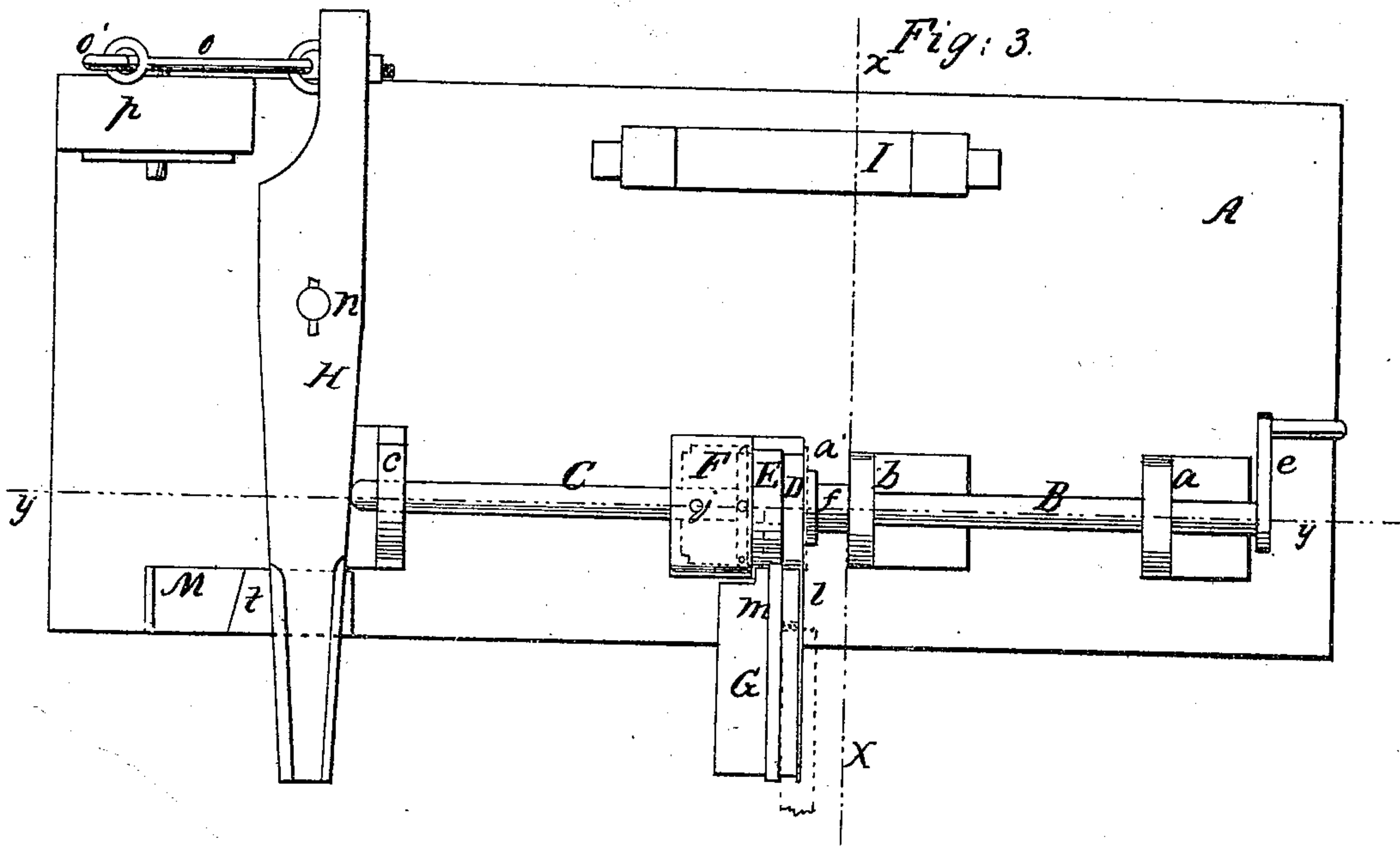
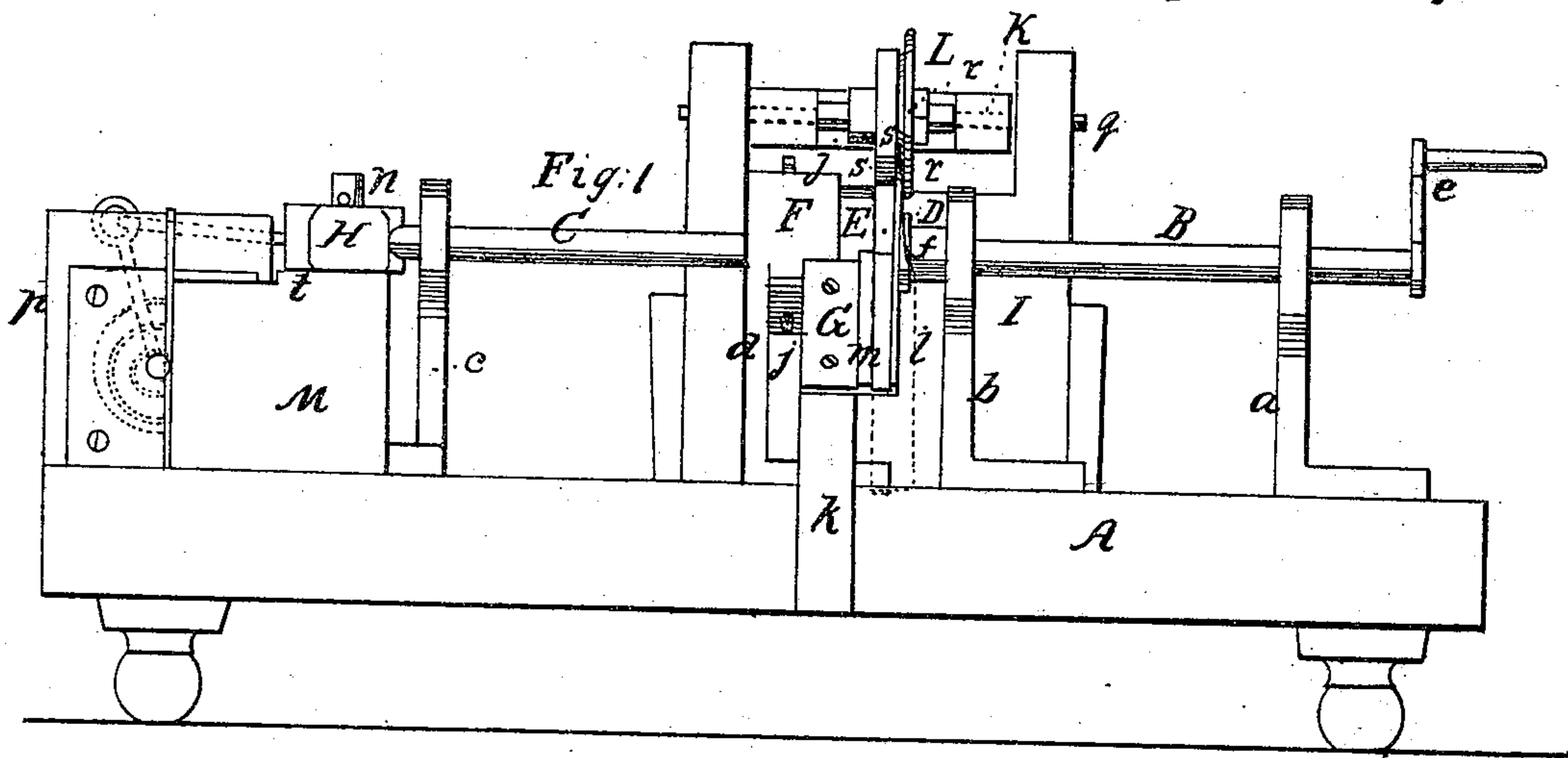


*S. B. Terry Sheet 1. 2 Sheets.*

*Paper Box Mach.*

*N<sup>o</sup> 25373.*

*Patented Sept. 6. 1859.*



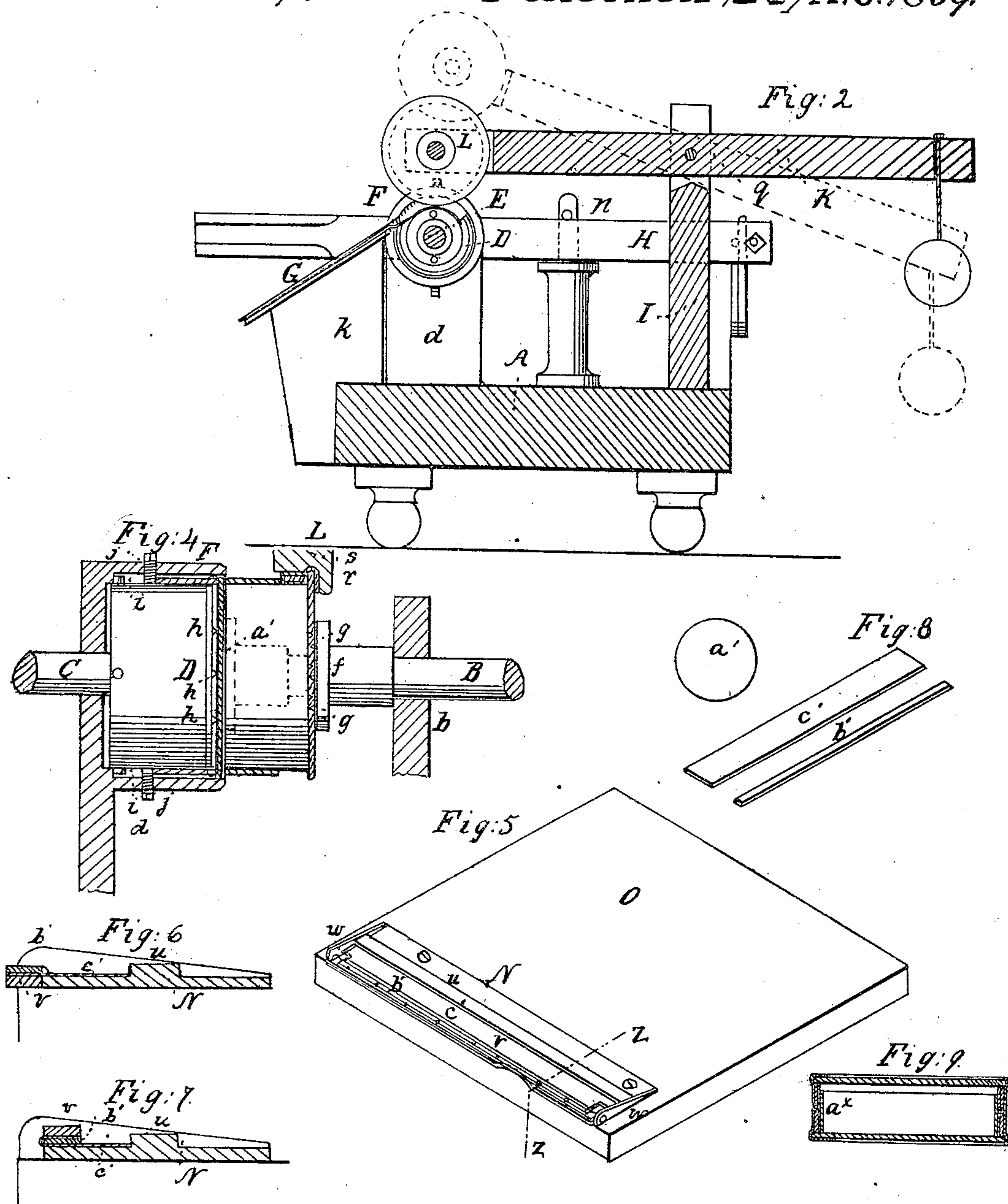
Witnesses  
 Jesse Gaylord  
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*S. B. Terry Sheet 2. 2 Sheets*  
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*Seren Gaylord*  
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# UNITED STATES PATENT OFFICE.

SILAS B. TERRY, OF TERRYVILLE, CONNECTICUT, ASSIGNOR TO SILAS B. TERRY, JR., OF SAME PLACE.

## MACHINE FOR MAKING PAPER BOXES.

Specification forming part of Letters Patent No. 25,373, dated September 6, 1859.

*To all whom it may concern:*

Be it known that I, SILAS B. TERRY, of Terryville, in the county of Litchfield and State of Connecticut, have invented a new and useful Machine for Manufacturing Paper Boxes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a front view of my invention; Fig. 2, a transverse vertical section of the same, taken in the line  $x x$ , Fig. 3. Fig. 3 is a plan or top view of the same; Fig. 4, a longitudinal section of the shell or case which contains the cylindrical head to which the end pieces of the boxes are attached;  $y y$ , Fig. 3, indicates the plane of section; Fig. 5, a perspective view of the device by which the side strips of the boxes are covered; Figs. 6 and 7, transverse section of the same, taken in the line  $z z$ , Fig. 5. Fig. 8 are views of the several parts of a box that are operated on by this invention; Fig. 9, a vertical central section of a paper box such as are constructed by my invention.

This invention relates to a machine that is designed to facilitate the manufacture of circular paper boxes; and it consists in the employment or use of a rotating clamp, gage, or socket, discharging-ring, pressure-roller, and guide, the above parts being arranged substantially as hereinafter described, and used in connection with a folding device, whereby the manufacture of the above-named boxes is greatly expedited and the work done in a perfect manner.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a base or platform, to which four uprights,  $a b c d$ , are secured. The uprights  $a b$  form supports for a mandrel, B, which has a crank,  $e$ , on its outer end and a circular disk,  $f$ , on its inner end, said disk having spurs  $g$  attached to its face side, as shown clearly in Fig. 4. The mandrel B is allowed to rotate and also to slide longitudinally in its bearings. The uprights  $c d$  form supports for a mandrel, C, the inner end of which has a cylindrical head, D, attached, with spurs  $h$  on its face or end, and pins  $i$  projecting from its periphery to serve as stops to

a ring or band, E, which is fitted loosely on the head D. The upper end of the support  $d$  is provided with a cylindrical socket, F, in which the head D is allowed to slide freely, and through the socket F screws or pins  $j$  pass, the use of which will be presently explained. The mandrel C is also allowed to turn freely and slide longitudinally in its bearings.

To the front part of the base or platform A an upright,  $k$ , is attached, and on the upper end of this platform an inclined plate, G, is secured. The plate G has a flange,  $l$ , turned up at one edge, and a ledge,  $m$ , is secured to the plate parallel with the ledge, as shown clearly in Figs. 1 and 3.

H is a lever which is fitted on a fulcrum,  $n$ , on the base or platform. This lever is connected at one end by a link,  $o$ , and lever  $o'$  to a coil-spring fitted in a box,  $p$ , on the platform. In Fig. 1 the coil-spring is shown by dotted lines.

To the upper surface of the base or platform A an upright, I, is attached. This upright has a bar, K, fitted on an axis,  $q$ , in its upper part. In the front end of this bar K a pressure-roller, L, is placed. The periphery of this roller is provided with a flange,  $r$ , and a recess,  $s$ , as shown clearly in Figs. 1 and 4. The back end of the bar K has a weight attached, said weight having a tendency to keep the front end of the bar elevated. An upright, M, is attached to the front part of the base or platform, said upright having a ledge or shoulder,  $t$ , on its upper surface to serve as a stop for lever H.

N, Figs. 5, 6, and 7, represents a metal plate attached to a base, O. This plate has a ledge,  $u$ , secured longitudinally to it, and a bar,  $v$ , is attached to the front part of plate N by pivots  $w w$ , as shown clearly in Fig. 5, said pivots permitting the bar  $v$  to fold over on plate N, as shown in Fig. 7.

The operation is as follows: The circular pieces of pasteboard  $a'$  (see Fig. 8) which form the end pieces of the boxes are previously cut out by any suitable machine, and the long rectangular strips of pasteboard  $b'$  as well as the white strip of thin paper  $C'$  are also previously cut by machinery. The above parts constitute the stock which my inven-



tion works up. The circular pieces of pasteboard  $a'$  are covered at one side with white paper, this work being also previously done. The operator first throws back the lever H so that it will bear against the stop  $t$ , and then throws back the mandrel C so that the head D will be within the socket F, as shown in black, Fig. 4. A piece of pasteboard,  $a'$ , is then inserted in the socket F, the inner diameter of which is just the size to receive it. (See Fig. 4.) The pasteboard  $a'$  is placed against the face or end of the head D, and the disk  $f$  is then shoved against the pasteboard, which is consequently secured by the spurs  $g$   $h$  between the head and disk. The lever H is then elevated above the ledge or shoulder  $t$ , and the coil-spring in the box  $p$  forces the head D out from the socket F, as shown in black in Figs. 1 and 3 and in blue in the enlarged section, Fig. 4. The operator now takes a strip,  $c'$ , of thin white paper and places it on the plate N, one edge being against the ledge  $u$ . This paper  $c'$  is then pasted on its upper surface, and a strip,  $b'$ , of pasteboard is placed on the paper  $c'$  directly over the bar  $v$ . The bar  $v$  is then turned over, as shown in Fig. 7, and the pasteboard strip  $b'$  will be covered with the strips  $c'$  of white paper, a projecting edge or margin of the latter being left. The covered pasteboard strip  $b'$  is then placed on the inclined plate G, the ring E on the head D being shoved back so that it bears against the pins or stops  $i$ . The bar K is then turned down and the roller L bears on the head D. The operator then turns the mandrel B by hand and the circular pasteboard  $a'$  is rotated and the covered pasteboard strip  $b'$  drawn between the roller L and the head D, the flange  $r$  of roller L turning the margin of the thin strip of paper  $c'$  over the edge of the circular piece of pasteboard  $a'$ , and thereby connecting the strip  $b'$  with the circular piece  $a'$ , the latter forming the top or bottom of the box and the former part of its side, each box being formed of two parts constructed precisely similar, one portion, which forms the lid or cover, fitting over a strip,  $a''$ , pasted

within the other portion, which forms the lower part of the box. (See Fig. 9.) The roller L while performing its work is pressed down on the head D by hand.

From the above description it will be seen that the invention connects the circular parts  $a'$  with the strips  $b'$ , said parts forming the tops and bottoms and sides of the boxes, the remaining work—such as the pasting of the strip  $a''$  in one part—being done by hand, as also the covering of the boxes, if desired, with colored paper. When the parts  $a'$  are connected with the parts  $b'$  of the box, the lever H and mandrel C are forced back by hand, the head D passing within the socket F, and the band E, being arrested by the screws or stops  $j$ , serves to force the part of the box just formed off from the head D. The band E therefore serves as a discharging device as well as a gage.

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

1. The pressure-roller L in connection with the rotating clamp formed of the head D and disk  $f$ , arranged substantially as and for the purpose set forth.

2. In combination with the pressure-roller L, head D, and disk  $f$ , the ring or band E, provided with the pins or strips  $i$ , the socket F, provided with the screws or pins  $j$ , and the guide-plate G, arranged for joint operation as and for the purpose described.

3. The arrangement of the pressure-lever H and sliding mandrels B C, for the purpose specified.

4. The employment or use of the folding device, formed of the plate N, provided with the ledge  $u$  and the pivoted bar  $v$ , when said folding device is used in connection with the pressure-roller L, rotating head D, and disk  $f$ , for the purpose set forth.

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Witnesses:

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