(No Model.)

J. KREHBIEL.

CAPSULE CUTTER.

No. 313,601. Patented Mar. 10, 1885.

Fig. 1.

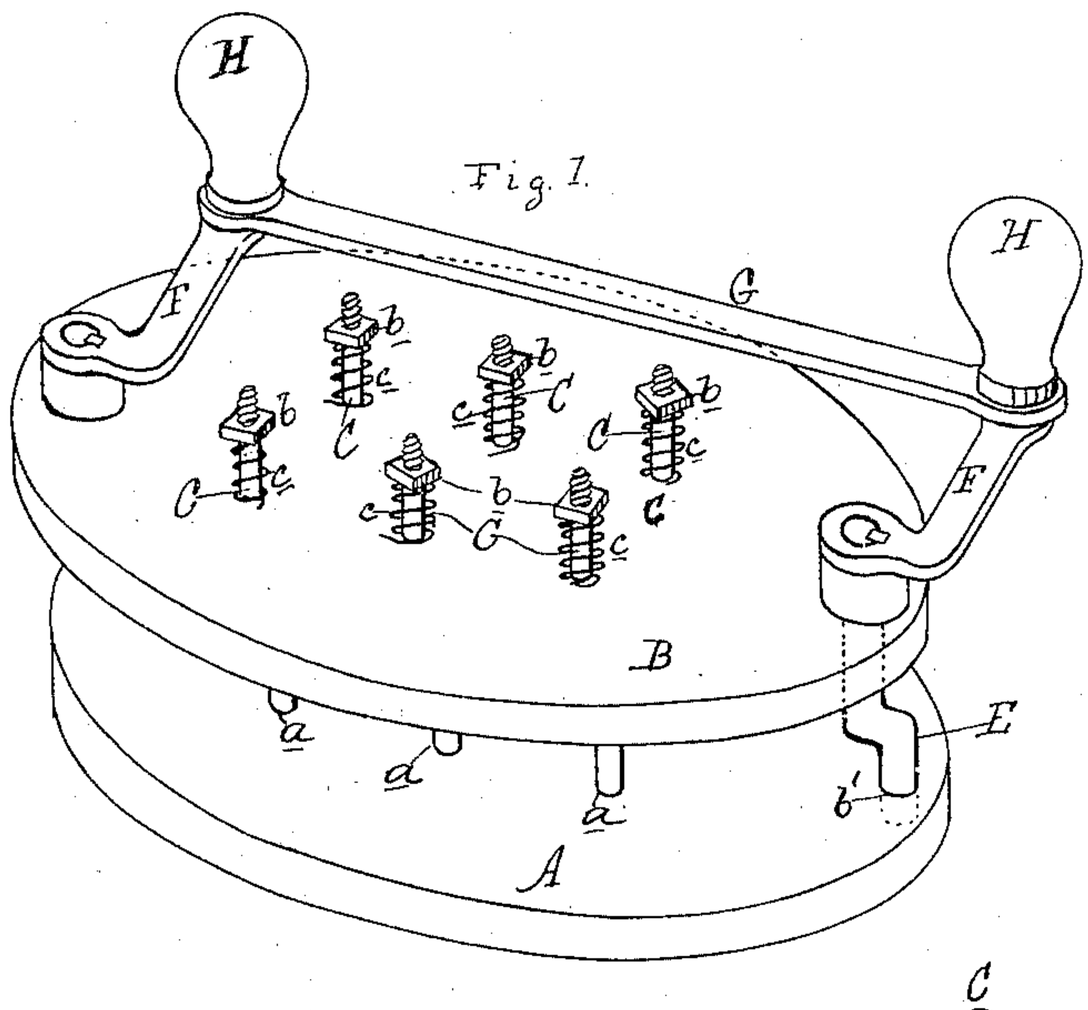


Fig. 2.

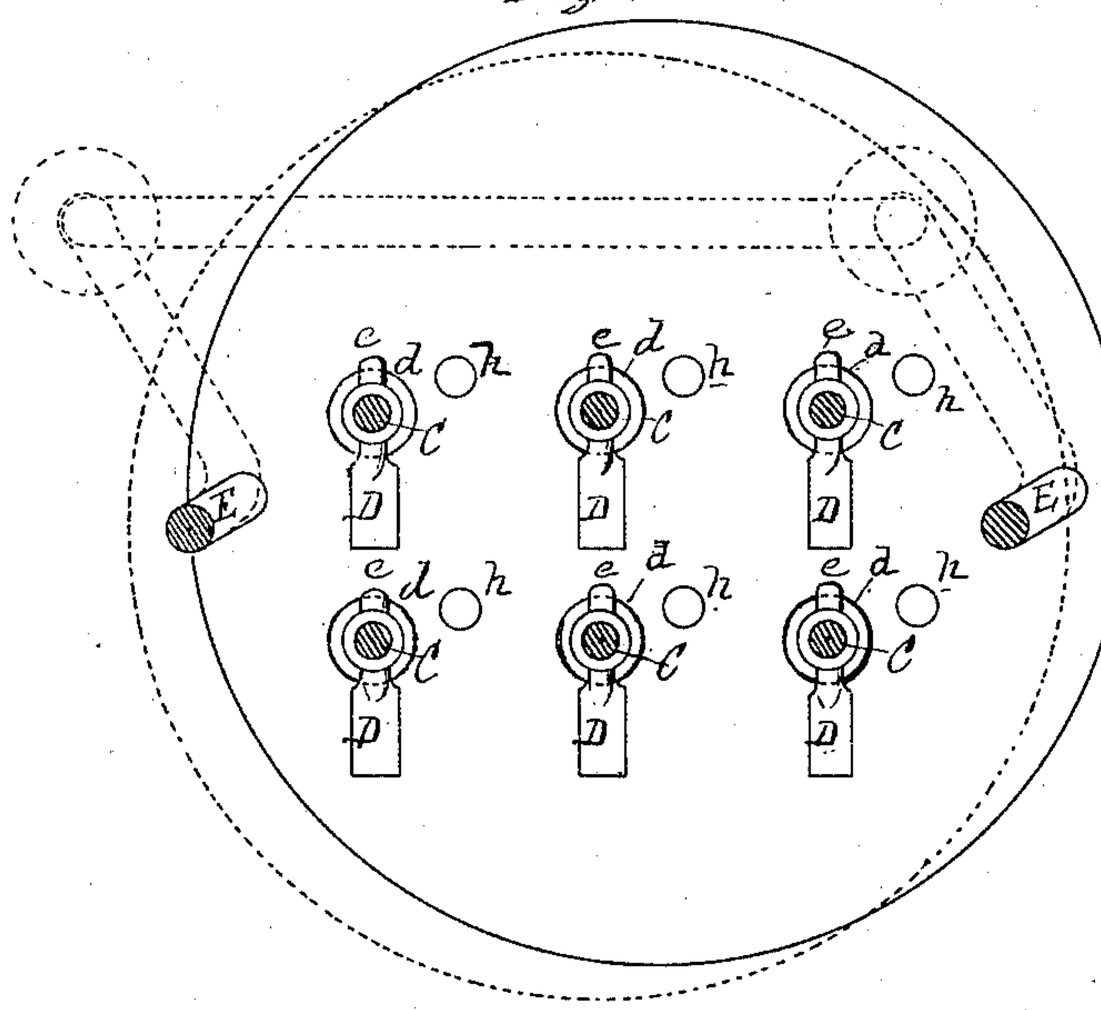
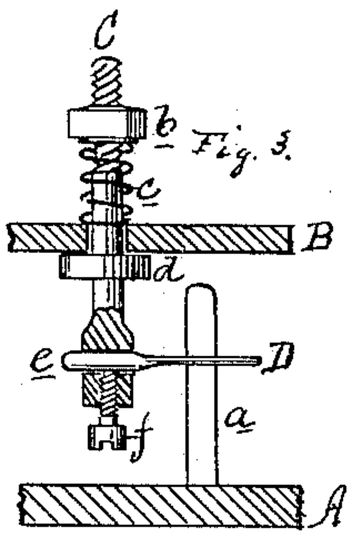


Fig. 3.



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JOHN KREHBIEL, OF DETROIT, MICHIGAN.

CAPSULE-CUTTER.

SPECIFICATION forming part of Letters Patent No. 313,601, dated March 10, 1885.

Application filed March 26, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN KREHBIEL, of Detroit, in the county of Wayne and State of Michigan, have invented new and useful Improvements in Straight-Knife Device for Cutting Capsules; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to certain new and useful improvements in the construction of hand-tools adapted to cut capsules to any desired length upon their mold-pins; and the invention consists in the peculiar construction of the parts and their combination, as more fully hereinafter described.

Figure 1 is a perspective of my device, shown as in operation. Fig. 2 is a reverse view of the plate carrying the cutters. Fig. 3 is a sectional detail showing a section of cutter-carrying plate and section of plate of molds, and an elevation, partly in section, of one of the cutters.

In the accompanying drawings, which form a part of this specification, A represents a circular metallic plate, from the upper face of which project the mold-pins *a*, set in series and at equal distances apart, and this plate is provided with recesses *b'* near the periphery and directly opposite each other on a central line through the axis of the plate.

B is another metallic plate of the same size and form as the plate A, and through this plate, at equal distances apart and in series, pass the shafts C. The upper end of these shafts is threaded, as shown, and each of them is provided with a nut, *b*, between which and the face of the plate is interposed a suitable spring, *c*. Below the plate B each of these shafts is provided with a washer, *d*. Laterally through the lower part of each of these shafts there is a slot adapted to receive the shank *e* of the knife-blade D, the shafts C being adapted to rotate freely in the plate B, through which they pass.

f is a set-screw passing through the bottom end of each of the shafts C, to secure the knife in place in the slot and allow said knife to be removed and replaced at will.

E is a crank-shaft, there being two of these passing through the plate B at points coincident to the recesses *b'*, and to the upper end of each of these crank-shafts is secured a crank, F, and these cranks are coupled together by a bar, G, and handles H are secured at the points of intersection between such bar and the cranks.

In practice the plate B is set over the plate A, with its projecting mold-pins, upon which the gelatine capsules are formed, and the lower end of the crank-shafts E inserted in the recesses *b'*, care being taken that the plates A and B are in coincidence. Any suitable stops, adjustable or otherwise, may be employed between the two plates A and B to regulate the required distance in order to cut the capsules at the proper length. Now, the operator, grasping one of the handles H, gives one complete turn of the crank F, which gives an eccentric motion to the plate B, bringing the edge of each of the knives D into contact with the capsules upon the mold-pins, and the complete revolution of the crank gives this eccentric motion to the plate B and keeps the knife in contact and cuts off the capsule all around the pin. When the stroke is completed and the capsules cut off, a slight rearward motion being given to the cranks removes the knives from their contact with the mold-pins, as shown in Fig. 2, where the position of the mold-pins is indicated at *h*.

No claim is made in this application to the combination of the plate carrying the cutters, the eccentric or crank shafts, and the plate carrying the mold-pins and provided with bearings for the shafts, as it forms the subject-matter of a claim in my application of even date herewith, having the Serial No. 125,610.

What I claim as my invention is—

1. In a hand-tool for cutting off gelatine capsules, a series of straight knives, each adjustably secured to its own shaft, such shafts being secured in a circular plate at regular intervals and having a rotary motion in such plate, such plate having means, substantially as described, for giving it an eccentric motion, whereby the cutting-edge of each knife is compelled to cut around the periphery of the mold-pins, substantially as described.

2. In a hand-tool for the purposes described, the rotating shaft carrying a straight knife

longitudinally adjustable in the lower end of said shaft, said shaft being provided with means for a vertical adjustment in its carrying-plate, substantially as specified.

3. A hand-tool for the purposes described, consisting of the plate B, shafts C, journaled therein, springs *c*, acting on said shafts, nuts *b*, washers *d*, and knives D, all on said shafts C, crank-shafts E, cranks F, secured thereto, the bar G, connecting said cranks F and provided with handles H, all constructed, combined, and operating substantially as set forth.

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