(No Model.)

G. P. SALISBURY.

Paper Cartridge Machine.

No. 239,851. Patented April 5, 1881.

fig 1

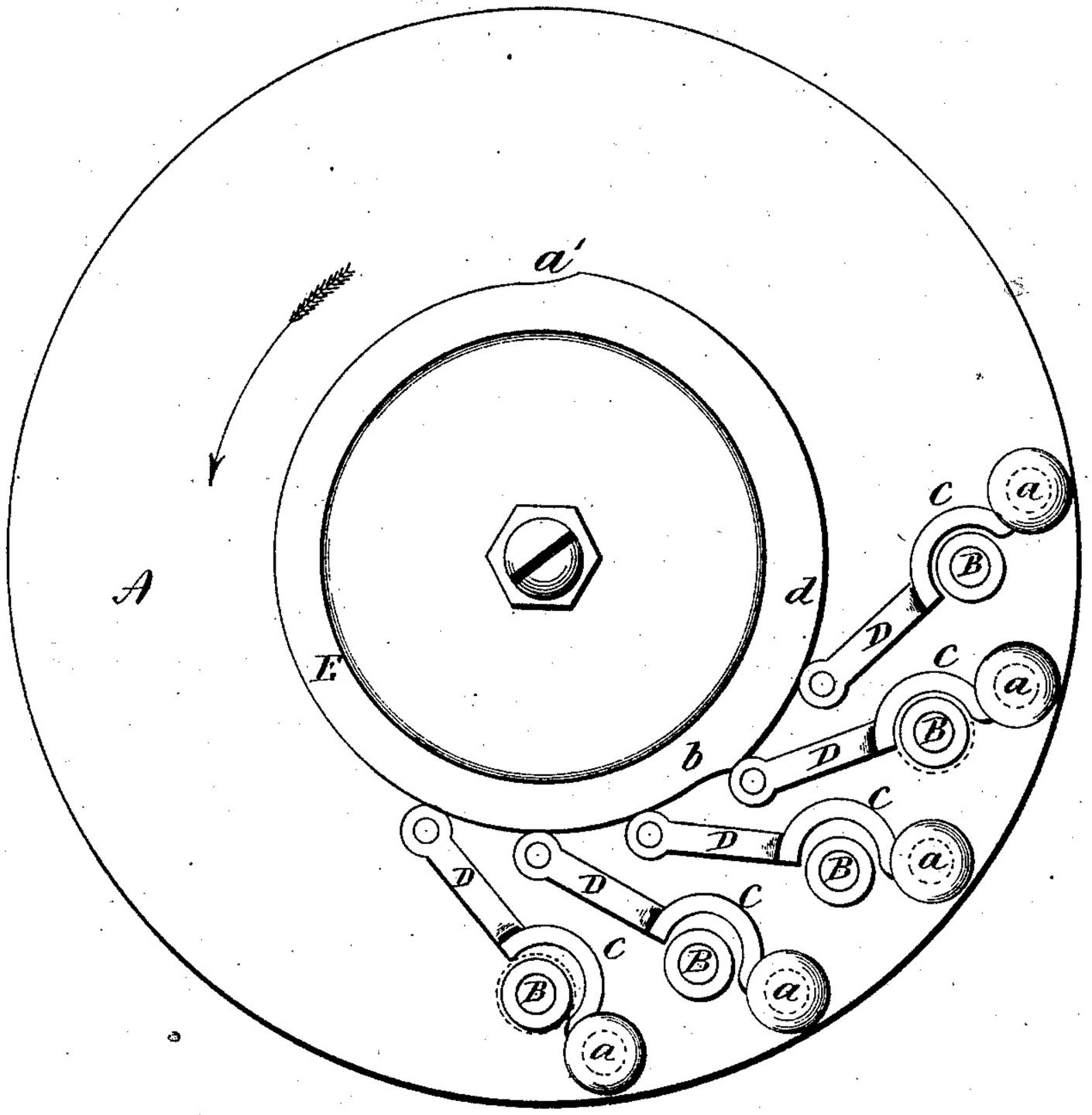
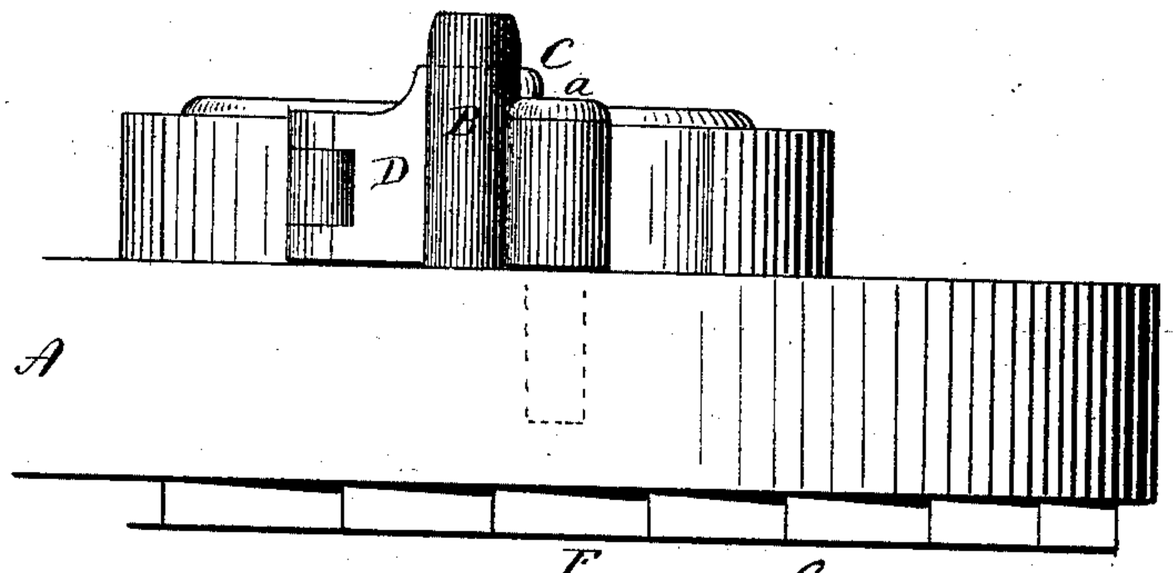


fig 2



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UNITED STATES PATENT OFFICE.

GEORGE P. SALISBURY, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE WINCHESTER REPEATING ARMS COMPANY, OF SAME PLACE.

PAPER-CARTRIDGE MACHINE.

SPECIFICATION forming part of Letters Patent No. 239,851, dated April 5, 1881.

Application filed February 12, 1881. (No model.)

To all whom it may concern:

Be it known that I, GEORGE P. SALISBURY, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Machines for Making Paper Cartridges; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a top view of the feeding-disk; Fig. 2, a partial side view.

This invention relates to an improvement in machines employed in the manufacture of paper cartridges, but applicable to the manufacture of cartridges from other material.

In the manufacture of paper cartridges by machinery the tubes are arranged upon posts or studs on the disk, to be successively presented for the various operations—such as introducing the re-enforce, the wad, or placing the cap thereon. Whatever force is required to produce these operations is necessarily borne by the edge of the tube at the mouth. Frequently in these operations the edge or mouth is more or less injured, and many times the tube will be crippled.

To avoid this difficulty is the object of this invention; and it consists in combining with the post or support within the tube an external clamp, which will at the proper time bear upon the outer surface of the tube and clamp it upon the posts with sufficient power to resist the force of the operation being performed.

In the illustration I show a convenient and practical construction for accomplishing the object of the invention.

A represents the usual disk or dial feed, on the upper surface of which are vertical posts B, arranged in a circle concentric with the center of motion of the disk in the usual manner, and upon which the tubes are set, the posts fitting closely the interior of the tubes, the disk rotated in the usual manner, to successively present the tubes on the post for the operation to be performed.

c is the jaw, pivoted to the disk, as at *a*, outside the posts. The face of the jaw adjacent to the post corresponds to the exterior shape of the tubes to be operated upon, and so that when the tube is placed upon the post and the jaw *c* forced against the outside of the tube it will clamp the tube between the post and the jaw. The vertical extent of the jaw should be nearly equal to the height of the post, as shown in Fig. 2, so as to make the bearing of considerable extent upon the surface of the tube.

From the jaw an arm, D, extends inward and rides upon the edge of a cam, E, a portion of which—say from *a'* to *b*—is concentric with the disk, and of less diameter than the remainder of the cam-surface—that is, so that there will be a raised or projecting portion, as at *d*. This cam is stationary, and the raised portion is at the point where the operation is to be performed upon the tube. As the disk revolves the arms D ride upon that portion of the periphery of the cam which is of the smaller diameter, and which permits the jaws to fall back from the posts, so that during that time the tubes may be placed on the posts in the usual manner; but as soon as the arms D pass onto the part of the cam E of larger diameter the end of the arm is forced outward, so as to bring the jaw to a firm bearing against the tube, and clamp it firmly against the post during the operation to be performed thereon. As the arms pass off from the part *d* of the cam the jaw is released, the tube operated on may be removed, and fresh tubes introduced.

As represented, a separate jaw is provided for each post; but it will be readily understood that a single jaw not attached to the disk may be employed at the point where the operation is to be performed, so as to clamp the tube during the operation and release it immediately after; or the individual jaws may be employed hung to the disk inside the post, instead of outside, the arm of the jaw operated by the cam outside the disk. I therefore do not wish to be understood as confining my invention to the particular construction of jaw shown in the accompanying drawings.

While this invention is made with special reference to the manufacture of paper cartridges, it may be employed with good results

in many operations upon the head of metal cartridges, and avoid the bearing heretofore required to be taken at the mouth.

In the accompanying illustration I have not represented any feeding device, except the ratchet F beneath the disk; neither have I shown any mechanism for either of the operations upon the cartridges, as such are too well known to require illustration or description.

I claim—

1. In combination with the posts for supporting the tube, a jaw presenting a face corresponding to the exterior of the tube, and mechanism, substantially such as described, to impart a forced movement of said jaw toward the post, to clamp the tube during the operation thereon, and release it after such operation, substantially as described.

2. A revolving disk provided with posts to receive the tubes, combined with jaws pivoted upon said disk, and mechanism, substantially such as described, to force the said jaws toward and so as to clamp the tube upon the post during the operation thereon, and release it after such operation, substantially as described.

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Witnesses:

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