Dec. 30, 1924. 1,521,237

F. A. FULLER

BAG FRAME HINGE

Filed Oct. 24, 1923

Fig. 1.

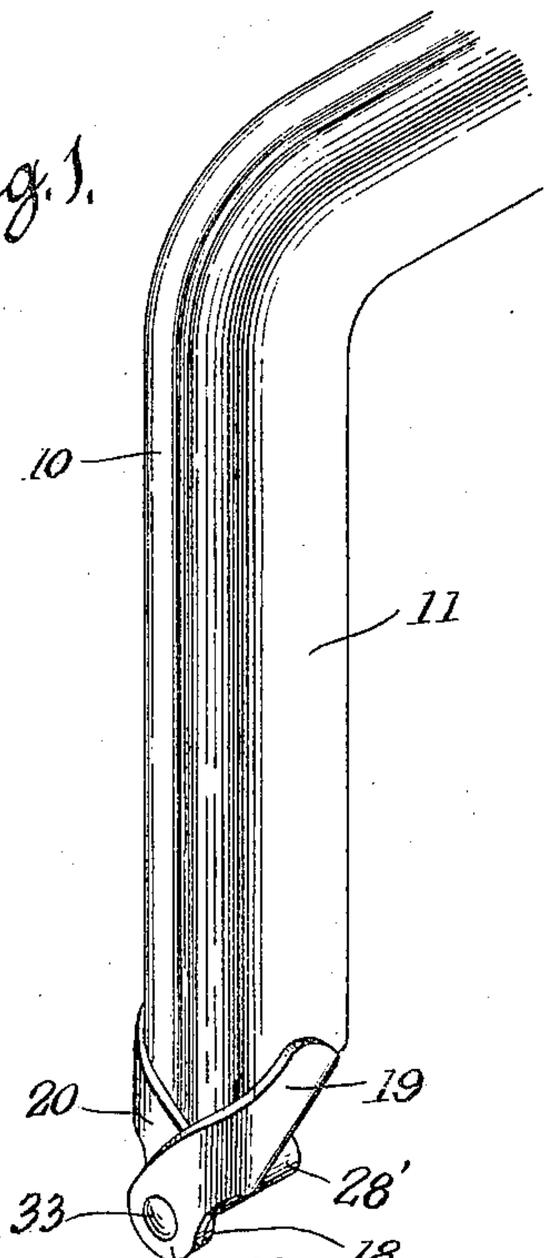


Fig. 2.

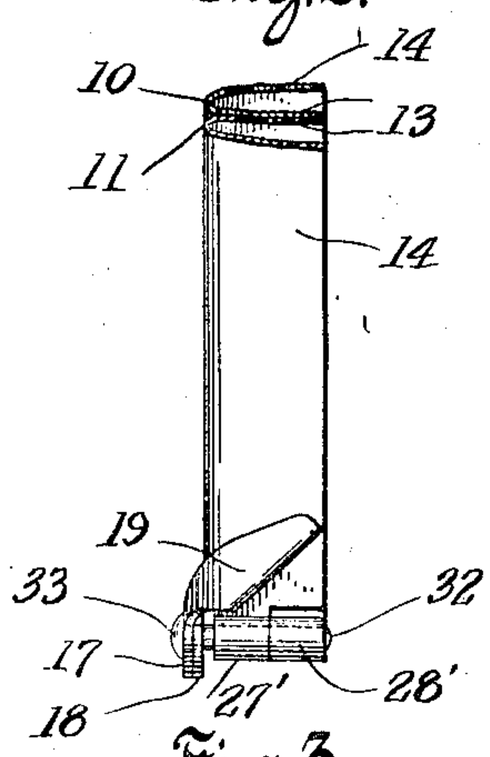


Fig. 3.

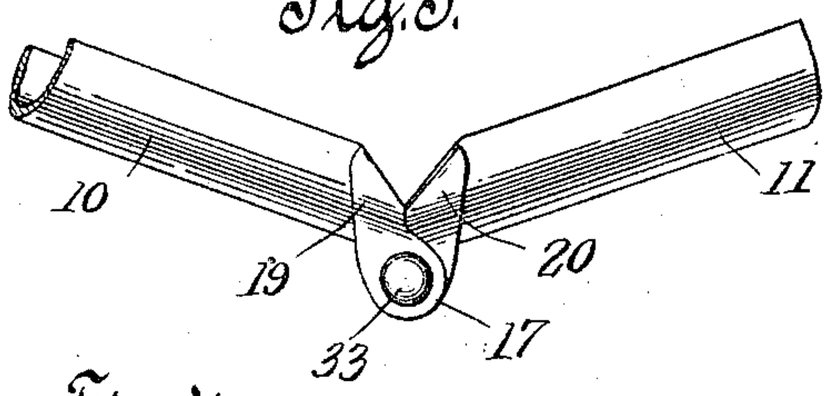


Fig. 4.

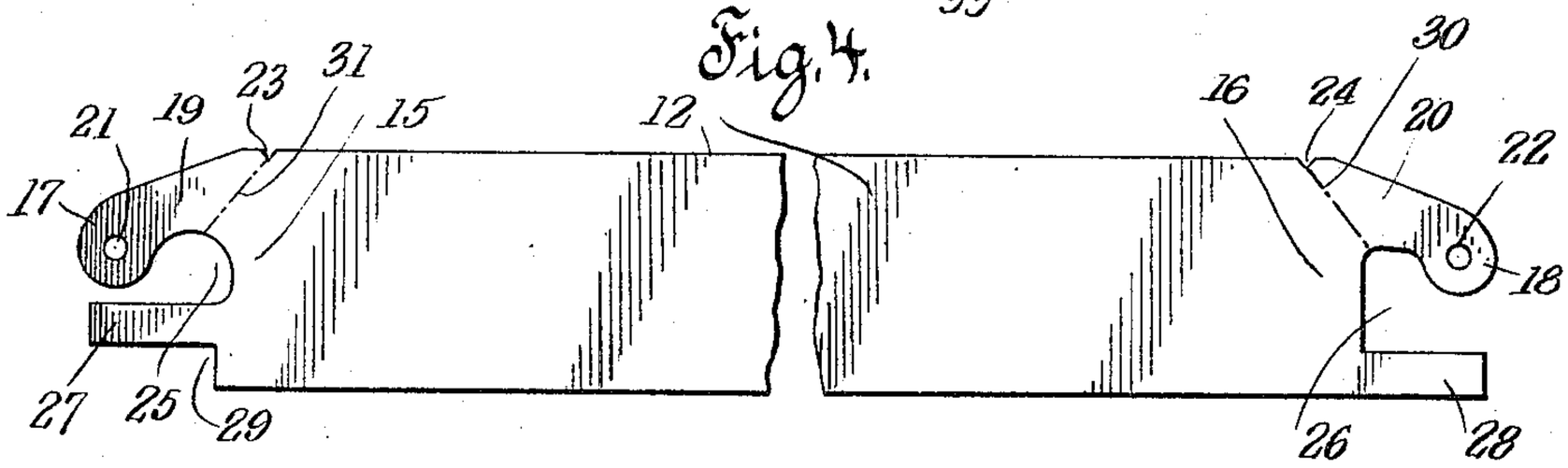


Fig. 5.

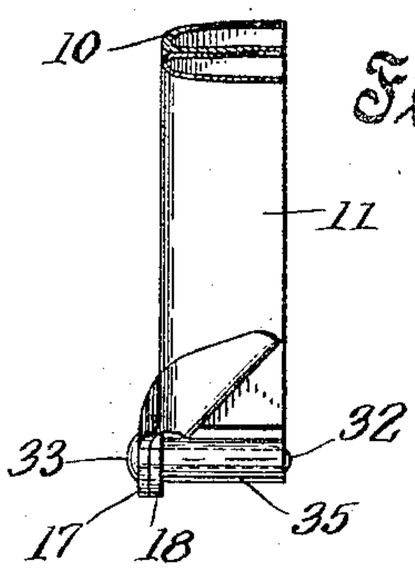
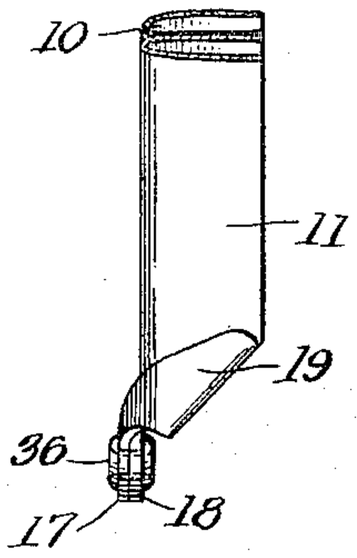


Fig. 6.



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UNITED STATES PATENT OFFICE.

FRANZ A. FULLER, OF NEWARK, NEW JERSEY, ASSIGNOR TO THE J. E. MERGOTT COMPANY, OF NEWARK, NEW JERSEY, A CORPORATION OF DELAWARE.

BAG-FRAME HINGE.

Application filed October 24, 1923. Serial No. 670,406.

To all whom it may concern:

Be it known that I, FRANZ A. FULLER, a citizen of the United States, a resident of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Bag-Frame Hinges, of which the following is a specification.

This invention relates to bag frame hinges as used in pivotally uniting the two sides of a conventional bag frame structure and has as its primary object to provide unusually strong and effective hinges, all elements of which, except the pins, are integral with the blanks from which the frame is made.

Another purpose is to produce hinges that add rather than detract from the strength of the frame and which, by reason of their ornamental appearance, enhance the value of the bag.

A further aim is in the provision of improved frame hinges that are relatively inexpensive to construct, easy to apply and operate and which, due to their structure are prevented from opening beyond a definite amount.

These several important aims and objects, together with others which will become apparent further on, are accomplished by the novel construction and arrangement of parts hereinafter described and shown in the accompanying drawing, forming a material part of this disclosure, and in which:—

Figure 1 is a fragmentary perspective view showing a part of a bag frame with a preferred embodiment of the invention incorporated therewith.

Figure 2 is a fragmentary side view of the same, showing the hinge elements.

Figure 3 is an end view of the same, the hinge being in an extreme open position.

Figure 4 is a plan view of the frame blank as shaped ready for bending, drawn to an enlarged scale.

Figure 5 is a view similar to Fig. 2 but showing an alternate type of construction.

Figure 6 is another like view illustrating a further modification of the hinge joint.

Stated in general terms the invention consists in the peculiar and novel shaping of blanks, including bending, piercing and assembling, to produce a hinge possessing more rigidity and stability than those heretofore made, thereby reducing the amount of breakage in the manufacture of bag frames of this type and in their subsequent use.

Referring now more in detail to the drawing, the numeral 10 designates one of the bag frame sides in general and 11 the other, mating side, which, as will be seen, are pivotally connected by hinges to fold closely against each other and also capable of being extended oppositely outward to permit entrance to the bag with which the frame is engaged.

These frame sides are produced from a blank 12, as shown in Fig. 4, common to both, this blank being bent on a medium line lengthwise the present flat surfaces 13 juxtaposed when the bag is closed and curved outer surfaces 14 finished in accordance with the taste of the manufacturer, these elements being further bent at a right angle in the plane of their width to extend down the bag sides as usual.

Again referring to the blank in Fig. 4, it will be noticed that the ends 15 and 16 are not alike; both present extensions 17 and 18 respectively, curved except for the necks 19 and 20 connecting with the main or body portion of the blank and containing central openings 21 and 22.

The upper edges of the necks are tangential to the curved extensions and join the blank near slight angular recesses 23 and 24 in the edge of the blank, in what will be the outer portion 14 of the frame.

The recess 25 below the neck 19 is bounded at its opposite side by a parallel lug 27 extending from the end 15 of the blank and at its opposite edge is a rectangular corner recess 29.

At the end 16 of the blank a recess 26 reaches below the neck 20, its opposite edge being bounded by an outstanding lug 28.

If a duplicate blank should be reversed so that its end 15 would engage the end 16

of the blank shown in Fig. 4, it would be found that its lug 27 would enter the space 26, clearing the extension 18 and that the lug 28 would fit the recess 29.

It will be seen that the necks are bent, after the blanks have been given a channel formation, at an approximate angle of forty-five degrees, as indicated by the folding lines 30 and 31, from the notches, tightly over the curved surfaces 14 at the ends of the blanks, and the extensions 17 and 18 bent to present their perforations in register with those of the mating frame member, as illustrated in Fig. 1, the center of the openings 21 and 22 being disposed substantially in the plane of the flat elements 13 of the frame.

The lugs 27 and 28 are coiled to present sleeves 27′ and 28′ in register with the perforations and suited to them are hinge pins 32, upset on their inner ends and provided with button heads 33 disposed at the outer sides of the extensions 17, thus constituting a hinge.

The edges of the recesses 25 and 26 meet and form a positive stop when the bag frame is opened as shown in Fig. 3 thus avoiding binding of the hinge joints when opening the bag.

In the modification shown in Fig. 5 a blank is used like that described except that the lug 27 is made wider, occupying the space of the recess 29 and the lug 28, on the opposite end of the blank is wholly omitted, thus permitting coiling the lug, as at 35, about the body of the pin 32, which passes through the extensions 17 and 18 in the manner already described.

Figure 6 discloses a further variation in construction, in which both lugs 27 and 28 are omitted, the hinge being made of the elements 17 and 18 held pivotally together with tubular or like rivets 36, the blanks being cut at an angle on their inner members 13, in conformity with the angle of the outer members 14.

The overlying neck elements 19 and 20 tend to stiffen and re-enforce the ends of the frame members very materially and are held rigidly in place by brazing or soldering so that no crevice exists and separation cannot occur.

Experience has demonstrated that the organization above described is highly efficient and while I have presented approved embodiments of my invention, I do not care to restrict myself to the exact details of construction herein set forth, it being obvious that minor variations, thereof, not involving the exercise of invention, may be made by any skilled mechanic, and such departures from what is herein described and claimed, I consider within the scope and terms of my claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A combined bag frame and hinge comprising a pair of duplicate channelled side frames arranged in reverse end relation, curved projections on each of the ends of said frames, said projections being perforate and bent to closely overlie the outer surfaces of the channelled frames, the perforations in said projection being in register one with another at each end of the frame and with the other surface of the channelled frames, and pivots secured in the perforations on which said side frames turn.

2. A combined bag frame and hinge comprising a pair of duplicate channelled side frames arranged in reverse end relation, curved projections on each of the ends of said frames, said projections being perforate and bent at an angle to fold closely over the outer surfaces of the channel and protrude at right angles to bring the perforations in adjacent projections into registration, and pivots passing through the perforations on which said side frames are hingedly engaged.

3. A combined bag frame and hinge comprising a pair of duplicate channelled side frames arranged in reverse end relation, curved projections on each of the ends of said frames, said projections being perforate and bent at an angle to fold closely over the outer surfaces of the channel and protrude at right angles to bring the perforations in adjacent projections into registration, pivots passing through the perforations on which said side frames are hingedly engaged, and lugs extending in staggered relation from the ends of said frames coiled to produce mating sleeves through which said pivots pass.

4. A bag frame hinge comprising in combination with the frame sides, hinge elements on the ends of each side frame disposed in a plane at right angles to the plane of the side frames, other hinge elements disposed in planes parallel to the side frames, and pins passing through adjacent hinge elements at each end of the frame sides upon which said sides pivot.

5. A bag frame hinge comprising in combination with a pair of frame sides composed of like members arranged in opposed relation, re-enforcements formed by extensions on the ends of said members folded at an angle of approximately forty-five degrees closely thereover, said extensions containing central perforations, and rivets in the mentioned perforations forming pivots on which said frame sides turn.

6. A bag frame hinge comprising in combination with a pair of frame sides composed of like members arranged in opposed rela-

tion, re-enforcements formed by extensions on the ends of said members folded at an angle of forty-five degrees closely thereover, said extensions containing central perforations, rectangular projections on at least one end of each side frame coiled to produce a sleeve, and pins passing through the mentioned perforations into adjacent sleeves, said pins constituting the pivotal axes for the bag frame.

This specification signed and witnessed this 22nd day of October, 1923.

FRANZ A. FULLER.

Witnesses:

M. KLEEMAN,

PAUL E. HARTMAN.