Coffey* Attorney

1,060,697.

Patented May 6, 1913.

3 SHEETS—SHEET 2.



Witnesses.

R. B. Aronson
George A. Neubauer

Inventor.
Nicholas C. Newerf,
By *Wm. S. Sargent* Attorney.

1,060,697.

Patented May 6, 1913.

3 SHEETS—SHEET 3.

Fig. 9.

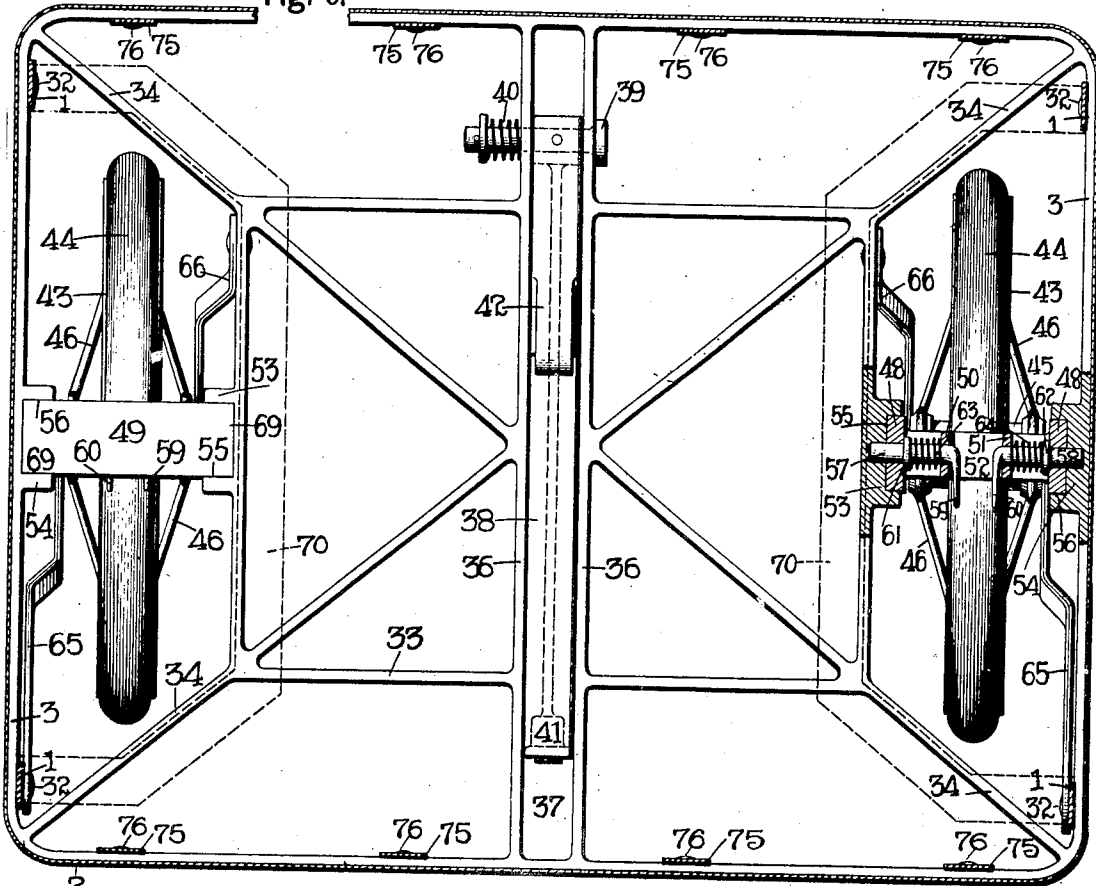
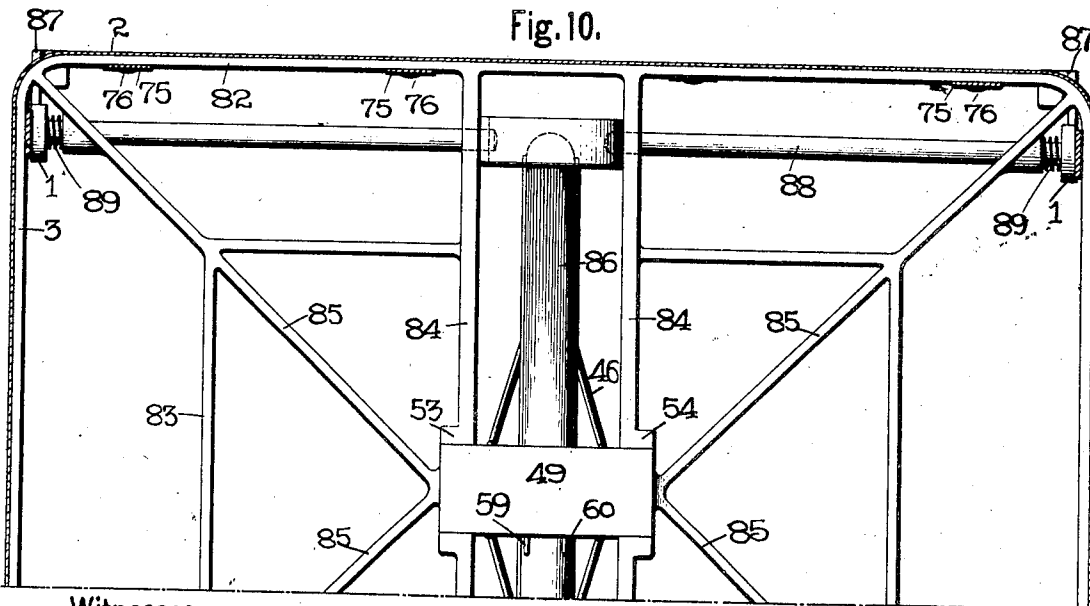


Fig. 10.



Witnesses.

R. B. Arnold.

George A. Neubauer

Nicholas C. Newerf

By *C. J. Sander*

Inventor.

Attorney.

UNITED STATES PATENT OFFICE.

NICHOLAS C. NEWERF, OF BUFFALO, NEW YORK.

MAIL-BAG.

1,060,697.

Specification of Letters Patent.

Patented May 6, 1913.

Application filed February 9, 1911. Serial No. 607,576.

To all whom it may concern:

Be it known that I, NICHOLAS C. NEWERF, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Mail-Bags, of which the following is a specification.

This invention relates to improvements in bags, and primarily to bags utilized for transporting mail or other articles.

One of the features of the invention has reference to a supporting wheel or supporting wheels for the bag, mounted at the lower end thereof, and adjustable so that they can be moved within the interior of the bag when not in use.

Another feature has reference to the collapsible or folding construction of the bag.

The invention also refers to certain details of construction which will be hereinafter described and claimed, reference being had to the accompanying drawings in which a preferred adaptation of the improved bag is shown.

Figure 1 is a side elevation of the improved mail bag. Fig. 2 is an enlarged fragmentary view of the upper portion of the frame, with a section through the top or ridge bar of said frame. Fig. 3 is an enlarged fragmentary section through the lower portion of the bag and one of the supporting wheels thereof. Fig. 4 is an enlarged interior view of a fragment of the bag, showing the spring locking device for locking the bag either in its folded or its open position. Fig. 5 is a transverse section on line *a a*, Fig. 4, showing also a plan view of the spring locking device. Fig. 6 is a side elevation of the frame and one of the supporting wheels, with said frame open, and the supporting wheel in its depending supporting position, the bag covering being omitted. Fig. 7 is a side elevation of the frame and one of the supporting wheels, with the frame in folded or collapsed position and the supporting wheel moved within the pocket, the bag covering being omitted. Fig. 8 is an enlarged section showing the manner of detachably fastening the top cover of the bag in place. Fig. 9 is an enlarged horizontal section on line *b b*, Fig. 1, showing the construction of the base of the frame, and also a partial section through one of the supporting wheels, and also showing a supporting leg in its folded non-supporting position. Fig. 10 is an enlarged

plan view of the base of the frame showing another structural form of base, and embodying therein one central supporting wheel and two side legs.

In referring to the drawings in detail, like numerals designate like parts, in the preferred adaptation illustrated.

This improved device consists of a frame, a bag-like covering of flexible material fitted around and inclosing said frame, said bag-like covering being provided with a bottom opening, and a supporting wheel adapted to be arranged below the bag when in operating position, and to be moved up through the bottom opening and concealed within the interior of the flexible covering when it is desired to render the bag more compact.

The frame of this improved bag is of a skeleton form, and is preferably constructed of suitable members or strips of spring metal. In arrangement, the frame includes a plurality of vertical side members, a bottom or base member having a loop or loops, and diagonally extending connecting bars, a plurality of intermediate loop-like members connecting the vertical members at intervals, and a plurality of top members.

The vertical side members 1 are preferably four in number and extend within the flexible bag 2. These vertical side members 1 are arranged in opposed pairs, being pivoted at their lower ends to the outer loop 3 of the base or bottom member, so that they have a movement toward or from each other in the manner shown in Figs. 6 and 7. The vertical side members 1 are supported above the base by means of loop members, which are similar in size to the outer loop of the base member and extend horizontally between and connect at their corners to the vertical side members.

Three of the loop members are preferably employed, being located at approximately equal intervals above the base member. These loop members will be hereinafter designated as the top loop member, the intermediate loop member and the lower loop member respectively.

The lower loop member is constructed of two opposed side portions 4 and 5, having bent ends 6 which extend at approximately right angles, and are provided with outwardly extending projections or pins 7. The opposed bent ends 6 are each connected by means of toggle links, two pairs of links being utilized, one of which is arranged on

each side. The links 8 and 9 of each pair are pivotally connected together at their inner ends by means of a pin 10, and are provided with longitudinal slots 11 in their outer ends through which the pins 6 extend, as shown in Figs. 6 and 7. The intermediate loop member likewise consists of two opposed side portions 12 and 13, having inwardly bent ends 14 which are similarly provided with outwardly extending pins 15, and toggle links arranged in pairs and having the inner ends of the links 16 of each pair pivoted together by a pivot pin 17, and the outer ends of said links are provided with longitudinal slots 18 through which the pins 14 are fitted. The upper loop member also consists of two opposed end portions 19, having inwardly bent ends 20 provided with outwardly extending pins 22, and toggle links 22 which are pivoted together at their inner ends by a pivot pin 23 and are pivotally connected at their outer ends to the bent ends of the end portions by the pivot pins 21.

It will be noted by referring to Figs. 7 and 8 that the longitudinal slots in the toggle links of the intermediate loop member are made considerably shorter than the longitudinal slots in the outer ends of the toggle links of the lower loop member, for the purpose of providing a greater range of adjustment for the parts of the lower loop member. The three loop members are connected to each other by means of two vertical bars 24. These bars are arranged on opposite sides of the frame, and the pivot pins 10, 17 and 23 are fastened thereto at proper intervals, as shown in Figs. 7 and 8.

A top, cross or ridge bar 25 extends horizontally between and connects the upper ends of the vertical bars 24. Toggle links extend oppositely from the ridge bar 25, and are adapted to be arranged to extend diagonally when the frame is in its open position, as shown in Fig. 6, and to be folded together when the frame is in its folded position, as shown in Fig. 7. These top toggle links, in fact, constitute the supporting frame for the top covering of the bag, and are preferably four in number and of similar construction. Each of the toggle links consists of an upper portion 26, which is pivoted at its upper end to the ridge bar, and is provided with a laterally extending pin 27 at its lower end, and a lower portion 28 which is provided with a longitudinal slot 29 in its upper end through which the pin 27 is fitted. The lower end of the lower portion 28 is provided with an angularly extending side portion 30 which is pivoted at its lower end to one of the bent ends 20 of the top loop member, as shown in Fig. 6, by a pivot pin 31.

In folding or collapsing the frame, the vertical bars 24 are moved downward and

carry with them the connected inner ends of the toggle links of the three loop members and also the ridge bar. This causes the toggle links to turn from the longitudinally aligned position shown in Fig. 6, to the angular position shown in Fig. 7, and moves the end portions of each loop member toward each other and also swings the vertical side frame members toward each other. The downward movement of the ridge bar also causes the top toggle links to fold upon each other in the manner shown in Fig. 7. The loop members are each fastened to the vertical side members of the frame by rivets or other suitable fastenings 32. The base or bottom member of the frame as preferably constructed, consists of the outer loop member 3, previously described, an inner loop member 33, which is sufficiently smaller than the outer loop member to leave an intervening space between the two members, and diagonally extending bars 34 which extend between and connect the outer loop to the inner loop of the base member.

The top mouth of the bag is adapted to be closed or covered to protect its contents by a cover 35 of flexible material, which is extended over the ridge bar and the diagonally extending pivotal top bars, and is detachably buttoned at its edge to the frame so that it may be conveniently disconnected therefrom and lifted when desired to permit access to the interior of the bag. A pair of slightly separated parallel bars 36 extends transversely and centrally between the sides of the outer loop of the base member and pass through and separate the inner loop of said member into two portions, as shown in Fig. 9. The diagonally extending bars 34, extend from about the center of the bars 36 to the corners of the outer loop of the base member. A space 37, between the bars 36, forms a narrow pocket in which a pivotally mounted central supporting leg 38 is adapted to be folded when not in use, as shown in Fig. 9. The leg 38 is pivoted at one end between the bars 35 by a pin 39, and said pin is tensioned in its position by a spring 40. The leg 38 is provided with an enlarged lower end or foot 41, see Fig. 1, which is adapted to rest upon the ground when the leg is in its depending separating position. The leg 38 also has an intermediate lateral enlargement 42 against which the toe of the operator is adapted to be pressed in turning the leg on its pivot.

In the form of the invention shown in Figs. 1 to 9, two supporting wheels are employed, being located on opposite sides of the central pocket 37 in which the center supporting leg is pivoted. These wheels are located in the spaces or pockets between the outer and inner loops of the base member. As the wheels are identical in construction, it is thought that the description of one will

suffice for both. The preferable form of wheel illustrated consists of a rim 43, a resilient tire 44 of rubber or similar material fitted on said rim, a central hub 45, and a series of spokes 46 extending from the hub and connecting said hub to the rim. Each wheel is preferably mounted on anti-friction ball bearings rotatably mounted on a stationary spindle 47. The wheel is supported by a wheel supporting frame which consists of two vertical depending bars 48 between the lower ends of which the spindle 47 extends, a top transverse cross or bridge bar 49 which extends between and connects the upper ends of the vertical bars, and two angular brace bars 50 and 51 which depend from intermediate points of the cross bar 49 between its ends, and diverge from each other, merging in the vertical bars 48 at points located below the horizontal plane of the rim of the wheel. The two angular bars 50 and 51 are tied and connected to each other by a short cross bar 52 which extends horizontally across between the said bars at a short distance below the top bar 49, as shown in Fig. 3. The wheel and its supporting frame are slidably mounted in the main frame of the bag structure so that they may be moved up within said bag structure when not in use. Opposed blocks 53 and 54 are arranged on the opposite surfaces of the inner and outer loops of the base member, and these blocks are provided with opposed vertical grooves 55 and 56 which constitute slideways for the supporting frame of the wheel, substantially as shown in Figs. 3 and 9.

The wheel and its supporting frame is locked in its depending supporting position by two oppositely extending spring pressed pins 57 and 58, the outer ends of which project oppositely to each other and seat in depressions in the blocks 53 and 54. The pins 57 and 58 have laterally bent inner ends 59 and 60, as shown in Fig. 9, which form a convenient grip for the operator's fingers in retracting or withdrawing the pins from the depressions in the blocks to unlock and release the supporting frame and permit it and the wheel to be moved upward within the structure of the bag. The pins 57 and 58 are also provided with enlargements 61 and 62 located intermediate their ends, and coil springs 63 and 64 are fitted loosely around the pins, each of said springs bearing at its respective ends against one of the enlargements 61 and 62 and one of the angular bars 50 and 51, and thereby yieldingly pressing the pin outward, as shown in Fig. 3. Each of the wheels and its supporting frame is additionally supported against lateral movement in either direction by two pivotal bars 65 and 66, which are pivoted at their upper ends to two widely separated points on the outer loop of the base member of the

frame, and are provided with longitudinal slots 67 and 68 in their lower end portions through which the spindle 47 of the wheel slidably passes. The slots 67 and 68 are made of sufficient length to allow the wheel and its supporting frame to be moved up within the interior of the bag structure, or downward into supporting position, as desired.

The opposite ends 69 of the top cross bar 49 of the wheel supporting frame project beyond the outer surface of the vertical bars 48, and seat in top recesses in the opposed blocks 53 and 54, as shown in Fig. 3.

A flap 70, of suitable flexible material, is arranged in the bottom of the bag and is connected at one side only to said bag bottom, so that it may be lifted to permit the passage of the supporting wheel and its frame within the interior of the bag, and may be utilized to close the opening through which the supporting wheel and its frame passes as they are moved out from the bag, and downward into their depending supporting position. The position of the flap when utilized to close the opening is shown in Fig. 3.

A handle is provided on one side of the top of the bag for enabling the operator to conveniently trundle the bag on its supporting wheels. This handle consists of a horizontal bar 71 which is connected to, and extends between two extensions 72 of two of the vertical side members of the frame, as shown in Figs. 1, 6 and 7. The extensions 72 project upwardly from the upper portion of the side frame members, and curve outwardly in the manner shown in Fig. 2.

To enable the operator to carry the bag a shoulder strap 73 may be attached by rings 74 to the center of the top of the bag, as shown in Fig. 1.

Vertical strengthening and stiffening strips 75 of thin flexible steel or other suitable material, may be arranged on the longitudinal sides of the frame and fastened to the base and to the loop members by rivets 76, see Figs. 2, 3, 6, 7, 9 and 10. The purpose of these strips is not only to strengthen the frame, but also to support the flexible bag-like covering in a distended condition.

The lock for holding the bag in either a folded or open position is shown in Figs. 4 and 5, and consists of a metal plate 77 fastened to the inner surface of the flexible bag covering 2, and arranged so as to straddle the bar 24, and a spring plate 78 fastened to the plate 77 and carrying a pin 79 which may seat in either of two openings 80 and 81 located in the bar 24. Two of these locks are provided, one being located on each side of the bag. When the bag is open, the pin 79 seats in the lower opening 81 of the vertical bar 24, and when folded, in the upper opening 80 of said bar.

In the form of the invention illustrated in Fig. 10, a central supporting wheel, and two side supporting legs are utilized in lieu of two side supporting wheels and a central supporting leg, the structure shown in Figs. 1 to 9, inclusive, and heretofore described. The base member in this form of the bag constructed, is very similar to the base of the other form heretofore described, and comprises an outer loop 82, an inner loop 83, two parallel transverse bars 84 extending between and connecting the sides of the outer loop and diagonally extending brace bars 85. A supporting wheel 86, similar to that previously described in the other form of the invention illustrated, is slidably supported between the bars 84, and is adapted to be moved downward into supporting position, or upward within the interior of the bag, in about the same manner as the supporting wheels previously described. With this form, two supporting legs 87 are utilized, each of said legs being mounted at one end of a supporting rod 88 which passes through one side of the base member. Coil springs 89 are mounted loosely on the opposite ends of the bar 88 and in contacting position with the legs 89 for the purpose of tensioning the same.

The operation of this improved device is as follows: When the bag is in its open position and is stationary, it stands and is supported upon the ground or suitable foundation in the manner shown in Fig. 1, the supporting leg extending to one side of the wheels and maintaining the bag in nearly an upright position. When the operator, such, for instance, as a mail-man, desires to trundle or move it along the ground, he grasps the handle 71 and tilts the upper end of the bag back toward him sufficiently to lift the supporting leg from the ground. He then pushes the device along the ground in much the same manner as a baby carriage is trundled. When it is desired to remove any of the contents of the bag, the top covering is unbuttoned and lifted, exposing the interior of the bag and permitting the operator to insert his hand and remove what he wishes. To fold the bag it is necessary to first unlock the two vertical bars 24 and to then move them downward. This both collapses the top in a downward direction, and also folds the upper portion of the bag. The supporting wheel or wheels is moved up into the interior of the bag by retracting the spring pressed locking pin from the depressions in the opposed blocks and sliding the wheel and its supporting frame or the wheels and their supporting frames vertically upward within the interior of the bag.

The principal advantages of this improved device is that as the weight is not wholly borne by the operator, comparatively

large quantities of mail or other merchandise may be conveniently transported. Other advantages are that the supporting wheels may be moved up within the bag when not in use, and that the bag may be readily collapsed or folded when it is desired.

The cover 35 for the top mouth of the bag is so arranged that when the upper portion of the bag is collapsed, the ends of the cover will extend down upon the sides of the frame, and may be detachably fastened thereto to prevent flapping.

I claim:—

1. In a device of the class described, a flexible bag structure adapted to be either wholly carried by an operator or trundled along the surface, and a supporting wheel adjustably extending from said bag structure and adapted to support the device in trundling position to be moved up within the bag structure when the device is carried by the operator.

2. In a device of the class described, a long rectangular bag structure having a handle at its top and an opening in its bottom and a supporting wheel adjustably depending from the lower end of said bag structure and adapted to support the device in trundling position and to be moved up through the bottom opening within the interior of the bag when the device is carried by the operator.

3. In a device of the class described, a flexible bag, a metal supporting frame within said bag and a supporting wheel slidably mounted in the metal frame.

4. In a device of the class described, a flexible bag, a metal supporting frame within the bag, a supporting wheel having a frame slidably mounted in the metal supporting frame.

5. In a device of the class described, a bag structure, a supporting wheel having a frame slidably mounted in the bag structure, spring pressed pins for locking the frame, and means for locking the frame of said supporting wheel in its depending supporting position.

6. In a device of the class described, a long rectangular flexible bag having a bottom opening and a top mouth and a metal supporting frame within the bag having a longitudinal slideway above the bottom opening of said bag and a supporting wheel having a frame slidably mounted in said slideway; said wheel being adapted to pass through the bottom opening in the bag in moving from one position to another.

7. In a device of the class described, a metal frame, a bag-like covering of flexible material around said frame, and a supporting wheel adjustably mounted in said frame.

8. In a device of the class described, a main metal frame, a bag-like covering of

flexible material around said main frame and a supporting wheel having a wheel supporting frame adjustably mounted in said main frame.

5 9. In a device of the class described, a main metal frame, a bag-like covering of flexible material around said main frame, having a bottom opening and a wheel supporting frame carrying a wheel; said wheel supporting frame being adjustably mounted in said main metal frame and being adapted to be moved upward through the bottom opening to within the bag structure when not in use.

15 10. In a device of the class described, a main frame, a bag-like covering for said main frame, a wheel supporting frame adjustably mounted in said main frame and carrying a supporting wheel, and oppositely extending spring pressed pins for locking the wheel frame in its depending supporting position in the main frame.

20 11. In a device of the class described, a main metal frame having opposed vertical grooves forming a slideway, a bag-like covering of flexible material around said main frame and a supporting wheel having a frame slidably mounted in said opposed grooves.

30 12. In a device of the class described, a main metal frame, a flexible bag around said frame and having a bottom opening and a top mouth an adjustable supporting wheel adapted to depend from the metal frame when in operative position, and to be locked within the bag when in inoperative position.

40 13. In a device of the class described, a bag-like structure having a bottom opening, and an adjustable leg pivoted at one end to and adapted to depend from the bag-like structure when in operative position, and to be locked within the bag-like structure when in an inoperative position.

45 14. In a device of the class described, a frame having side members and a base to which the lower ends of the side members are pivoted and a flexible bag-like covering around said frame.

50 15. In a device of the class described, a frame including a base, side frame members pivoted to the base, and top frame members pivotally connected to the side frame members, and a flexible bag-like covering around the frame.

55 16. In a device of the class described, a folding frame having a base, side frame

members pivoted to the base, top frame members pivotally connected to the side frame members, and an intermediate collapsible loop member connecting the side frame members, and a flexible bag-like covering around the frame.

17. In a device of the class described, a folding frame having a base, side frame members pivoted to the base, top frame members pivotally connected to the side frame members, and an intermediate collapsible loop member connecting the side frame members, said collapsible loop member having toggle link portions, and a flexible bag-like covering around the frame.

18. In a device of the class described, a folding frame having a base, side frame members pivoted at their lower ends to the base, and a plurality of collapsible loop members located at intervals and connected to the side frame members, each of said collapsible loop members having toggle link portions, and bars pivotally connected to the toggle link portions of the loop members whereby the loop members are simultaneously collapsed and expanded, and a flexible bag-like covering around the frame.

19. In a device of the class described, a frame including a base, side frame members pivoted to the base, and top frame members pivotally connected to the side frame members; said top frame members consisting of a plurality of pivotally mounted bars, and a central ridge bar connecting the pivotally mounted bars, and a collapsible bag-like covering around the frame.

20. In a device of the class described, a frame including a base, side frame members pivoted to the base and top frame members pivotally connected to the side frame members; said top frame members consisting of a plurality of pivotally mounted bars, and a central ridge bar connecting the pivotally mounted bars, a collapsible bag-like covering around the frame, and a removable top covering for the top mouth of the bag.

21. In a device of the class described, a bag-like structure having an opening in its bottom, a flap adapted to normally close said opening, and a depending supporting wheel adapted to be moved up through said bottom opening within the interior of the bag when not in use.

NICHOLAS C. NEWERF.

Witnesses:

H. L. C. JEKEL,
CHAS. F. JEKEL.