

(No Model.)

2 Sheets—Sheet 1.

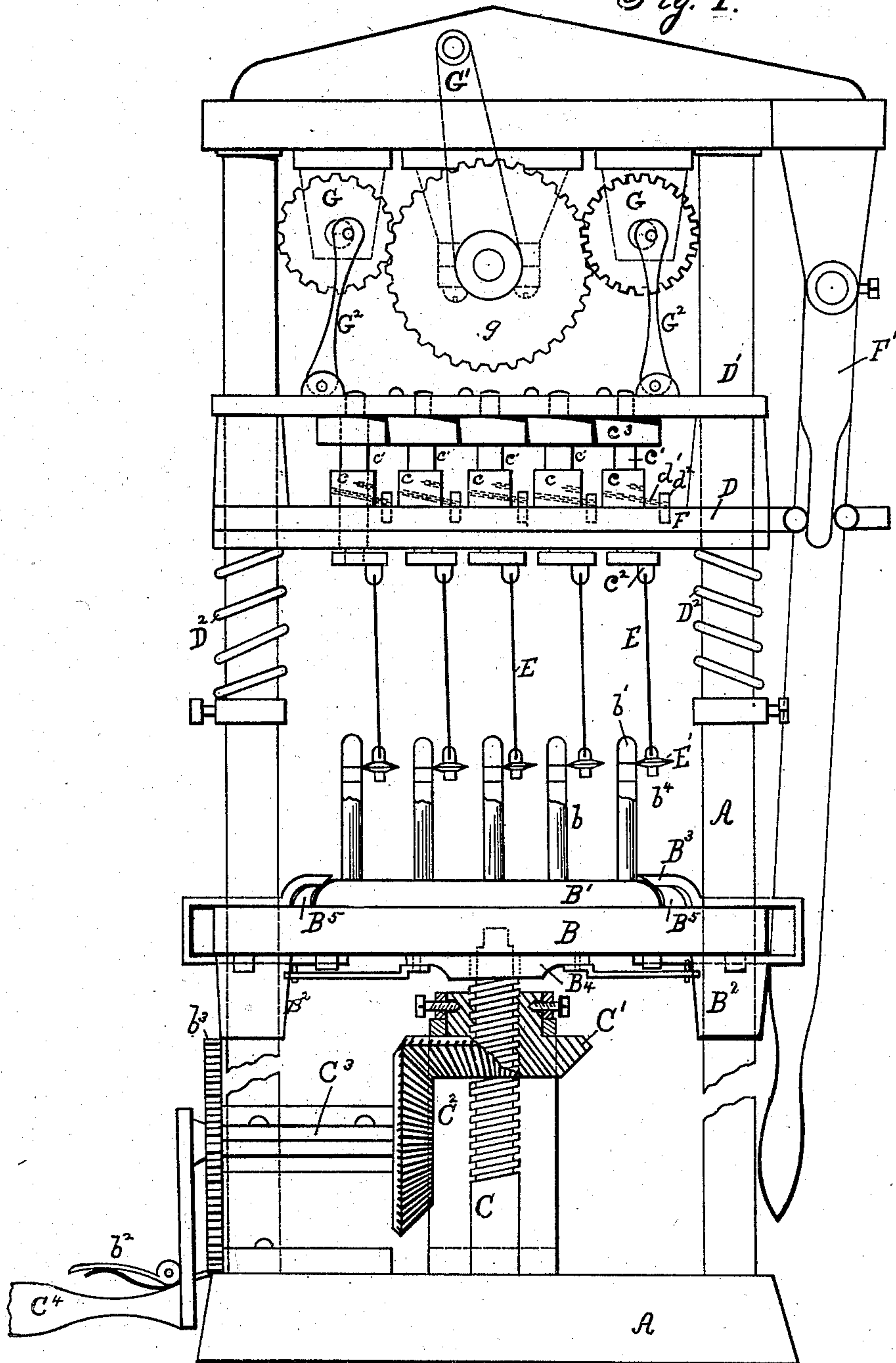
L. J. WOHNLICH & R. J. SCHOLLES.

MACHINE FOR CUTTING OFF CAPSULES.

No. 255,829.

Patented Apr. 4, 1882.

Fig. 1.



WITNESSES

Samuel C. Thomas.
J. Edward Warren

INVENTOR

Louis J. Wohnlich.
Richard J. Scholles
By W. W. Leggett Attorney.

(No Model.)

2 Sheets—Sheet 2.

L. J. WOHNICH & R. J. SCHOLES.

MACHINE FOR CUTTING OFF CAPSULES.

No. 255,829.

Patented Apr. 4, 1882.

Fig. 2.

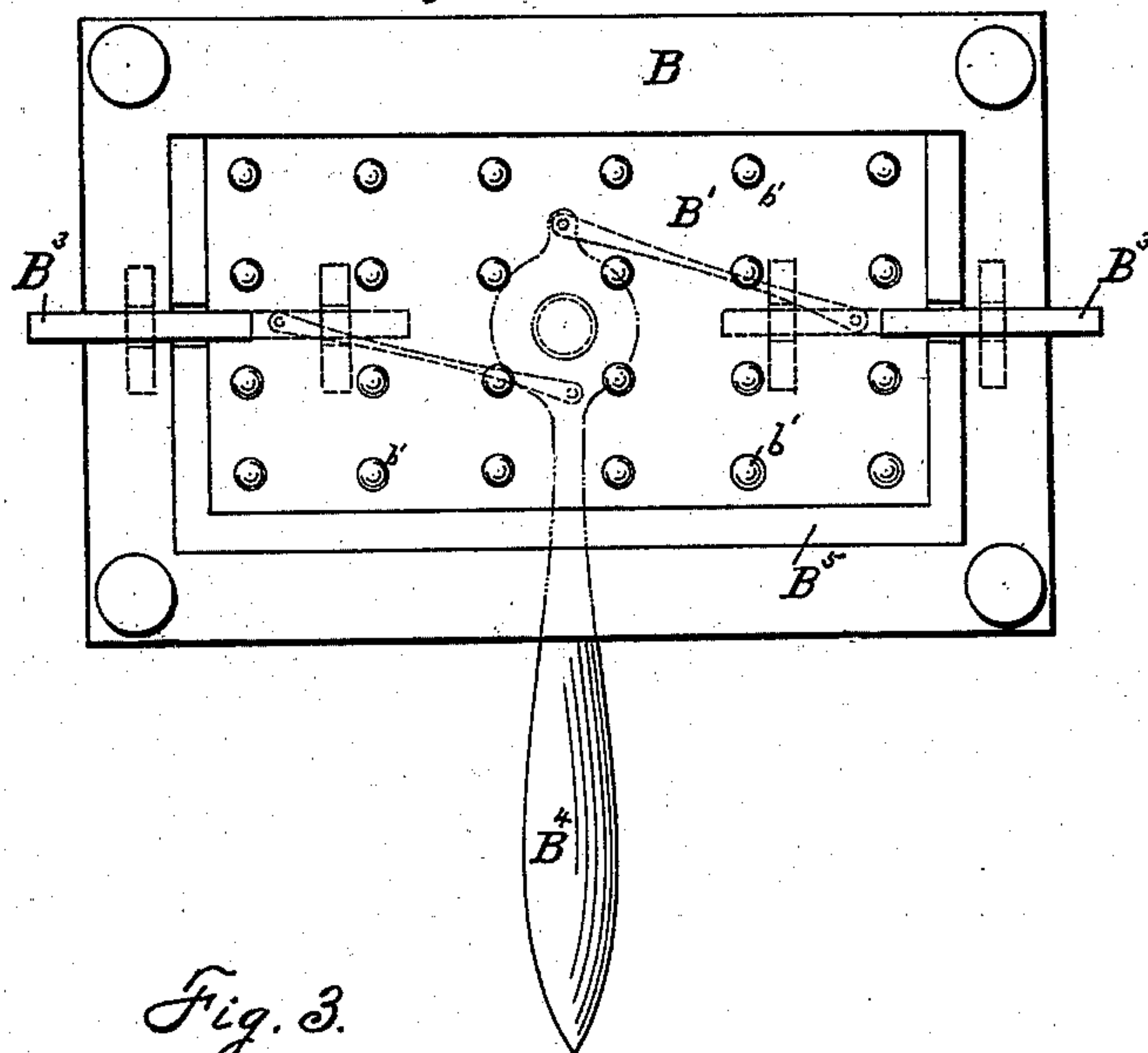
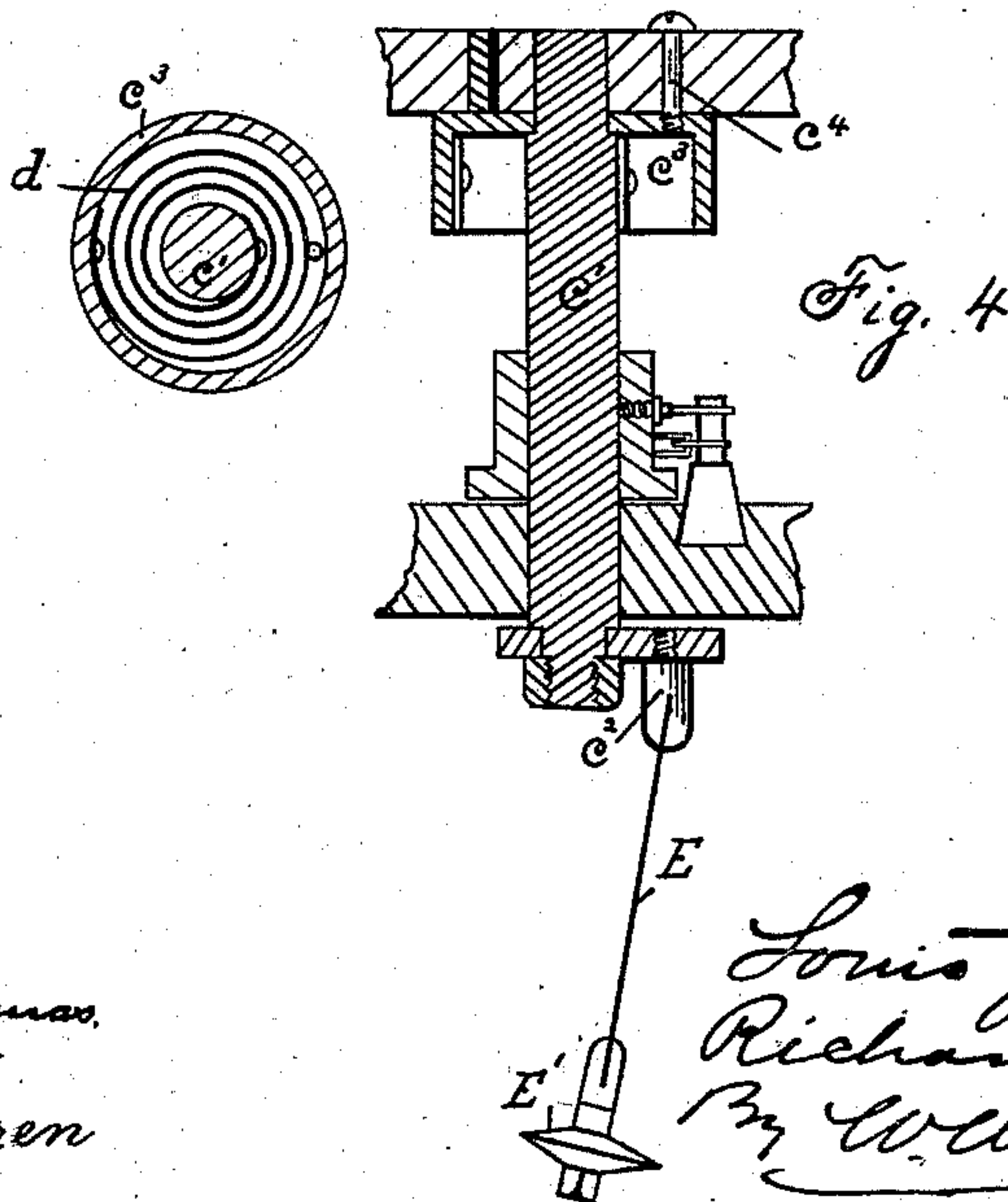
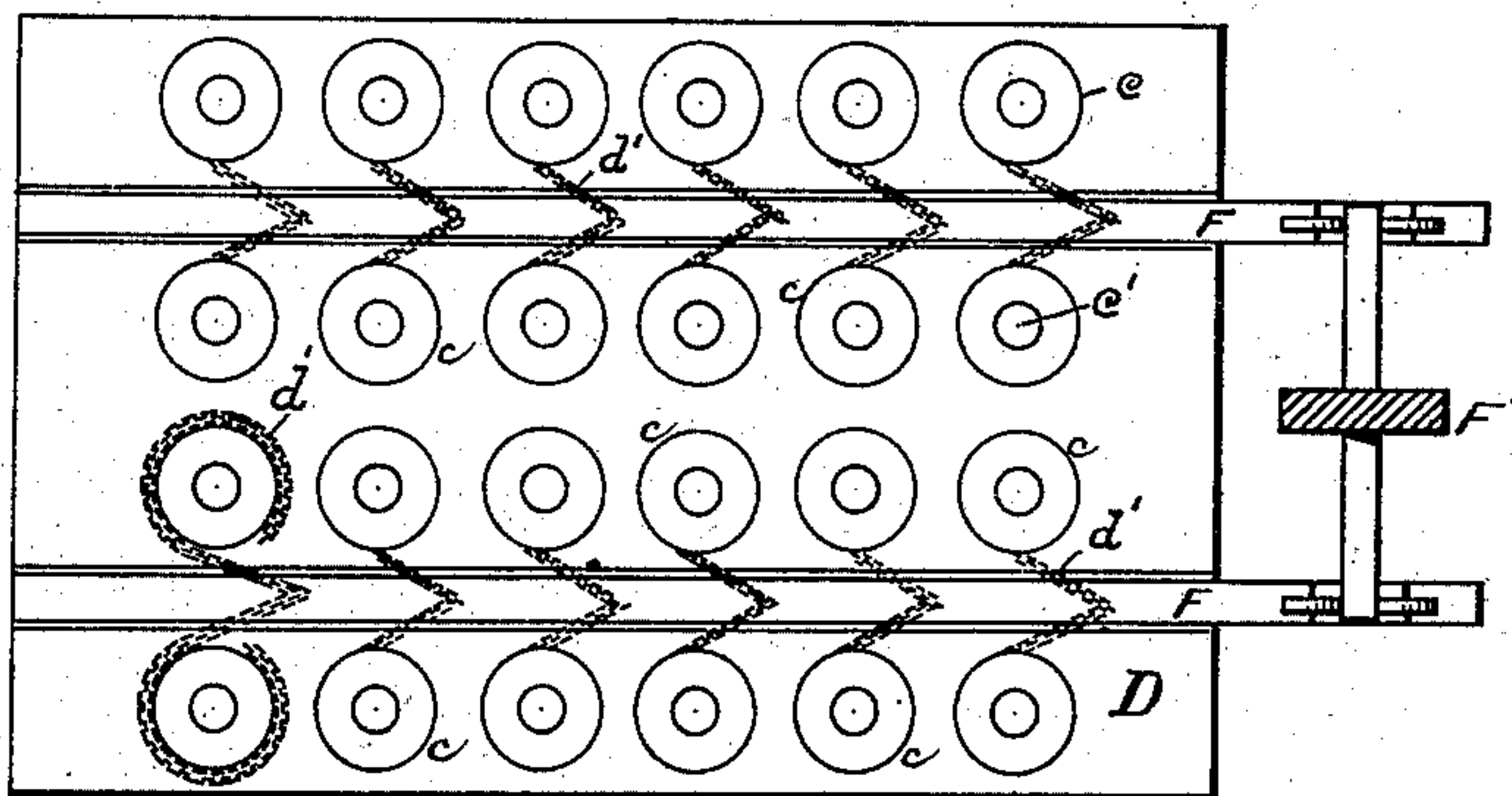


Fig. 3.



WITNESSES

Samuel C. Thomas.
J. Edward Warren

INVENTOR

Louis J. Wohnlich
Richard J. Scholes
By W. W. Leggett.
Attorney

UNITED STATES PATENT OFFICE.

LOUIS J. WOHNLICH AND RICHARD J. SCHOLLES, OF DETROIT, MICHIGAN,
ASSIGNORS TO SAID SCHOLLES, WILLIAM MCFARLAND, AND ANDREW
MCFARLAND, ALL OF SAME PLACE.

MACHINE FOR CUTTING OFF CAPSULES.

SPECIFICATION forming part of Letters Patent No. 255,829, dated April 4, 1882.

Application filed January 23, 1882. (No model.)

To all whom it may concern:

Be it known that we, LOUIS J. WOHNLICH and RICHARD J. SCHOLLES, of Detroit, county of Wayne, State of Michigan, have invented a new and useful Improvement in Machines for Cutting off Capsules; and we declare the following to be a full, clear, and exact description of the same, 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 a part of this specification.

Our invention consists in the combinations of devices and appliances hereinafter specified, and more particularly pointed out in the claims.

In the drawings, Figure 1 is a front elevation of a machine embodying our invention. Fig. 2 is a plan view of the platform which supports the mold-table, showing the means for clamping the table to the platform. Fig. 3 is a plan view of the platform which supports the drums at the upper ends of the rotary cutters. Fig. 4 shows separate sectional views of the spring-drum and chain mechanism, together with the rotary cutters.

The object of our invention is to facilitate the cutting of gelatine capsules upon the molds upon which they are formed.

To this end A represents the frame supporting the device.

B is a vertically-movable platform, supporting a mold plate or table, B', of capsule-molds b, with the capsules b' formed thereon.

B² is a sleeve arrangement fitting upon the sides of the frame A.

C is a screw; C', a rotary nut; C², a beveled wheel geared into the nut.

C³ is a shank, and C⁴ the handle for turning the same and elevating or lowering the table.

b² is a spring catch or pawl in the handle C⁴. b³ is a segmental rack-bar, into which the pawl b² may engage at any desired point to hold the table B in any desired position.

B³ are clamps, operated by a lever, B⁴, for holding the mold-plate B' firmly in position upon the table. The plate is guided to its proper place by cleats B⁵.

D D' represent beds or plates having a downward and upward movement upon or within the frame A.

D² represents springs coiled about the posts of the frame supporting the plates D D'.

The letter c indicates a series of spring and chain drums. c' is the shaft by which each drum is secured to the upper plate, D'. The lower end of the shaft passes through the lower bed or plate, D.

c² is a crank attachment at the lower end of the shaft.

E E are spring-arms projecting downward from each crank.

E' E' are rotary cutters supported by the spring-arms E E.

d is a spring attached to the interior of the case c³, coiling about the shaft c'.

d' is a chain secured at one end to the outer surface of each drum and coiled once around the drum as it stands in its normal position, the other end being attached to pins d² on a sliding bar, F.

F' is a lever attached to the frame above, by which the sliding bar F is moved longitudinally. When the lever, with the sliding bar attached, is pulled outward from the machine the spring in the drum is coiled, and by letting go the lever the springs uncoil and the chain is coiled about the drum. The shaft of the spring and drum thus makes one or more revolutions with the crank attachment c², and with it the spring-arm E, pressing the rotary cutter E' about the capsule upon the mold.

G G are cog-wheels pivoted upon hangers depending from the top piece of frame A and gearing with an intermediate cog-wheel, g, journaled upon a hanger and provided with a crank, G'.

G² G² are links, having their upper ends pivoted upon crank-pins projecting from the hubs or near the centers of wheels G G and their lower ends pivoted to ears projecting from the plate D'. When the crank G' is turned and motion communicated to wheels G the plates D' and D have an up-and-down or jiggling motion communicated to them through the links G² and springs D², so that the rotary cutters E' will be caused to scrape loose the waste portions of the capsules below the circular incisions made by said cutters and said waste portions will fall from the molds.

By the operation of this device the capsules can be cut uniformly at any required length and the severed portion separated from the capsule. c^3 is a spring-case loosely connected
5 with the drum-shaft. One end of the spring is connected to this case and the other end to the shaft. c^4 is a pin or screw, by which the spring-case may be secured immovably after it shall have been turned sufficiently to give the de-
10 sired tension to the spring.

In using the machine the plate B' detached is inverted and the molds dipped in properly-prepared gelatine in the usual manner, and after the molds have received a coating of sufficient thickness the plate B' is placed upon the platform B, as shown in the drawings, and secured by the clamps B³, which are operated by the lever B⁴ and connecting-links in an obvious manner. The platform B is then elevated to
20 bring the molds in proper relation to the rotary cutters E', this being performed by turning the crank C⁴ and the bevel-gear C², first disengaging the pawl b^2 from the rack b^3 . The wheel C² gives a rotary motion to the nut C', which drives the
25 screw C upward to raise the platform to the desired position, where it may be retained by allowing the pawl b^2 to re-engage with the rack b^3 . The lever F' is then operated to move the sliding bar F and cause the operation of the cut-
30 ters, as before described, after which the crank G' is turned to cause the cutter to scrape off the waste portion of the shell, and the mold-plate may then be removed and the platform lowered for another operation.

35 We are aware that a capsule-cutting machine has heretofore been invented in which the mold-plate is placed upon a vertically-moving platform and by it raised to bring the molds in proper relation to rotary cutters carried by
40 spring-arms, and that in such a machine the waste is removed from the molds by forcing them upward after the capsules are cut off; and we do not claim such a machine broadly.

What we claim is—

45 1. In a capsule-cutting machine, a series of

rotary cutters mounted on spring-arms depending from vertical rotary shafts provided with drums driven in one direction by the uncoiling of chains or bands, and retracted by springs,
50 substantially as described.

2. The combination, with the series of drums fixed upon the cutter-shafts, of the bands, each having one end attached to the outside of one of the drums, one or more slides connected with the opposite ends of said bands, and means for
55 operating said slides, the whole being arranged to operate essentially as set forth.

3. The combination, with the rotary shaft and drum to which any cutter is attached, of a spring, one end of which engages the shaft
60 and the other end is attached to an adjustable drum-case, and pins or screws by which said drum-case may be given any desired rotary adjustment for varying the tension of the spring, substantially as described.
65

4. The combination, with a platform supporting the rotary cutters, of one or more supporting-arms, connected at their upper ends eccentrically with corresponding pinions, and a crank and pinion for rotating the same and imparting
70 a jiggling motion to the cutters, substantially as described.

5. In a capsule-machine, the combination, with the mold-plate-supporting platform, of the two clamps B³ B³, the lever B⁴, and connect-
75 ing-links, whereby said clamps are operated simultaneously, substantially as described.

6. In a capsule-cutting machine, the combination, with the rotary cutter supporting-platform, and jiggling mechanism, of springs
80 located beneath the platform, serving as cushions, substantially as and for the purposes described.

In testimony whereof we sign this specification in the presence of two witnesses.

LOUIS J. WOHNLICH.
RICHARD J. SCHOLLES.

Witnesses:

J. EDWARD WARREN,
N. S. WRIGHT.