(No Model.)

D. APPEL.
Bag Machine.

No. 241,114. Patented May 10, 1881.

Fig. 1.

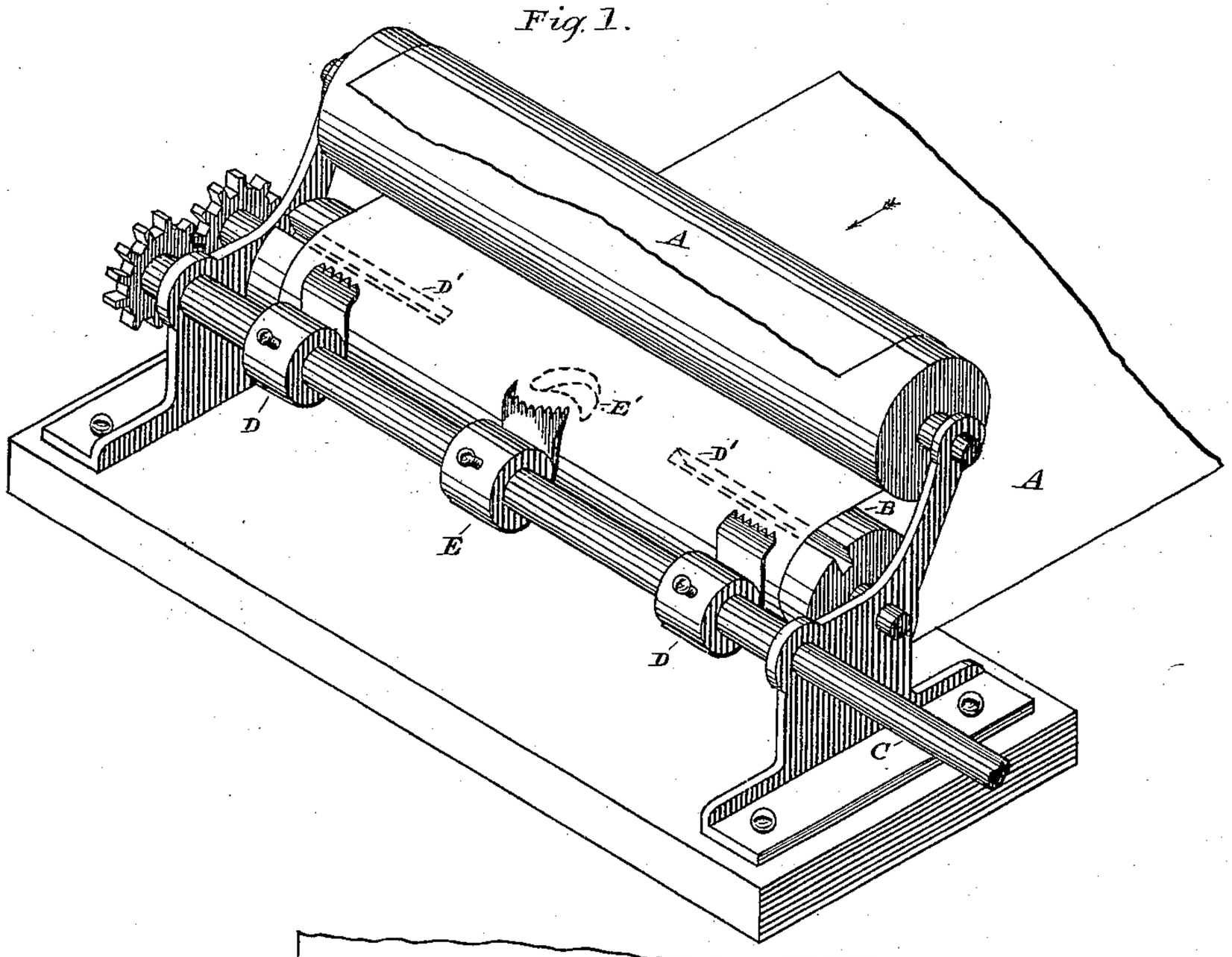
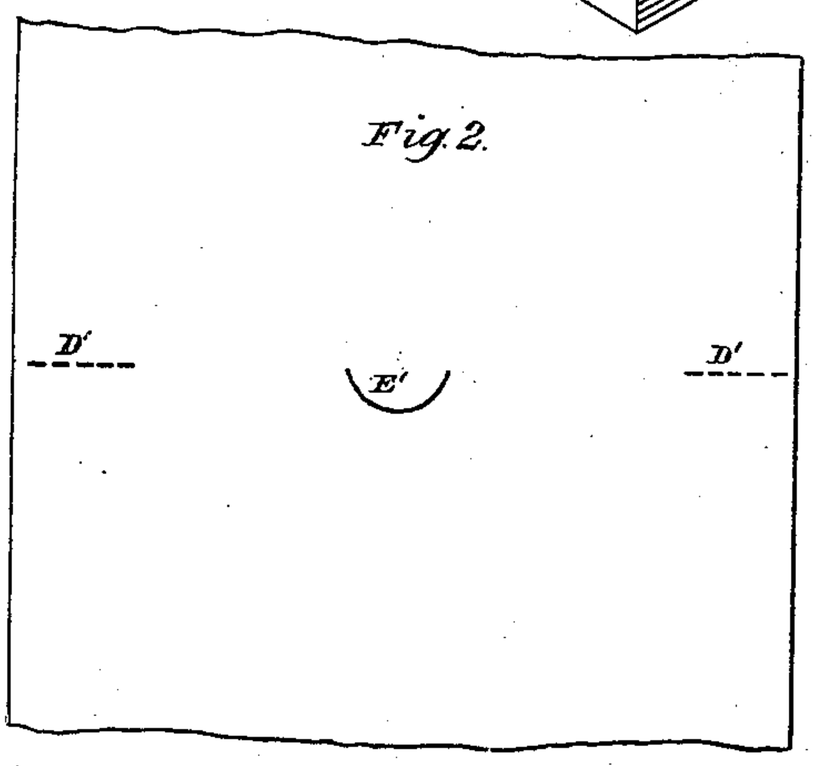


Fig. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

DANIEL APPEL, OF CLEVELAND, OHIO, ASSIGNOR TO HIMSELF AND NEWTON W. TAYLOR, OF SAME PLACE, ONE-HALF TO EACH.

BAG-MACHINE.

SPECIFICATION forming part of Letters Patent No. 241,114, dated May 10, 1881.

Application filed September 29, 1880. (No model.)

To all whom it may concern:

Be it known that I, DANIEL APPEL, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Paper-Bag Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to paper-bag machinery, and more particularly to that class of paper-bag machines that are adapted to take paper from a continuous roll, and form, paste, cut, and deliver a completed bag at the other end of the machine; and it consists in an improved device for cutting the thumb-hole, and also a portion of the blank upon each side of the thumb-hole, before the web of paper reaches the former.

In the drawings, Figure 1 is an isometric view of that portion of a paper-bag machine embodying my invention. Fig. 2 is a plan view of the sheet or web as it is cut after passing through my device.

In the said drawings, A represents the web of paper moving in the direction indicated by the arrow.

B represents a cylinder under and over which this web passes. This cylinder is recessed, as indicated in the drawings by dotted lines, for the accommodation of the knives.

C is a shaft geared to the cylinder B and provided with cutters or knives, and so adjusted with reference to the cylinder B that at each revolution of the cylinder B and shaft C the knives enter the recess in the cylinder B. These knives are adjustable upon the shaft C, and are retained in any desired position by means of set-screws. In the drawings are shown three knives. Two, D D, are represented as having straight serrated blades, while the third knife is represented as having a curved blade.

I do not limit myself in any degree to the form, shape, size, or number of these knives, as they may be varied at pleasure; but in the manufacture of paper bags and paper-bag machinery I have found the number, size, and shape of those shown in the drawings to be more preferable.

My process is to cut or perforate the web of paper before it reaches the former at the points indicated in Fig. 1 by the dotted lines; and after the paper has passed the former and the bag is partially made, the paper being folded, the straight cuts D′ come directly opposite the curved cut E′. The bag is held in this partially-severed state preferably until the diamond fold is made, or at any other point in the manufacture desired, when, with any suitable mechanism, the balance of the paper between the cuts D and E may be severed by any suitable cutters.

I do not limit myself in any degree to any particular kinds or style of bag, as this device is equally useful in the manufacture of the common paper bag, the satchel-bottom, or the square-bottom bag.

In practice it is found best when making large-sized bags or flour-sacks from heavy Manila paper to cut the extreme edges of both side portions of the web; but when making the smaller-sized bags from thinner and poorer paper it is best to cut the extreme edge of one side portion of the web and leave the extreme edge of the other side portion uncut.

Having thus described my device, what I claim is—

1. In a paper-bag machine, the combination, with a cylinder, of a companion cylinder provided with three knives at different points of its length, the central knife being adapted to cut the thumb-hole and the two side knives being adapted to cut the side portions in a web of paper prior to the latter reaching the tube-former, substantially as set forth.

2. In a paper-bag machine, the combination, with a cylinder, of a companion cylinder provided with a central knife for cutting the thumb-hole, and with two side knives for cutting the side portions of the web, one or more of said knives being adapted to be secured to the cylinder at different points of its length, substantially as set forth.

3. In a paper-bag machine, suitable revolving knives, in combination with a recessed cylinder, whereby the thumb-hole for the bag and that portion of the tube that is directly opposite the thumb-hole may be cut before the tube is formed, substantially as and for the purposes specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DANIEL APPEL.

Witnesses:
JNO. CROWELL, Jr.,
W. E. DONNELLY.