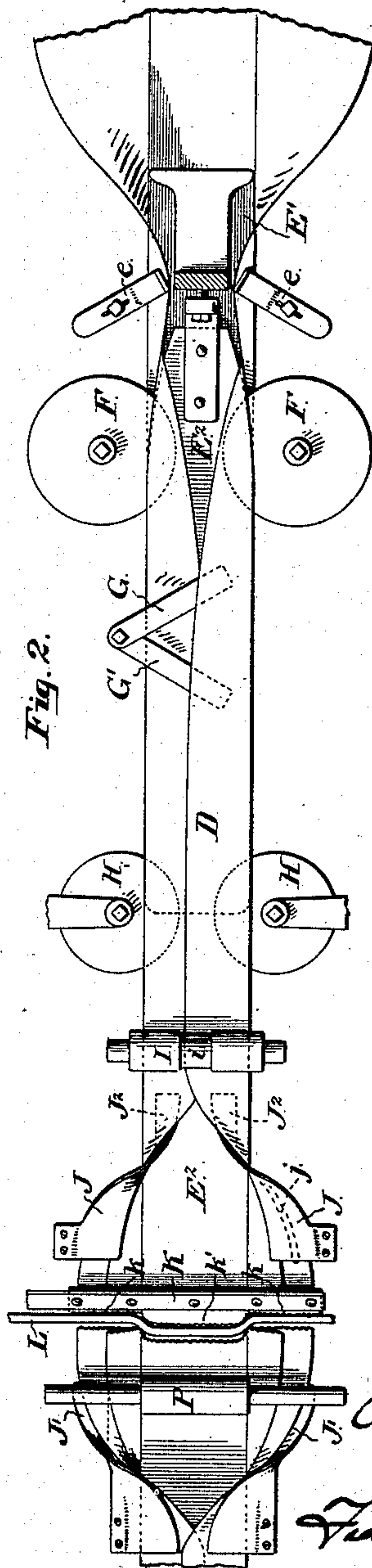
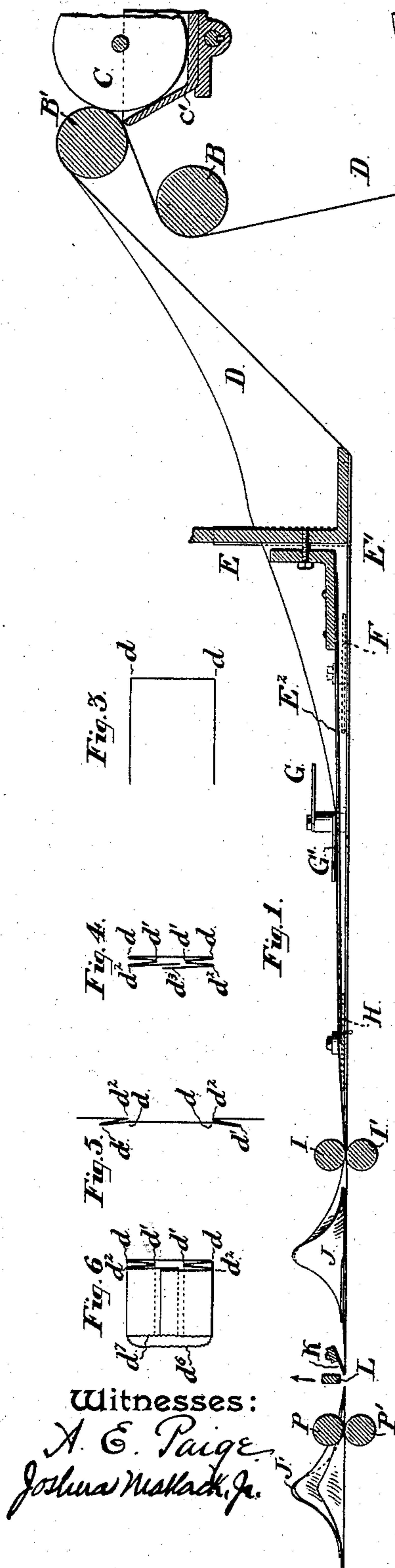


(No Model.)

C. B. STILWELL.
PAPER BAG MACHINERY.

No. 410,123.

Patented Aug. 27 1889.



UNITED STATES PATENT OFFICE.

CHARLES B. STILWELL, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
THE UNION PAPER BAG MACHINE COMPANY, OF SAME PLACE.

PAPER-BAG MACHINERY.

SPECIFICATION forming part of Letters Patent No. 410,123, dated August 27, 1889.

Application filed January 26, 1889. Serial No. 297,599. (No model.)

To all whom it may concern:

Be it known that I, CHARLES B. STILWELL, of the city and county of Philadelphia, State of Pennsylvania, have invented a new and
5 useful Improvement in Paper-Bag Machinery, of which the following is a true and exact description, reference being had to the accompanying drawings, which form a part of this specification.

10 My invention relates to mechanism for forming a bellows-folded tube from a web of paper and severing it into bag-blanks, and the novel features of my invention are hereinafter clearly set forth in the claims.

15 The mechanism will best be described in connection with the drawings, in which it is illustrated, and in which—

Figure 1 is a sectional elevation of my device, taken along its median line. Fig. 2 is a
20 plan view; Figs. 3, 4, 5, and 6, views of the web in different stages of its formation into a tube; Figs. 7, 8, 9, and 10, similar views showing the formation of a tube where the paper is introduced beneath the curved
25 spreaders J in a somewhat different way; and Fig. 11 is a section through the spreader J, which acts on the pasted edge of the web, showing a device I have provided it with to prevent contact of the paste with the spreader.

30 A is a roll of paper; B B', guide-rolls; C, a paste-roll; C', a paste-trough; D, the web of paper.

The web of paper is led through mechanism for forming it into a bellows-folded tube,
35 which, as shown in the drawings, consists of former-plates E' E², sustained on a standard E; tucking-wheels F F', for forming the bellows fold; fingers G G', for folding over the edges of the web; guide disks or wheels H H,
40 and creasing-rolls I I', all these parts, as shown, being of a well-known construction and forming no essential part of the present invention, being given simply as an example of folding mechanism.

45 J J are curved spreading-plates, which are situated at the end of the folding mechanism and the ends J² of which are introduced either beneath the folds d' d with the effect of open-

ing the folded web into the form shown in Fig. 5, or above the folds d' d², in which case
50 the web is opened into the form shown in Fig. 9. The folds d d, d' d', and d² d² are of course formed in the forming mechanism which precedes the curved opening-plates, the lines of fold in each case being the same
55 and the only difference being made by the position of the ends of the open places in the folds of the web.

K is a cutter, the edges of which are, where the web is opened into the form shown in Fig. 60
5, formed with a central projection k' and recessed sides k k, so as to cut a lip d⁶ in the under side of the folded tube and sever the remaining sides on the line d⁷. (See Fig. 6.)
65 Where, however, the tube is opened, as in Fig. 9, the edge of the knife should be reversed in form, the center being recessed and the sides projecting, as is indicated by the line O, Fig. 9. This results in cutting the lip d⁴ on
70 the upper side of the tube and severing the remaining sides on the line d⁵. (See Fig. 10.)

J, Figs. 2 and 11, indicates a slight projecting rib on the curved opening-plate J, which comes in contact with the pasted edge
75 of the blank. Its function is to hold the line of paste out of contact with the plate, which it does, as is indicated in Fig. 11.

L is a striker acting in connection with the knife K in the usual way.

P P are feed-rolls, which feed the severed
80 and partially-opened blanks forward; J J, curved closing-plates which operate in the reverse manner to the plates J J, folding the opened blank back again into the form of a tube, as is clearly shown in the drawings. 85

Any mechanism for completing the bags may of course be used in connection with my above-described device.

Having now described my invention, what I claim as new, and desire to secure by Let-
90 ters Patent, is—

1. In a paper-bag machine, the combination, with mechanism for forming a web of paper into a bellows-folded tube, of curved
95 spreaders J J, for spreading open the folded tube, a knife K, and striker L, for severing the

opened tube, and curved closing-plates J' J', for refolding the opened end of the blank, all substantially as and for the purpose specified.

2. In a paper-bag machine, the combination, with mechanism for forming a web of paper into a bellows-folded tube, of curved spreaders J J, for spreading open the folded

tube, and a rib *j*, formed on the side of the spreader J, against which the pasted edge of the paper rests.

CHAS. B. STILWELL.

Witnesses:

WILLIAM H. DOERING,
LISLE STOKES.