

No. 803,145.

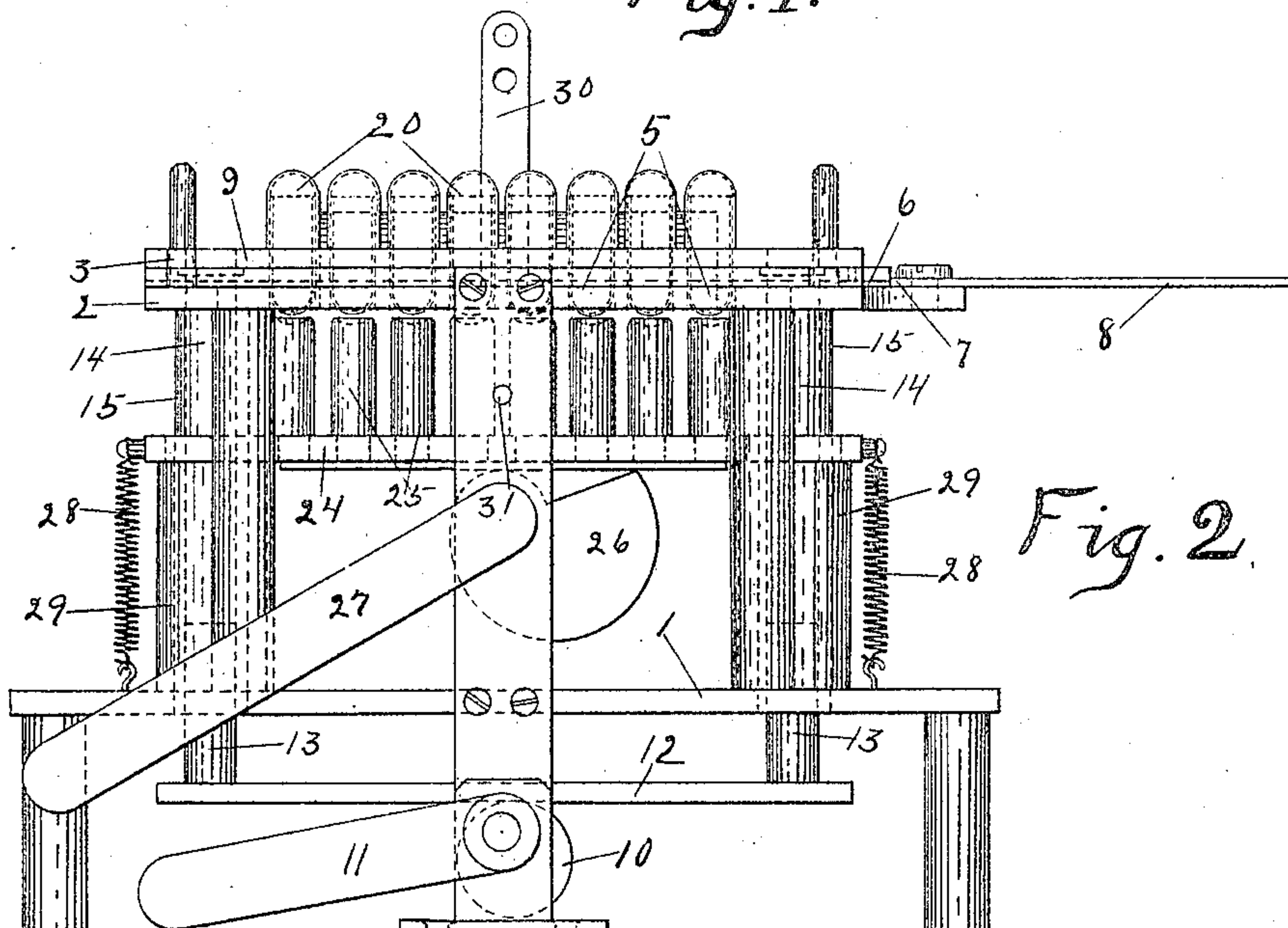
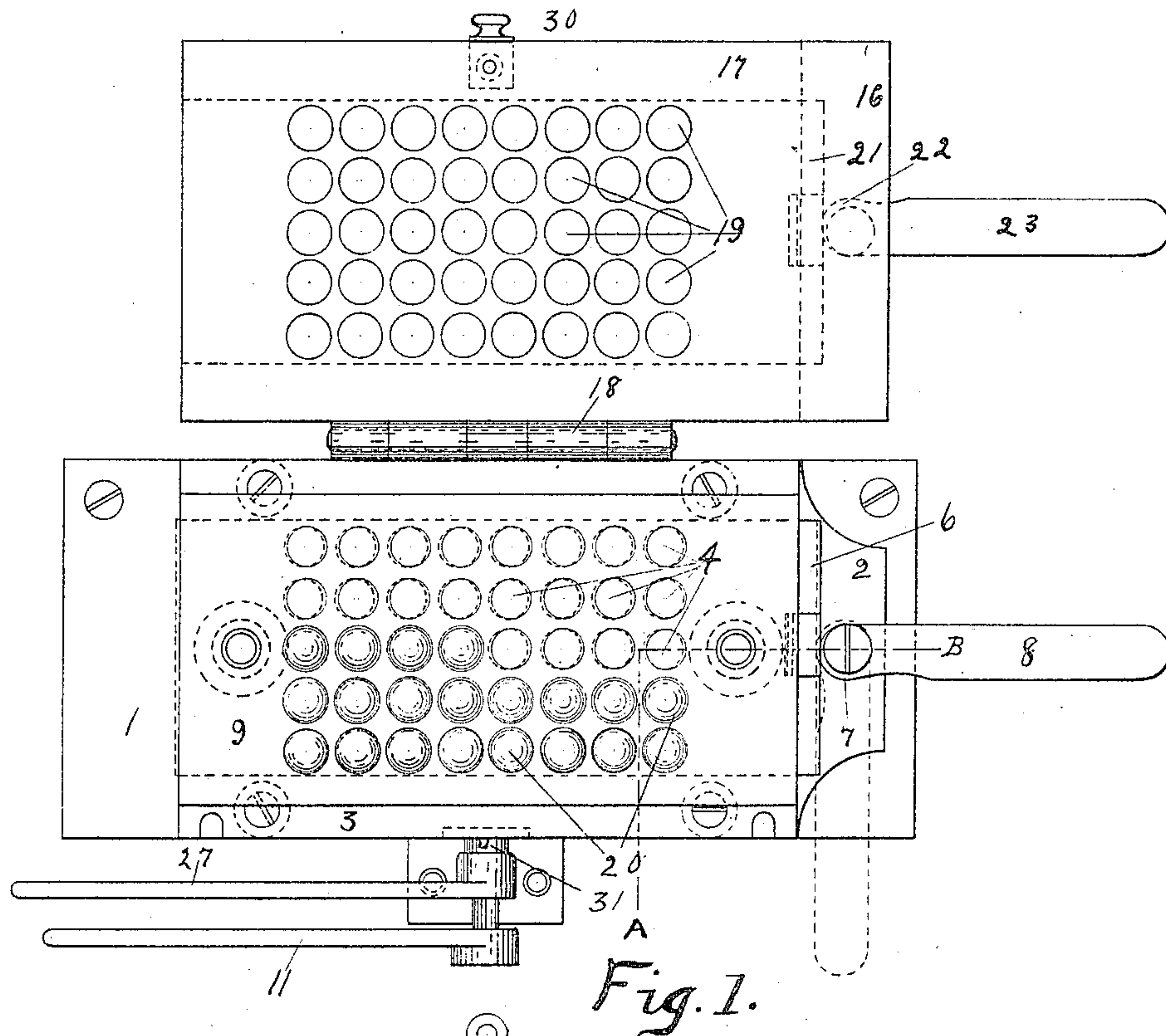
PATENTED OCT. 31, 1905.

B. T. WINCHESTER.

MACHINE FOR REMOVING AND PUTTING ON THE TOPS OF CAPSULES.

APPLICATION FILED DEC. 1, 1903.

2 SHEETS—SHEET 1.



Witnesses:
S. Gordon Hopkins
James H. Lewis

Benjamin Thaddeus Winchester Inventor
Per
William Wesley Carney Attorney

No. 803,145.

PATENTED OCT. 31, 1905.

B. T. WINCHESTER.
MACHINE FOR REMOVING AND PUTTING ON THE TOPS OF CAPSULES.

APPLICATION FILED DEC. 1, 1903.

2 SHEETS—SHEET 2.

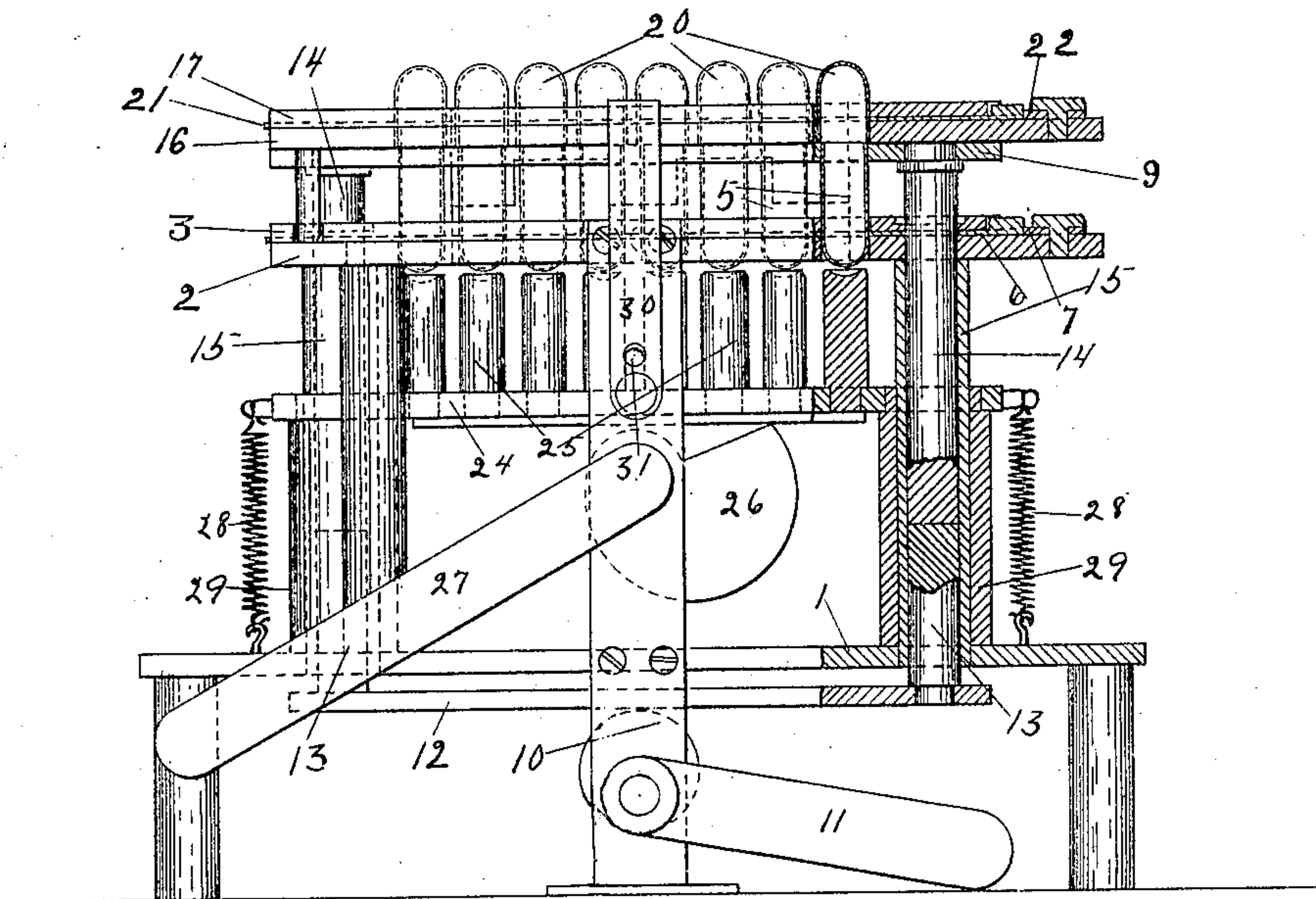


Fig. 3.

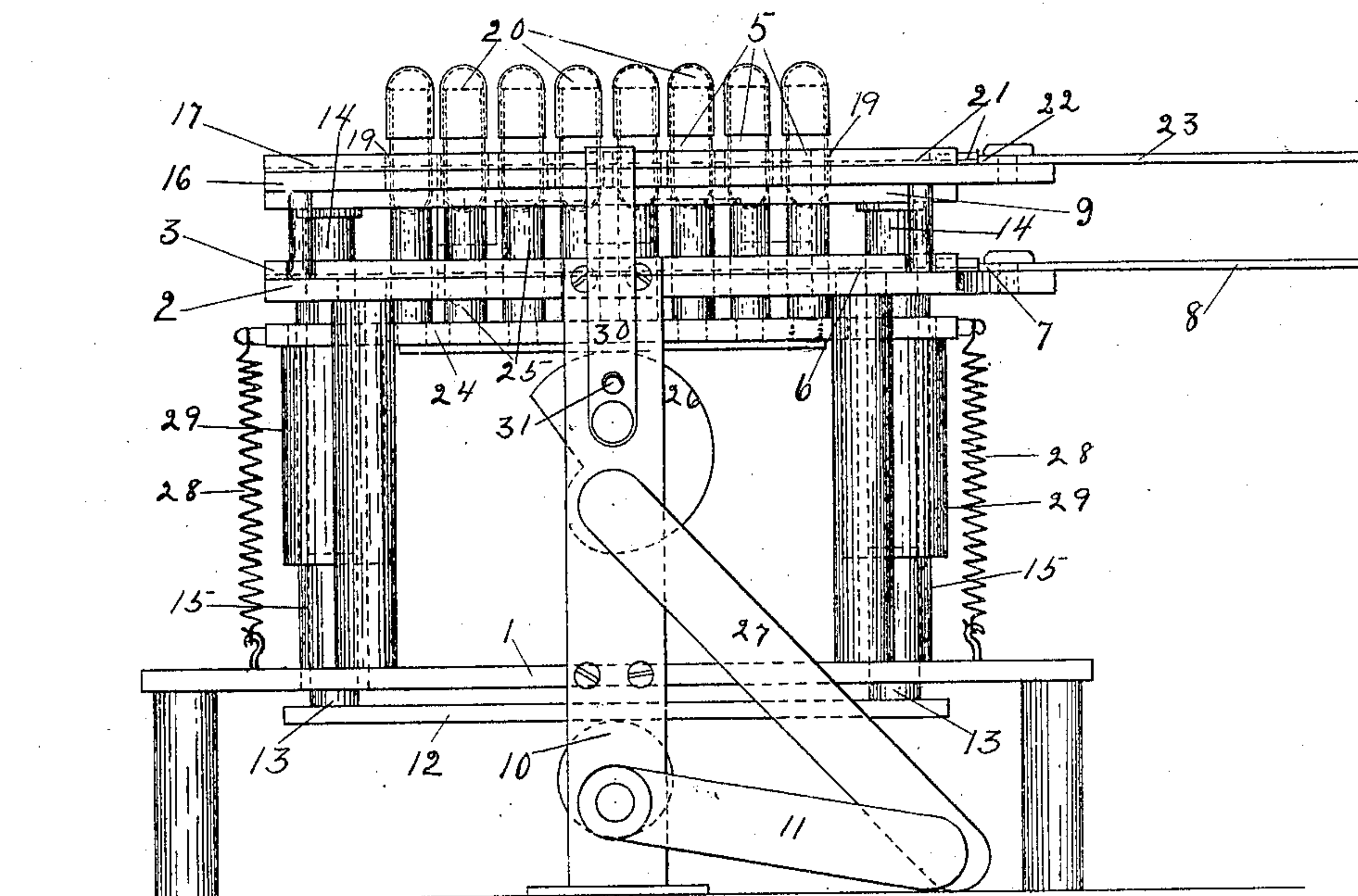


Fig. 4.

Witnesses:
S. Gordon Hopkins
James H. Lewis

Inventor
Benjamin Thomas Winchester
Per
William Wesley Varney Attorney.

UNITED STATES PATENT OFFICE.

BENJAMIN THOMAS WINCHESTER, OF WINDSOR HILLS, MARYLAND.

MACHINE FOR REMOVING AND PUTTING ON THE TOPS OF CAPSULES.

No. 803,145.

Specification of Letters Patent.

Patented Oct. 31, 1905.

Application filed December 1, 1903. Serial No. 183,372.

To all whom it may concern:

Be it known that I, BENJAMIN THOMAS WINCHESTER, a citizen of the United States, residing at Windsor Hills, in the county of Baltimore and State of Maryland, have invented a new and useful Machine for Removing and Putting On the Tops of Capsules, of which the following is a specification.

My invention relates to improvements in machines for removing and putting on the tops of capsules; and the object of my improvement is to provide a machine whereby the tops of a number of capsules may be removed and replaced simultaneously in the process of filling. I attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the machine as it appears when in position to receive the capsules and is shown filled to one-half of its capacity, also showing in dot means for securing the lower portion of the capsules in order that the tops of the same may be removed. Fig. 2 shows a front elevation of the machine in the same position as shown in Fig. 1. Fig. 3 shows a front elevation, partly in section, of the machine in position as it appears just as the two parts of the capsules have been separated, the part shown in section being taken on the line A B of Fig. 1; and Fig. 4 shows a front elevation of the machine as it appears after the capsules have been filled and the same forced up into their tops.

Similar numerals refer to similar parts throughout the several views.

1 is a platform supporting the upper portions of the machine.

2 and 3 are stationary plates with holes 4 approximately of the same diameter as that of the smaller end 5 of the capsules.

6 is a pinch-plate operating between plates 2 and 3 by means of cam 7 on lever 8 for securing the lower ends 5 of the capsules, said pinch-plate 6 having holes of the same diameter as those in plates 2 and 3 and registering therewith.

9 is a lifting-plate having holes of the same diameter as those in plates 2 and 3 and registering therewith and is operated by means of cam 10 on lever 11, operating against plate 12 and forcing rods 13, supported by plate 12, upward against rods 14, attached to said lifting-plate 9, rods 13 and 14 operating in sleeves 15.

16 and 17 are plates similar to plates 2 and

3, hinged at 18, but having the holes 19 approximately of the same diameter as the larger ends 20 of the capsules and registering with the holes in plates 2 and 3.

21 is a pinch-plate similar to pinch-plate 6, operating between plates 16 and 17 by means of cam 22 on lever 23 for securing the tops 20 of the capsules.

24 is a movable platform supporting plungers 25, which register with holes 4 and enter therein when forced upward by cam 26, connected with lever 27, operating against platform 24 when said lever is thrown back.

28 represents spiral springs for withdrawing plungers 25 from holes 4 upon the return of lever 27 to its normal position. Plungers 25 are kept in position to register with holes 4 by means of sleeves 29, attached to platform 24, operating on sleeves 15, which serve as guides for said sleeves 29.

30 is a spring-catch engaging with hook 31 for holding plates 16 and 17 parallel with plates 2 and 3 and the holes 19 in alinement with the holes 4 or for holding the machine in closed position.

The operation of my invention is as follows: The machine having been opened, as shown in Fig. 1, the capsules are inserted in holes 4 and lever 8 is pulled in position, as shown in dot in Fig. 1, thereby forcing pinch-plate 6 back slightly and securing the lower ends of the capsules. The machine is then closed, and by throwing lever 11 back lifting-plate 9 is raised, lifting therewith the tops of the capsules which enter holes 19 in the top of the machine, as shown in Fig. 3. Lever 23 is operated similarly as lever 8, thereby securing the capsule-tops in the top of the machine. Having thrown back the top of the machine carrying therewith the capsule-tops and filling the capsules, the machine is again closed, bringing each top directly over and in alinement with its respective capsule. The lower ends 5 of the capsules are then released from plates 2 and 3 by operating lever 8. Lever 27 is then thrown back, which, by means of cam 26, forces plungers 25 upward into holes 4, thereby pushing the capsules up into their tops. As soon as the capsules have been pushed far enough into the tops the said tops are released from pinch-plate 21 by throwing back lever 23, and the filled capsules with tops on are then forced on upward to the position shown in Fig. 4, when they are ready to be removed from the machine by throwing

the top back, as shown in Fig. 1, and the machine is then ready to be refilled with empty capsules.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a machine, in combination, a member provided with a hole to receive the male part of a capsule, means for securing said male part of said capsule to said member consisting of a pinch-plate operating on the side of said male member, a member provided with a hole to receive the female part of a capsule, means for securing the said female part of said capsule to said member, and means provided for moving in a definite path one of said members relatively to the other member whereby at a certain point in said path the holes respectively in said members register.

2. In a machine, in combination, a member provided with a hole and a pinch-plate for securing the male part of a capsule thereto, a member provided a hole and a pinch-plate for securing the female part of a capsule thereto, and means for retaining the movement of the said two members in fixed paths relatively.

3. In a capsule-machine, a member for holding the male part of a capsule, in combination with a lifting-plate fitting the said male part and operating to strip the female member therefrom.

4. In a capsule-machine, a stationary plate having holes to fit the smaller end of a capsule, a sliding pinch-plate having holes of the same diameter as those in said stationary plate and mounted thereon so that the holes in the said two plates can be thrown slightly out of alinement thereby pinching the said smaller end of the capsule and holding the same, means for operating said pinch-plate, a lifting-plate having holes of the same diameter as those in said stationary plate, and means for operating said lifting-plate.

5. In a capsule-machine, a stationary plate having holes to fit the smaller end of a capsule, a sliding pinch-plate having holes of the same diameter as those in said stationary plate and mounted thereon so that the holes in the said two plates can be thrown slightly out of alinement thereby pinching the said smaller end of the capsule and holding the same, means for operating said pinch-plate, a lifting-plate having holes of the same diameter as those in said stationary plate, means for operating said lifting-plate, a removable plate having holes to fit the larger end of the capsule and registering with the holes in said stationary plate, a sliding pinch-plate having holes of the same diameter as those in said removable plate and mounted thereon so that the holes in the said two plates can be thrown slightly out of alinement thereby pinching the said larger end of the capsule and holding the same, and means for operating said pinch-plate.

6. In a capsule-machine, a stationary plate having holes to fit the smaller end of a capsule, a sliding pinch-plate having holes of the same diameter as those in said stationary plate and mounted thereon so that the holes in the said two plates can be thrown slightly out of alinement thereby pinching the said smaller end of the capsule and holding the same, means for operating said pinch-plate, a lifting-plate having holes of the same diameter as those in said stationary plate and registering therewith, means for operating said lifting-plate, a removable plate having holes to fit the larger end of the capsule and registering with the holes in said stationary plate, a sliding pinch-plate having holes of the same diameter as those in said removable plate and registering therewith and mounted thereon so that the holes in the said two plates can be thrown slightly out of alinement thereby pinching the said larger end of the capsule and holding the same, means for operating said pinch-plate, means for removing and replacing said removable plate, a movable platform supporting thereon plungers in alinement with the holes in said stationary plate said plungers operating in said holes, means for releasing said smaller end of the capsule, means for operating said movable platform and plungers forcing said plungers into the holes in said stationary plate and forcing therefrom the said smaller end of the capsule into the larger end of the capsule.

7. In a capsule-machine, in combination, a stationary plate having holes to fit the smaller end of a capsule, a sliding pinch-plate having holes of the same diameter as those in said stationary plate and registering therewith the said pinch-plate being mounted on the said stationary plate so that the holes in the said two plates can be thrown slightly out of alinement thereby pinching the said smaller end of the capsule and holding the same, means for operating said pinch-plate, a lifting-plate having holes of the same diameter as those in said stationary plate and registering therewith, means for operating said lifting-plate, a removable plate having holes to fit the larger end of the capsule and registering with the holes in the said stationary plate, a sliding pinch-plate having holes of the same diameter as those in said removable plate and registering therewith the said pinch-plate being mounted on the said removable plate so that the holes in the said two plates can be thrown slightly out of alinement thereby pinching the said larger end of the capsule and holding the same, means for operating said pinch-plate, means for removing and replacing said removable plate, a movable platform supporting thereon plungers in alinement with the holes in said stationary plate said plungers operating in said holes, means for releasing said smaller end of the capsule, means for operating said mov-

able platform and plungers forcing said plungers into the holes in said stationary plate and forcing therefrom the said smaller end of the capsule into the larger end of the capsule, springs tending to return said movable platform to its normal position, and means for releasing the said larger end of the capsule.

8. In a machine, in combination, a member provided with a hole to receive the male part of a capsule, means for securing said

male part of said capsule to said member consisting of a pinch-plate operating on the side of said male part, a member provided with a hole to receive the female part of a capsule, means for securing the said female part of said capsule to said member.

BENJAMIN THOMAS WINCHESTER.

Witnesses:

S. GORDON HOPKINS,
WILLIAM W. VARNEY.