

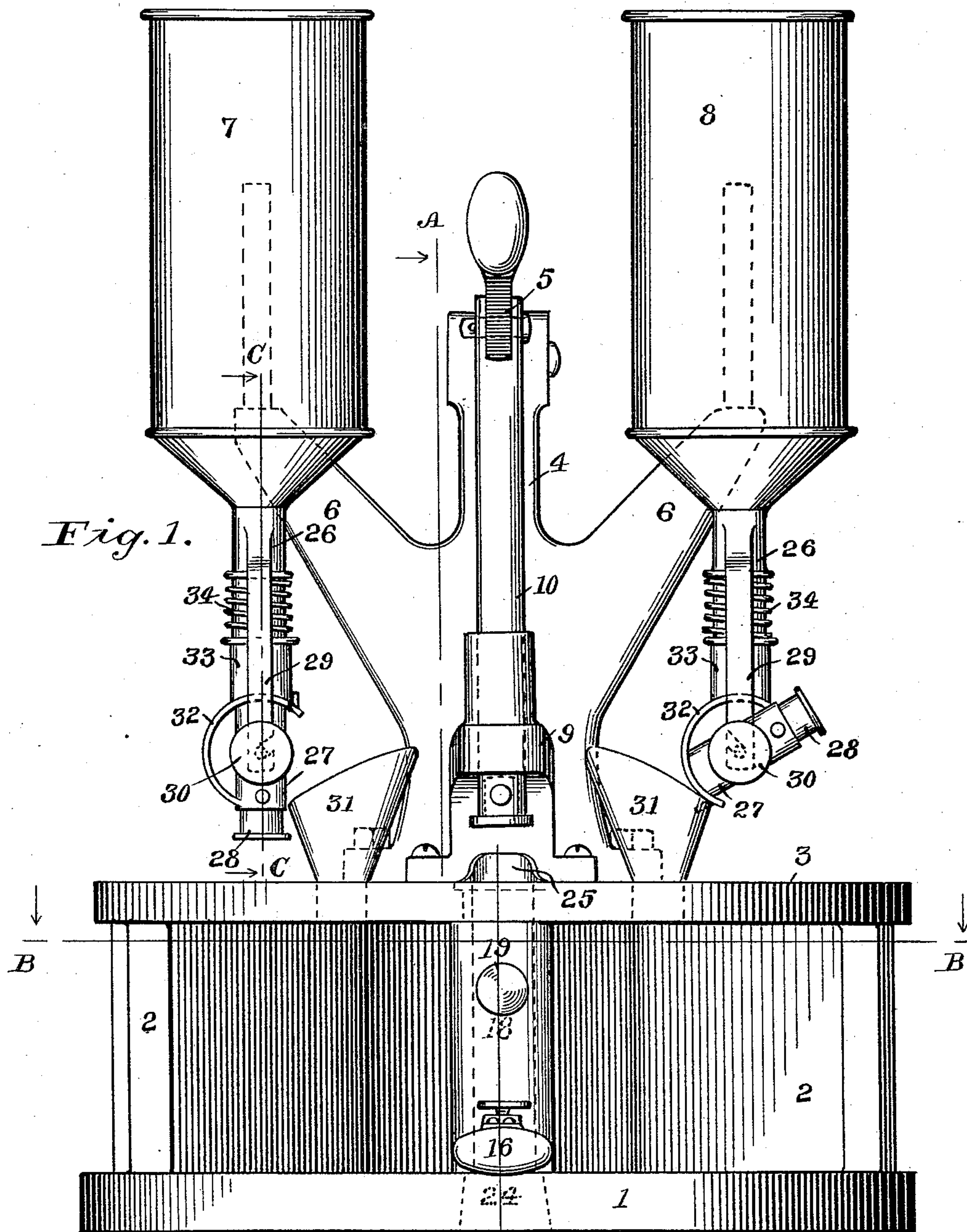
(No Model.)

3 Sheets—Sheet 1.

L. B. CROSBY.
CARTRIDGE LOADING MACHINE.

No. 536,685.

Patented Apr. 2, 1895.



WITNESSES:

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INVENTOR

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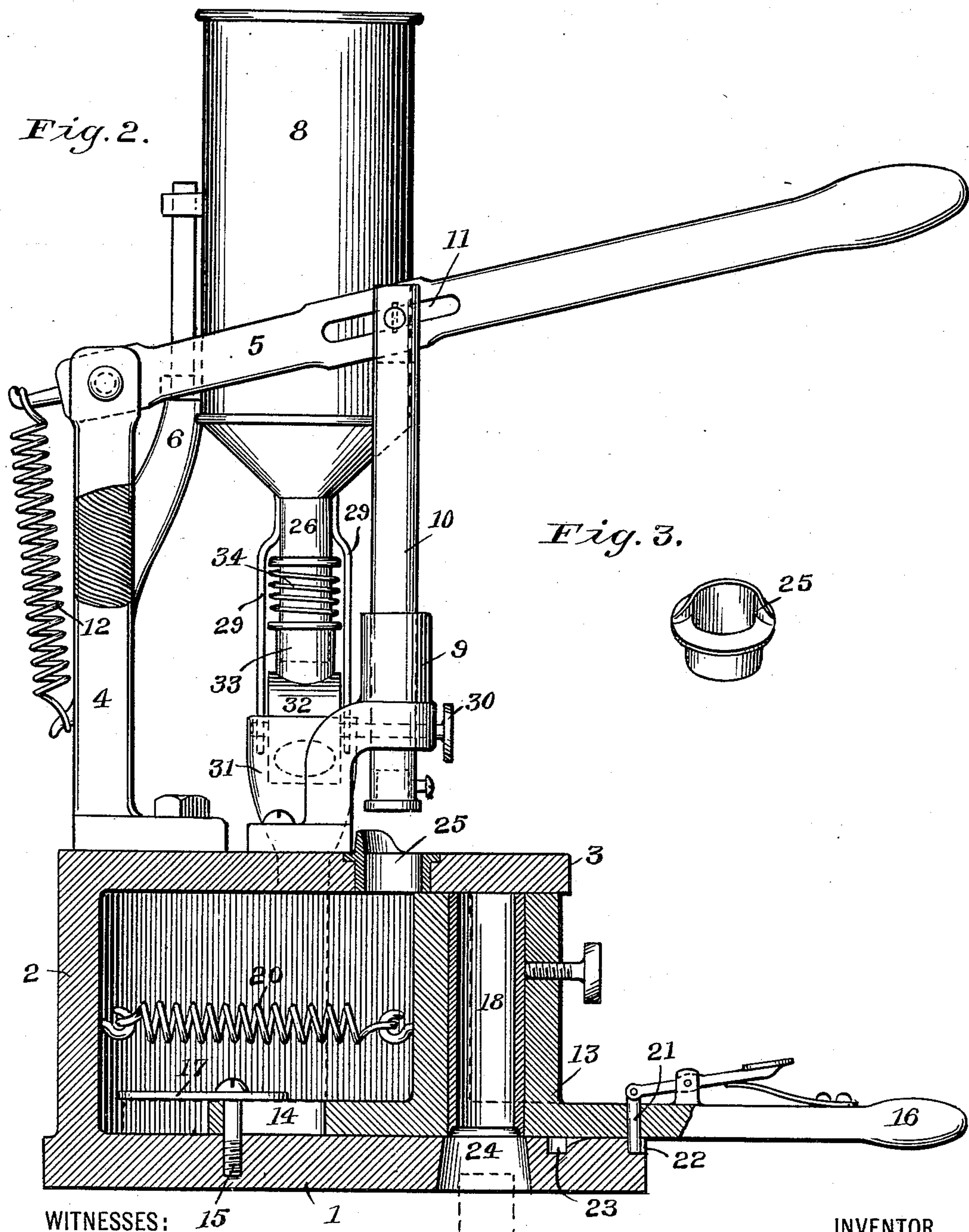
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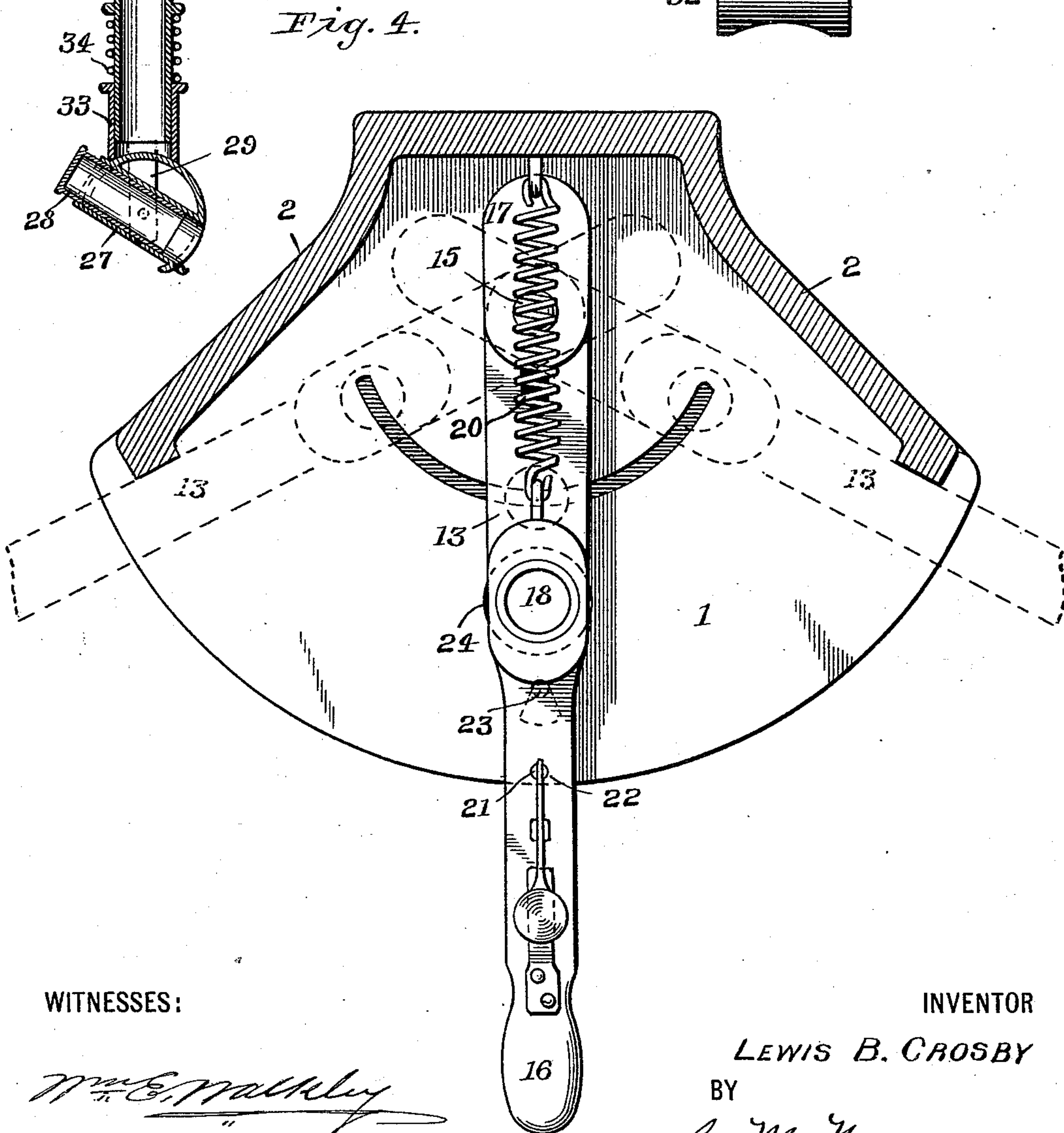
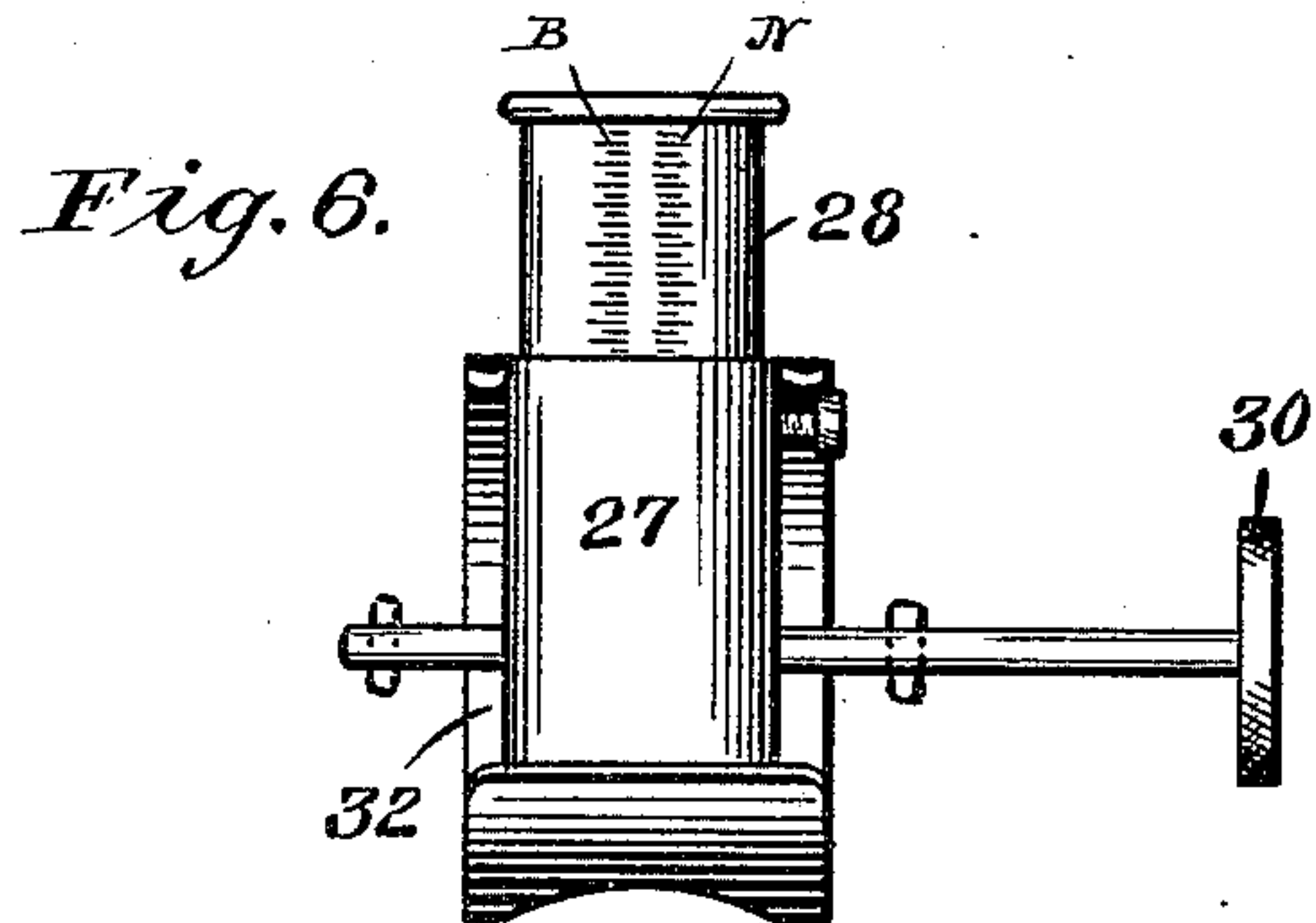
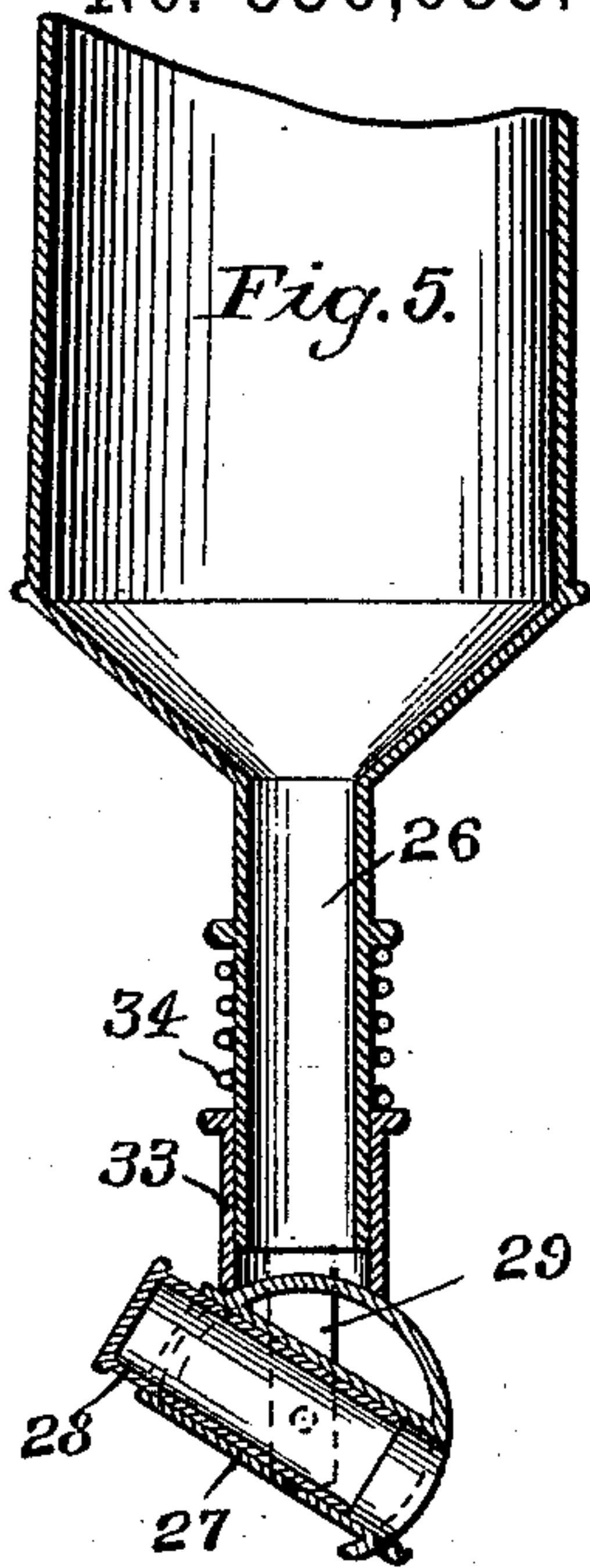
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CARTRIDGE LOADING MACHINE.

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Patented Apr. 2, 1895.



WITNESSES:

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UNITED STATES PATENT OFFICE.

LEWIS B. CROSBY, OF DANBURY, CONNECTICUT.

CARTRIDGE-LOADING MACHINE.

SPECIFICATION forming part of Letters Patent No. 536,685, dated April 2, 1895.

Application filed November 27, 1894. Serial No. 530,082. (No model.)

To all whom it may concern:

Be it known that I, LEWIS B. CROSBY, a citizen of the United States, and a resident of Danbury, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Cartridge-Loading Machines, of which the following is a specification.

My invention relates to cartridge loading machines, and particularly to a hand operating apparatus, such as are commonly used for private, special, and accurate use. As designed my novel loader may be operated by a single individual, and with but little practice, accuracy, speed, and regularity of loads may be accomplished.

It is the object of my construction to produce a machine which will be cheap, durable, and simply constructed; also a machine which shall be easily operated, and readily understood; further to provide for accuracy and regularity of loads whereby each and every shell, will be loaded a predetermined and like amount, both of powder and shot.

With the above objects in view I have devised the simple and novel mechanism illustrated upon the accompanying drawings, of which—

Figure 1, is a front elevation of the machine complete. Fig. 2, is a cross section on line A A of Fig. 1. Fig. 3, is a detail perspective view of the wad receiver. Fig. 4, is a sectional plan, on line B B of Fig. 1. Fig. 5, is a vertical section on line C C of Fig. 1. Fig. 6, is a detached side elevation of one of the measuring chambers.

Throughout the above figures the same numerals of reference denote like or corresponding parts.

As will be seen the machine consists, first, of a main frame or base 1, provided with vertical walls 2 upon the rear, and a table 3. The front edge of the base and table are semi-circular as will be seen with reference to Figs. 1 and 4. Upon the rear of the table is secured a post 4, in the top of which is hinged an operating lever 5. Upon each side of the post 4, is formed an arm 6 for the purpose of supporting the powder and shot magazines 7 and 8 respectively. Secured to the table 3 is also a bracket 9. This bracket serves as a guide for a plunger 10, the upper portion of

which is supported by means of a pin thereof passing through a slot 11 in the before mentioned operating lever 5. One end of a spring 12 is attached to the rear of this lever, and the other end being attached to the before mentioned post 4, the action of the spring being to retain the lever and plunger in a raised position as shown in Figs. 1 and 2. Beneath the table, and to the base is hinged a shell retaining carriage 13. This carriage is for the purpose of receiving the shell, and supporting it while it receives the charges, including the wadding operations. It is provided with an orifice 14 at the rear through which a screw 15 freely passes, and which serves as a pivot for the carriage to be swung upon by means of its handle 16. (See Figs. 2 and 4.) The orifice 14 is provided with a suitable shield 17. The carriage is provided with a suitable detachable shell chamber 18, which may be furnished in regular sizes. Said chambers are retained in the base of the carriage by means of a set screw 19. The carriage is in a forward position as shown in Figs. 2 and 4, and is so retained against the action of a spiral spring 20, by means of a spring actuated pin 21 at the front, said pin being designed to snugly fit into bores 22 and 23 of the base. The carriage is drawn to the position shown in Figs. 2 and 4, for the purpose of receiving and depositing the shell. In this position of the carriage it will be seen that the shell chamber 18 registers with the opening 24 in the base. After an empty shell has been inserted into the chamber 18 the pin 21 is disengaged from the bore 22, and the carriage allowed to assume its normal or rear position. (See dotted position Fig. 2.) From here the carriage is swung upon its pivot, to the left or right, as shown by dotted lines in Fig. 4 for the purpose of receiving powder and shot.

Within the table and directly in line with the plunger is fitted a guide 25 of suitable construction as is shown in detail in Fig. 3 and also appears in section in Fig. 2. This guide, like the shell chamber is furnished in regular sizes and may be inserted or removed from its bracket for different sizes of shells.

The ammunition magazines 7 and 8 are supported as before stated, at opposite sides of the operating handle and its plunger. They

are duplicates of each other, with but the exception that the measuring chamber of one operates to the right, while the other throws to the left. Since these parts are alike I will refer to them with like numerals and describe them as one. The magazine proper is provided with a central chute 26, through which the ammunition passes on its way to the measuring chamber immediately below. This measuring chamber is of a telescopic construction, consisting of an outer shell 27 and an internal frictional adjustable tube 28 which is adapted to be moved in or out as desired, thereby increasing or decreasing the capacity of the chambers. These chambers swing upon axes which are supported at opposite sides in hangers 29 secured to the chute of the magazine. The said axes of these chambers are provided with knurl wheels 30 by means of which they are rocked to, and from, the said chute, and funnels 31 secured in the table. The chamber is further provided with a semicircular cut off 32 upon one side, upon which rests a spring actuated extension 33. (See Figs. 2 and 5.) This extension is firmly held down against the cut off 32 by a spiral spring 34 abutting against the top of said extension, the opposite end of said spring being secured against an annular shoulder upon the chute. The purpose of this special connection between the mouth of the chute and the measuring chamber, is to insure a perfectly tight and positive connection thus preventing the escapement of fine ammunition.

From the construction just described relating to the chamber, it will be understood that said chamber may be adjusted to receive a predetermined amount, with reference to the graduations marked B and N. (See Fig. 6.) In practice one of these scales are used to measure black powder, and the other used for nitric powder thereby being able to make the necessary allowance of one for the other. The charges are measured into the chambers when the latter are in a position as at the left in Fig. 1. From this by means of the knurl wheel upon the axis of the chamber, said chambers are rocked to the position shown to the right in Fig. 1.

Having described the construction of my device, I will now proceed to briefly describe its operation.

Beginning with the machine in the position shown in the several principal figures of the drawings, the shell to be loaded, would be inserted into the carriage through the base (see Fig. 2) after which the pin 22 will be withdrawn from its socket, and the carriage thrown to the left. (See dotted lines Fig. 4.) In this position the measuring chambers of the powder magazine 7 would be operated, thereby depositing the necessary amount of powder into the shell. From that position the carriage is carried to the center again where the powder receives a wad from above by the use of the plunger. After this wad

upon the powder has been inserted; the carriage is moved to the right as shown by dotted lines in Fig. 4. At this station the shell receives a charge of shot from the magazine 8 immediately above, in the manner as the powder has previously been deposited. From here the carriage is moved to a central position again where the shot receives a wad, after which the carriage is drawn forward as seen in Fig. 2 in which position the shell is free to drop from the machine.

Having thus described my invention, I claim—

1. In a cartridge loading machine of the class described, the combination with suitable ammunition magazines provided with attached measuring chambers, of a shell carriage pivoted to the base of the machine and adapted to be swung to the left or right to receive ammunition, and a spring retracted wad plunger central between the two stations.

2. In an apparatus of the class described, the combination with ammunition magazines, of a chute extending therefrom hangers at each side of the chute, an adjustable measuring chamber pivoted within the hangers, a semicircular cut off attached to one side of the chamber, a spring retracted extension surrounding the end of the chute and fitted against said semicircular cut off.

3. In a machine for loading cartridge shells the combination with the frame work provided with ammunition magazines, of a plunger central between said magazines, a shell carriage arranged upon the base and constructed to swing in the path of said magazines and plunger, and opening through the base to admit of the introduction of a shell from beneath.

4. In a cartridge loading machine the combination with the base and its table, of a shell carriage pivotally arranged between said base and table, said carriage arranged to permit of it being drawn forward to allow the introduction of a shell, means for retaining the carriage in said drawn position, and mechanism for returning the carriage to its normal position.

5. In a machine of the class described the combination with the framework and ammunition magazines, of a shell carriage pivotally arranged beneath said magazines and between a table and base of the frame work, a detachable shell chamber secured within the carriage, a detachable guide secured in the table registering with said chamber when in its forward position, an opening 24 through the base, the same for the introduction of a shell when the carriage is drawn out.

Signed at Danbury, in the county of Fairfield and State of Connecticut, this 20th day of November, A. D. 1894.

LEWIS B. CROSBY.

Witnesses:

JOHN C. DOWNS,
HARRIE T. HOYT.