

No. 709,789.

J. MEEK.

Patented Sept. 23, 1902.

MECHANISM FOR REMOVING SELVAGE FROM BOX OR CARTON BLANKS.

(No Model.)

(Application filed Mar. 17, 1902.)

4 Sheets—Sheet 1.

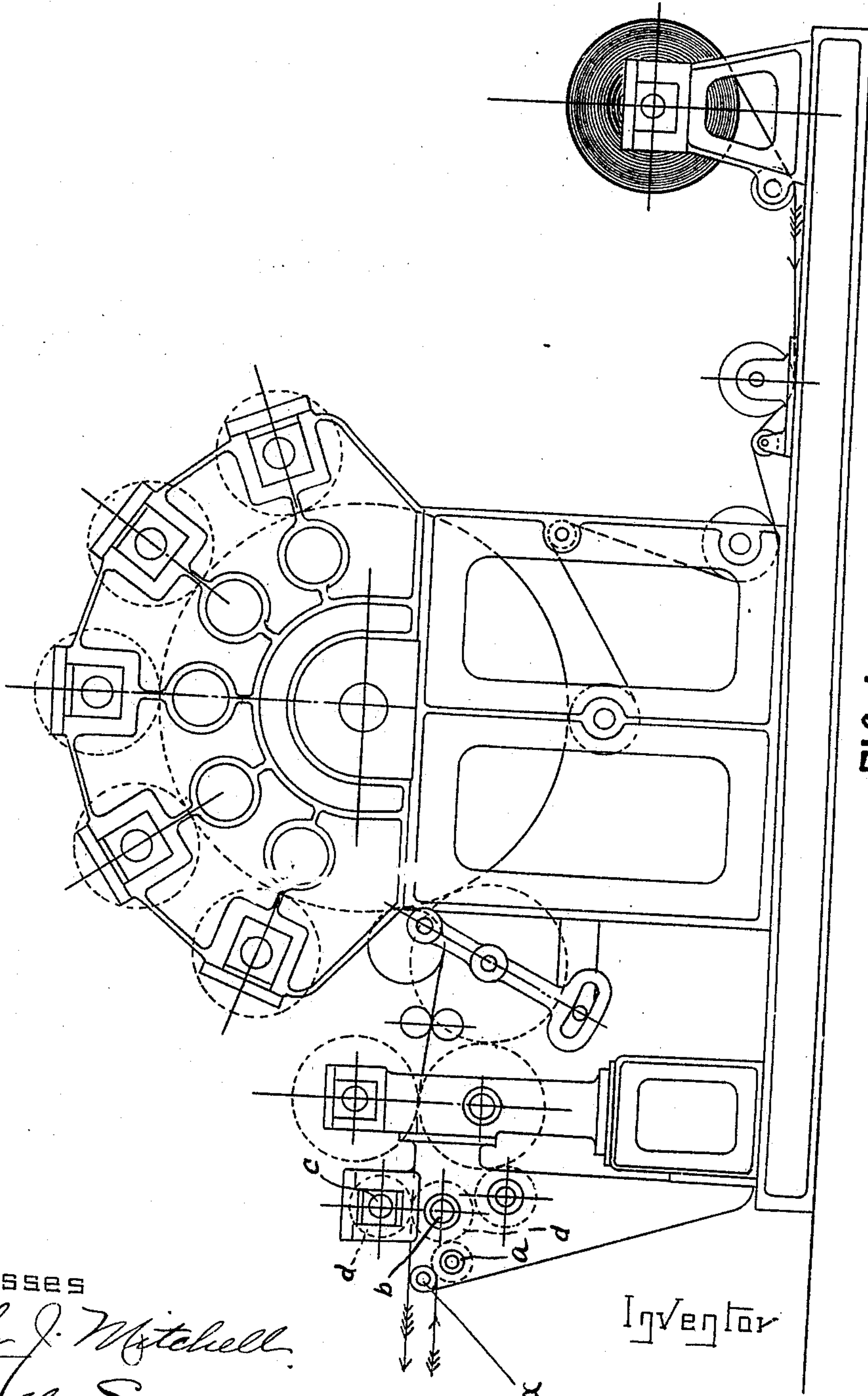


FIG. 1.

Witnesses

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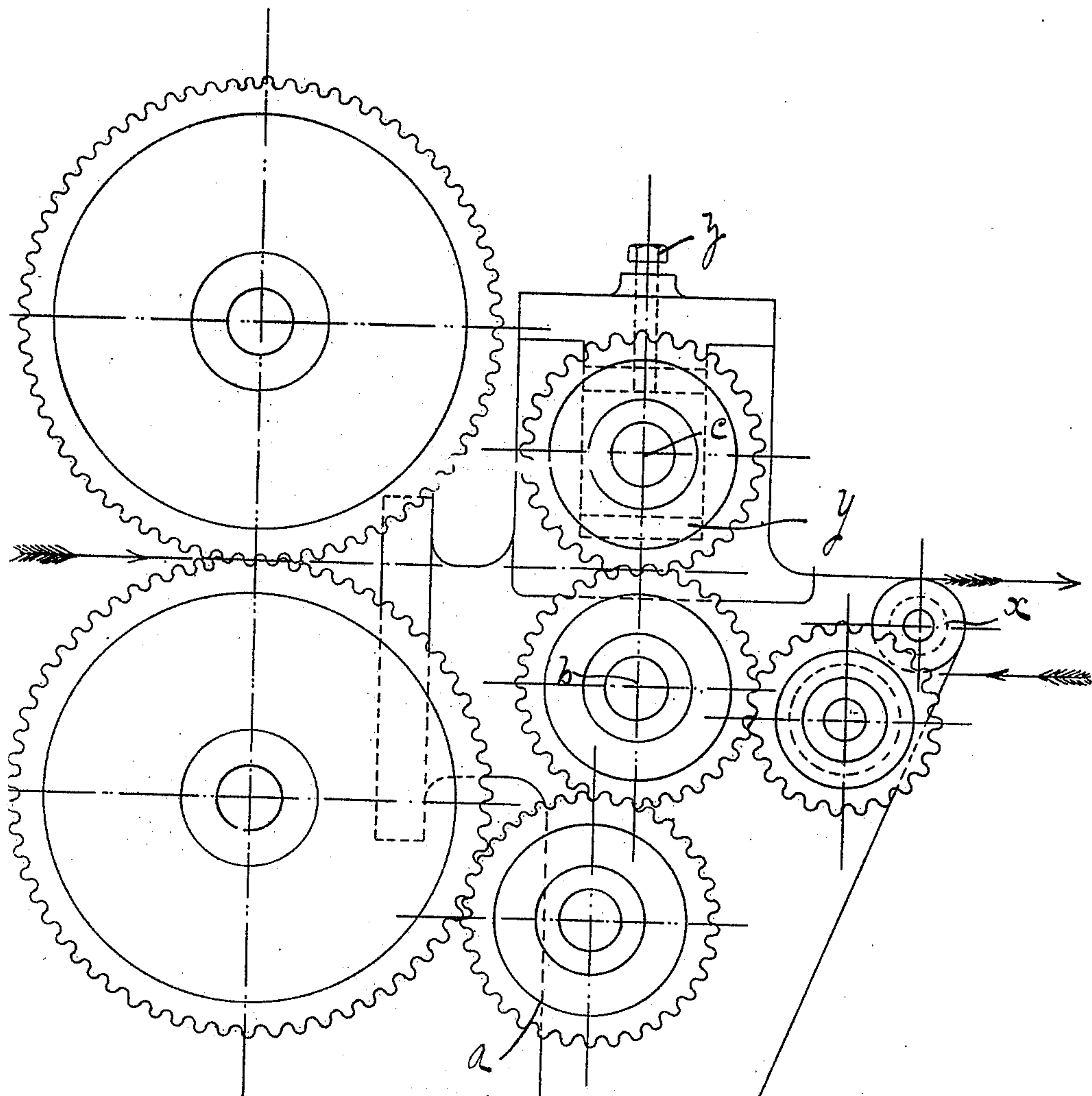


FIG. 2.

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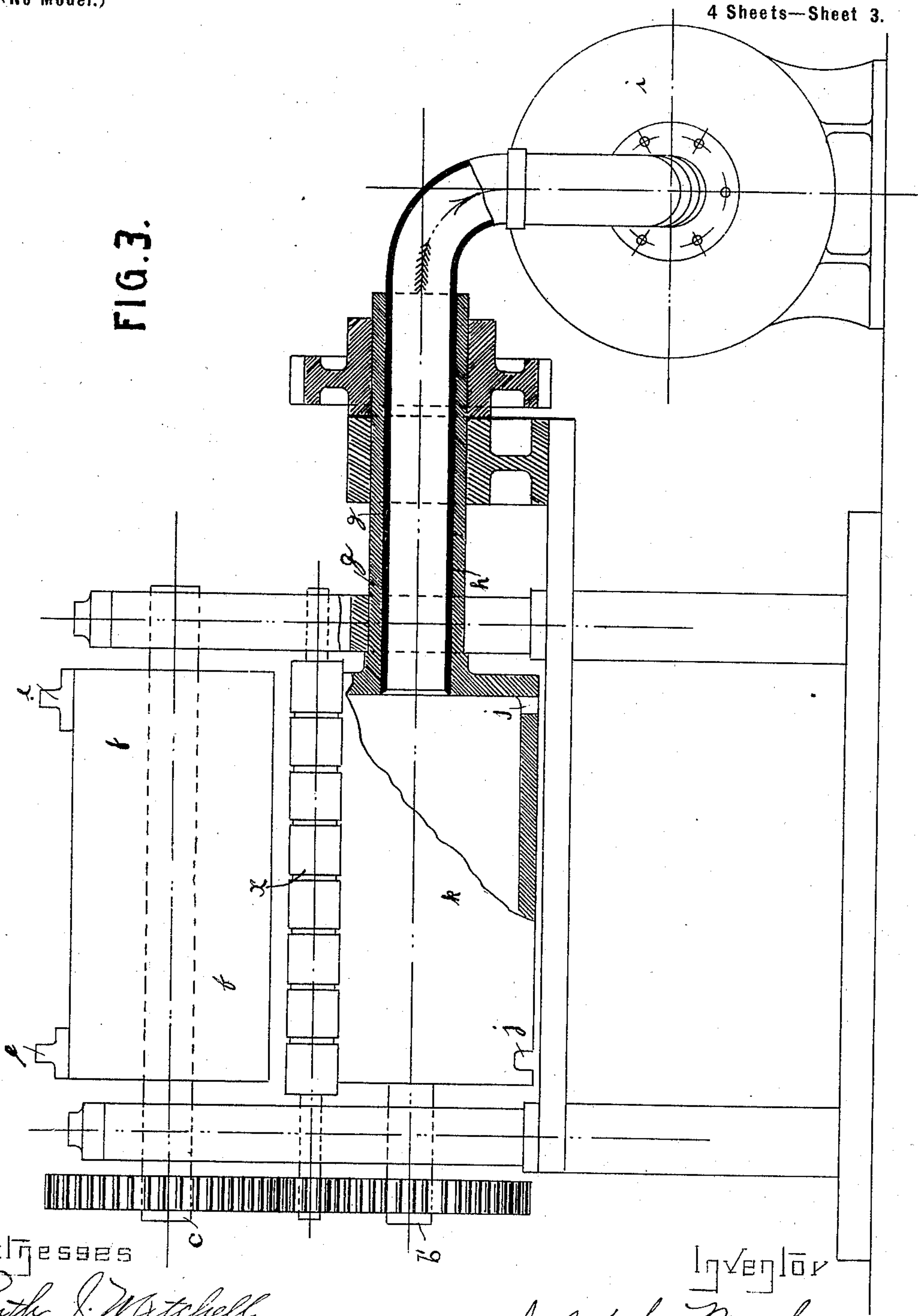
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4 Sheets—Sheet 3.

FIG. 3.



Witnesses

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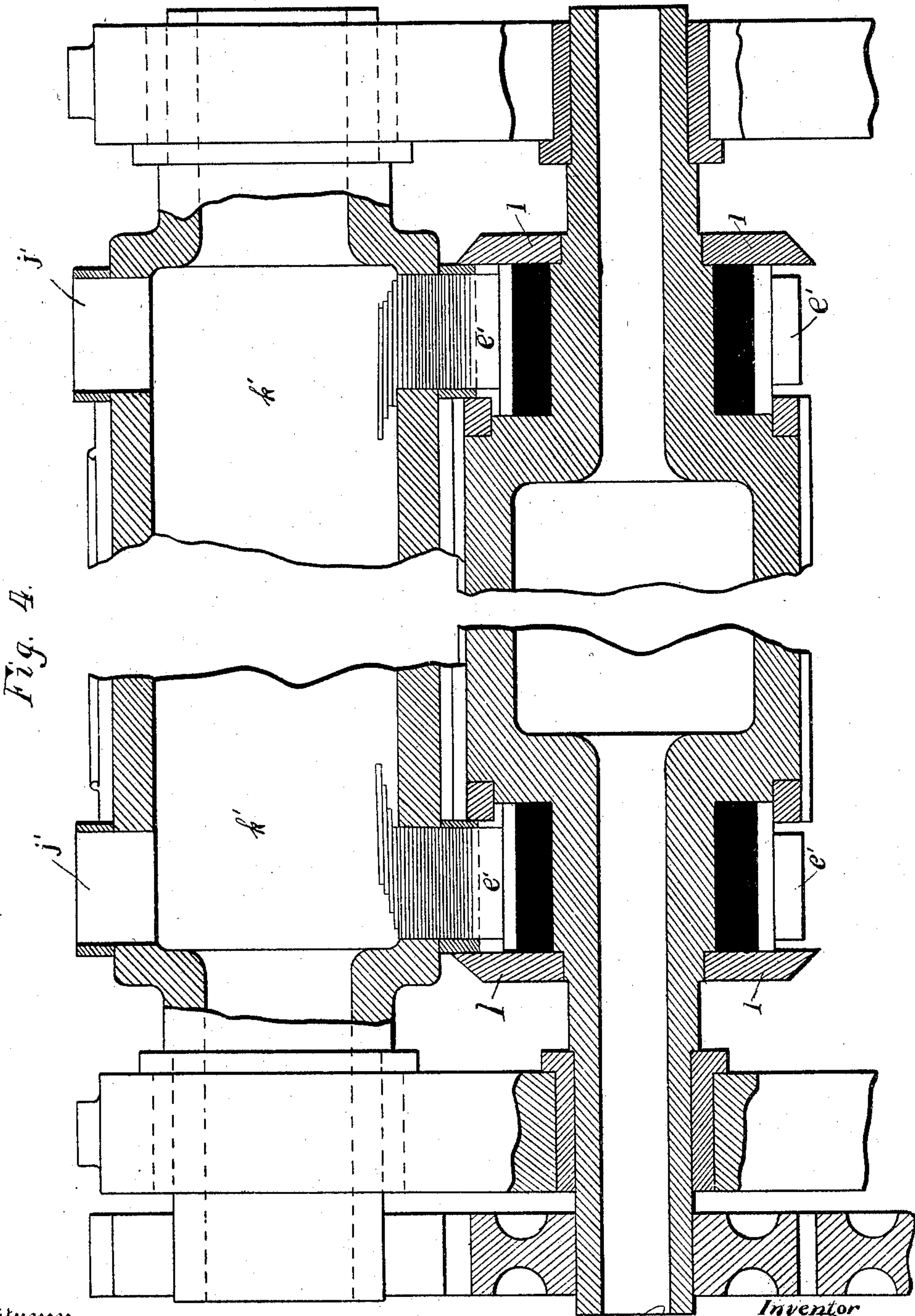
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4 Sheets—Sheet 4.



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# UNITED STATES PATENT OFFICE.

JOSEPH MEEK, OF TORONTO, CANADA, ASSIGNOR TO LEVER BROTHERS, LIMITED, OF PORT SUNLIGHT, ENGLAND.

MECHANISM FOR REMOVING SELVAGE FROM BOX OR CARTON BLANKS.

SPECIFICATION forming part of Letters Patent No. 709,789, dated September 23, 1902.

Application filed March 17, 1902. Serial No. 98,610. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH MEEK, a subject of the King of Great Britain, residing in Toronto, in the Province of Ontario, in the Dominion of Canada, (whose full postal address is Eastern avenue, Donbridge, Toronto, aforesaid,) have invented certain new and useful Improvements in Mechanism for Removing Selvage from Box or Carton Blanks, (for which application has been made in England, No. 8,911, dated April 30, 1901,) of which the following is a specification.

This invention has for its object improvements in mechanism for cutting and punching box and carton blanks, and particularly for discharging the cut-out pieces thereof. Such blanks are usually scored and printed in rotary or platen presses; but after those operations certain parts, which may be termed "selvage," are left upon the edges and flaps of the blanks, and before the boxes are set up these parts must be removed. The object of the present invention is the production of an apparatus designed to effect a removal of this selvage and the discharge of the same.

With this and other objects in view the invention consists in certain novel constructions, combinations, and arrangements of parts, as will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 represents a general end view of a printing and scoring machine, with an apparatus constructed in accordance with this invention added thereto as a supplementary attachment. Fig. 2 represents an enlarged detail end view of the said attachment, showing the gearing for operating it from the train of the printing and scoring machine. Fig. 3 represents an enlarged front view, partially in section, of the said attachment. Fig. 4 represents an enlarged longitudinal sectional view of a slightly-modified form of the present improved device.

In Figs. 1 and 2 the connections are shown by which the cutting and punching apparatus, arranged as an auxiliary attachment, is geared with the train of gear of the carton-blank printing and scoring machine. The driving is effected through an intermediate wheel *a*, which gears with the toothed wheel

of a shaft *b*, which latter wheel in turn meshes with the toothed wheel of a shaft *c*. The latter two gear-wheels are of equal sizes, and the shafts *b* and *c* are consequently rotated at equal speeds.

In Fig. 3 I have shown the preferred embodiment of the present invention wherein the selvage is exhausted by means of a fan from the interior of the lower drum after having been forced into the same by the cutting devices. In this figure punches *e* are mounted upon the periphery of an upper drum *f*. In this structure shaft *b* may only extend sufficiently far within the framing (which may be of any preferred form) for the left-hand end of the drum *k* to be attached thereto, or the short shaft may be formed integral with the drum. At the right-hand end the drum is provided with a hollow extension *g*, which is rotatably supported in the framing, and a stationary tube *h*, communicating with any suitable fan *i*, fits within said extension. Suitable apertures, as *j j*, are formed in the drum *k* and communicate with the interior thereof and are positioned to register with the punches *e*, in operation the material to be operated upon being passed between said drums *f* and *k* and the selvage or waste therefrom being directed into the drum *k* through apertures *j*, whereby operation of the fan *i* will exhaust atmosphere from tube *h* and the interior of drum *k* and in so doing will remove therefrom the said selvage, the air-current and selvage passing through the tube *h* in the direction of the arrow.

*x* indicates any suitable roller over which pass the tapes which serve for carrying away the punched and trimmed blanks, said roller and the gearing for operating it being clearly shown in Figs. 1 and 2, in which figures the tapes are indicated in dotted lines and their direction of travel by means of arrows.

In Fig. 4 I have indicated a slightly-modified construction in which an upper hollow drum *k'* is employed, mounted in any suitable framing and provided with apertures *j'*, communicating with the interior thereof and registering with any suitable punches *e'*, carried by a drum *f'*, mounted in said framing beneath the drum *k'*, which in operation cut the selvage from the material operated upon and



drive the same through said apertures  $j'$  into the interior of drum  $k'$ , such selvage or waste being carried off by pneumatic means. (Not shown, but similar in all respects to the disclosure in Fig. 3.) In this construction I preferably employ disk cutters  $l$ , carried at the ends of drum  $f'$  and contacting with suitable shoulders  $m$  on the drum  $k'$ , whereby the sheets of material passing between said drums will be trimmed to a given width.

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

1. A mechanism for removing selvage from box and carton blanks, comprising a pair of rollers, one of the same being hollow, means for rotating said rollers in timed relation to each other, punches carried by one of said rollers, apertures being formed in the hollow roller for receiving said punches whereby said selvage is designed to be passed into said hollow roller, and pneumatic means for removing said selvage therefrom, substantially as described.

2. In a mechanism of the class described, the combination with a suitable support, of a hollow roller journaled therein, a tube com-

municating with one of the journals of said roller, means for exhausting atmosphere within said tube, and means for removing the selvage from carton-blanks and delivering the same within said roller, substantially as described.

3. In a mechanism of the class described, the combination with a suitable support, of a hollow roller journaled therein, a second roller mounted contiguous the hollow roller, said hollow roller being provided with a plurality of apertures, a plurality of punches carried by said second-mentioned roller designed to enter said apertures whereby selvage from a carton-blank passed between said rollers may be directed into said hollow roller, and pneumatic means communicating with one of the journals of said hollow roller for removing the selvage therefrom, substantially as described.

In witness whereof I have hereunto signed my name, this 13th day of March, 1902, in the presence of two subscribing witnesses.

JOSEPH MEEK.

Witnesses:

R. L. SEWELL,  
E. MERNER.