

A. ADAMS.
Paper-Bag.

No. 221,712.

Patented Nov. 18, 1879.

Fig. 1.

Fig. 2.

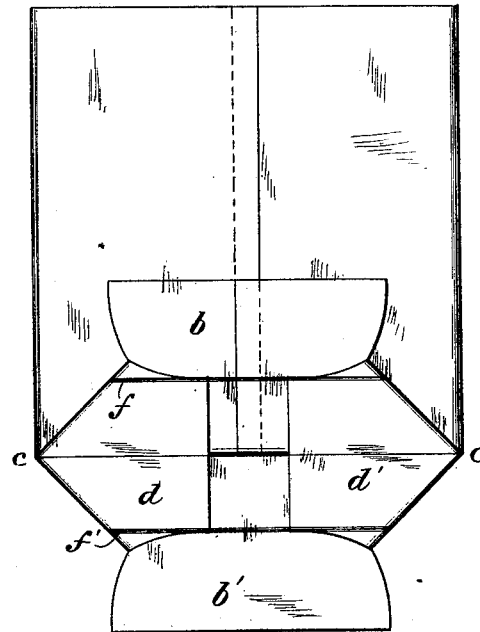
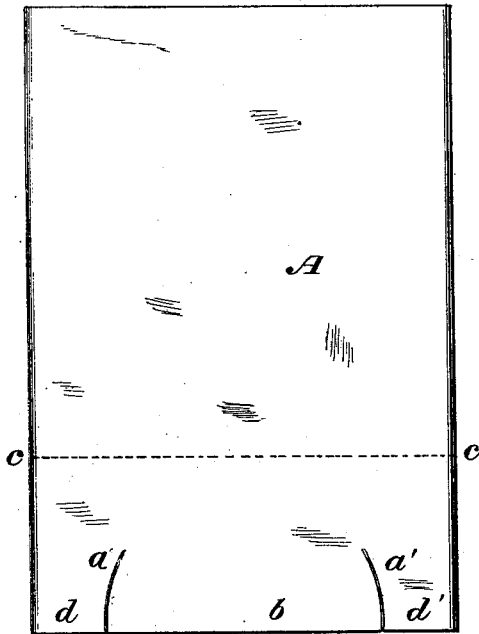
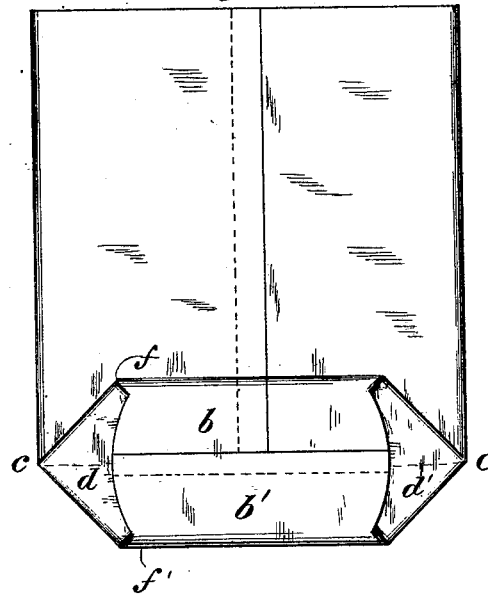
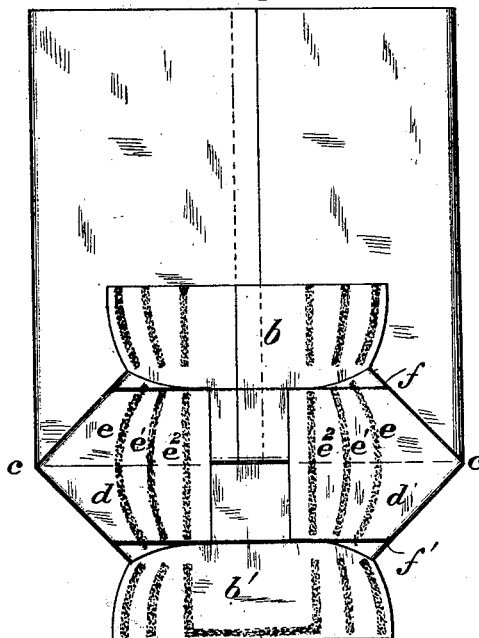


Fig. 3.

Fig. 4.



WITNESSES *e* 4

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IMPROVEMENT IN PAPER BAGS.

Specification forming part of Letters Patent No. 221,712, dated November 18, 1879; application filed July 11, 1879.

To all whom it may concern:

Be it known that I, ALFRED ADAMS, of Chagrin Falls, in the county of Cuyahoga and State of Ohio, have invented a new and Improved Satchel-Bottom Paper Bag, of which the following is a specification.

My invention relates to and constitutes an improvement upon the class of satchel-bottom paper bags shown in Letters Patent No. 105,877 granted to me August 2, 1870.

The object of my invention is to produce, with economy of material and labor, a satchel-bottom paper bag, the bottom of which shall have a large pasting-surface and a handsome finish. This end I attain by making the longitudinal slits of the bag-blank bottom curvilinear, with their inner ends closer together than their outer ones, instead of straight, as heretofore, whereby the ends of the bottom flaps of the finished bag are made convex toward the sides of the bag, as hereinafter more fully set forth.

The subject-matter claimed is hereinafter specifically stated.

In the accompanying drawings, which show the various stages of construction of the bag, Figure 1 represents a tubular blank with a transverse crease and curvilinear longitudinal cuts made therein, with the inner ends of the cuts closer together than their outer ones. Fig. 2 shows the condition of the blank after the formation of the first or opening fold. Fig. 3 shows the location or position of the paste-lines on the bag-bottom, and Fig. 4 represents the completed bag with its convex-ended bottom-flaps.

My improved bag may be made either automatically or by hand.

A machine capable of being adapted with slight alterations to make such a bag automatically is represented in Letters Patent No. 206,638 granted July 30, 1878, to Charles B. Stilwell.

I will now, however, describe the method in which my improved bag is made by hand, the successive manipulations being the same when made by machinery, except that in the latter case the operations are performed automatically.

The bags may be formed from a blank consisting of a flat sheet, as set forth in my pat-

ent above mentioned; but I prefer to make them from a ready-made tubular blank, A.

Longitudinal curvilinear cuts *a a'* are then made through both plies of the bag near its edges, as shown in Fig. 1. The inner ends of the cuts extend nearer the center of the blank than the outer ends, for a purpose hereinafter explained; but the cuts must not extend quite to the folding lines *f*, Figs. 2 and 4, as in such case a hole would be left in the bottom of the bag at the intersection of the fold-line by each cut, or else it would be weakened so as to tear readily at that point. The mouth of the tubular blank is then opened by pulling the central portions or flaps, *b b'*, apart, and turning inward and flattening down the edges of the blank, as shown in Fig. 2, so as to form the first fold. This operation is greatly facilitated by laying a plate or holder on the line *c c* of Fig. 1, which line afterward forms the central line of the bottom of the bag, as shown in Fig. 2. The inner edges of the outer parts *d, d'*, thus folded inward, do not abut in this instance, as the bag is strong enough without it. Three lines of paste *e e' e''* are then applied longitudinally across the bottom of the bag, and the inner lines connected by a transverse line, *e'*, of paste across the bottom fold, as shown in Fig. 3. Folds *f f'* are then formed transversely across the bottom parallel to each other and to the line *c c*. The upper bottom-flap, *b*, or that nearer the mouth of the bag is then folded over upon the bottom with its edges projecting beyond the central line, *c c*. The bottom flap, *b'*, is then folded over upon the bottom, and the previously-turned down flap *b* completing the bag, the bottom of which will present the appearance shown in Fig. 4, the ends or edges of the bottom flaps being convex.

The advantages of my improved bag are, first, that it requires no more paper than other forms of bag; second, the area or space covered by the third thickness (the superfluous thickness) in the finished bottom is small, which third thickness, as bags are ordinarily made, is objectionable, being in the way when printing the bag, as is frequently done; third, it utilizes the paper thus taken from the third or useless thickness by adding it to the overlapping flaps of the bottom, giving a large

pasting-surface and great security, and imparting a novel and desirable shape to the finished folds, giving the bag an attractive appearance; and, fourth, when made by machinery the greater width of the connecting-strip, insured by the curved form of the slits, facilitates the formation of the opening folds. This advantage is due to the fact that the distance between the inner ends of the slits is as great in this bag as in those having parallel slits, while the outer ends of the slits are farther apart, and consequently impart greater strength to the bottom of the bag.

I am aware that the side flaps of the mouth of a bag have been made convex toward the center by cutting gores out of the blank; but

such a bag differs from mine in construction, function, and result, as will be obvious to those skilled in the art by comparison of the two devices.

I claim as of my own invention—

A satchel-bottomed paper bag constructed with bottom flaps convex on their ends next the sides of the bag, and their pasting-surface thus elongated, as set forth.

In testimony whereof I have hereunto subscribed my name.

ALFRED ADAMS.

Witnesses:

A. H. GARDNER,
GEORGE KNUPP.