

C. F. ANNAN.  
PAPER BAG MACHINE.

No. 110,536.

Patented Dec. 27, 1870.

Fig. 1.

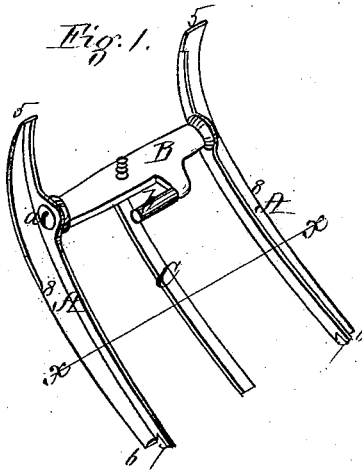


Fig. 2.

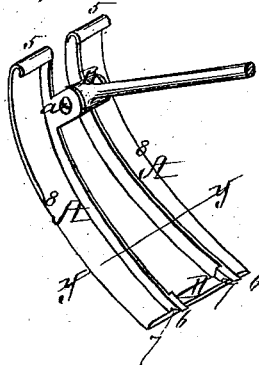


Fig. 3.

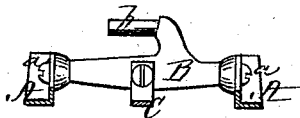


Fig. 4.

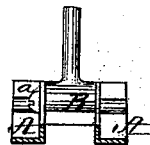
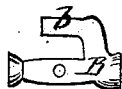


Fig. 5.



Witnesses,  
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# United States Patent Office.

CHARLES F. ANNAN, OF BOSTON, ASSIGNOR TO HIMSELF AND HERBERT S. MERRILL, OF CAMBRIDGE, MASSACHUSETTS.

Letters Patent No. 110,536, dated December 27, 1870.

## IMPROVEMENT IN PAPER-BAG MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern:*

Be it known that I, CHARLES F. ANNAN, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Machines for Making Paper Bags, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a perspective view, representing my improvement.

Figure 2 is a perspective view, representing a modification of the same.

Figure 3 is a transverse section on the line *x x* of fig. 1.

Figure 4 is a transverse section on the line *y y* of fig. 2.

Figure 5, detail to be referred to.

My present invention relates to an improvement in machines for making paper bags, and consists in a curved guide, provided with removable connections, whereby the width of the guide may be readily varied to accommodate strips of paper of various widths required in making bags of different sizes.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawing is represented a curved guide, consisting of two curved side pieces *A A*, held together by a cross-bar, *B*, secured in place by screws *a a*, in such manner that the distance between the rear or upper ends *5* is less than that between the front or lower ends *6*, in order that the paper strip, from which the bag is to be made, may be smoothly spread out and prevented from wrinkling as it is guided in its passage thereunder to the "former," not shown.

The lower ends, *b*, are provided with notches *7 7*, and fit loosely over the rear edge of the former, so that the rear or upper ends *5* of the guide may be raised or depressed by a brace, not shown, to give the pitch required in making bags of different sizes.

The form of each of the upper ends *5* is that of an irregular curve, composed of a combination of curves, which admits of paper being doubled or turned over previous to folding, in a much shorter space than has been done in machines as heretofore constructed, and the outer edge of each side piece *A* is tapered or beveled off from a point, *8*, to the lower end *6*, to insure

the shaping or creasing of each fold of the paper strip before going under the former.

*C* is a curved strip, placed centrally between and corresponding to the curvature of the under side of the main portion of each of the side pieces *A*, the object of the central strip being to prevent the paper, when of considerable width, from bulging up in the middle.

When paper of more than ordinary thickness and width is to be used, the lower ends, *6*, of the side pieces may be stiffened and prevented from springing inward by a brace, *D*, (see fig. 2,) and the tendency of the paper to be dragged and torn against the corners is thereby avoided.

The cross-bar *B*, which unites the upper ends of the side pieces *A A* together, is provided with a short stud, *b*, over which is slipped one end of the adjustable brace above referred to, the other end of which is connected with the frame-work.

When a bag is required of a less width than one previously made, it is simply necessary to remove the cross-bar *B*, fig. 1, and substitute in its place a shorter cross-bar, fig. 5, of the right length, when the width of the curved guide will be reduced, as required.

From the foregoing it will be seen that by having two side pieces *A A*, and a series of cross-bars, *B*, of different lengths, a curved guide of any desired width may be readily and conveniently provided to accommodate paper of any width.

Instead of a curved open guide, one made closed in one and the same piece may be employed. In such case, however, the guide could not be made adjustable, but the advantages resulting from the use of a curved and beveled guide would be retained. I prefer, however, the construction first described.

### *Claim.*

What I claim as my invention, and desire to secure by Letters Patent, is—

A curved guide, consisting of side pieces *A A*, provided with removable cross-bars *B*, and with or without a central strip, *C*, and brace *D*, substantially as and for the purpose set forth.

Witness my hand this 26th day of November, A. D. 1870.

Witnesses:

N. W. STEARNS,  
W. J. CAMBRIDGE.

CHS. F. ANNAN.