

No. 732,793.

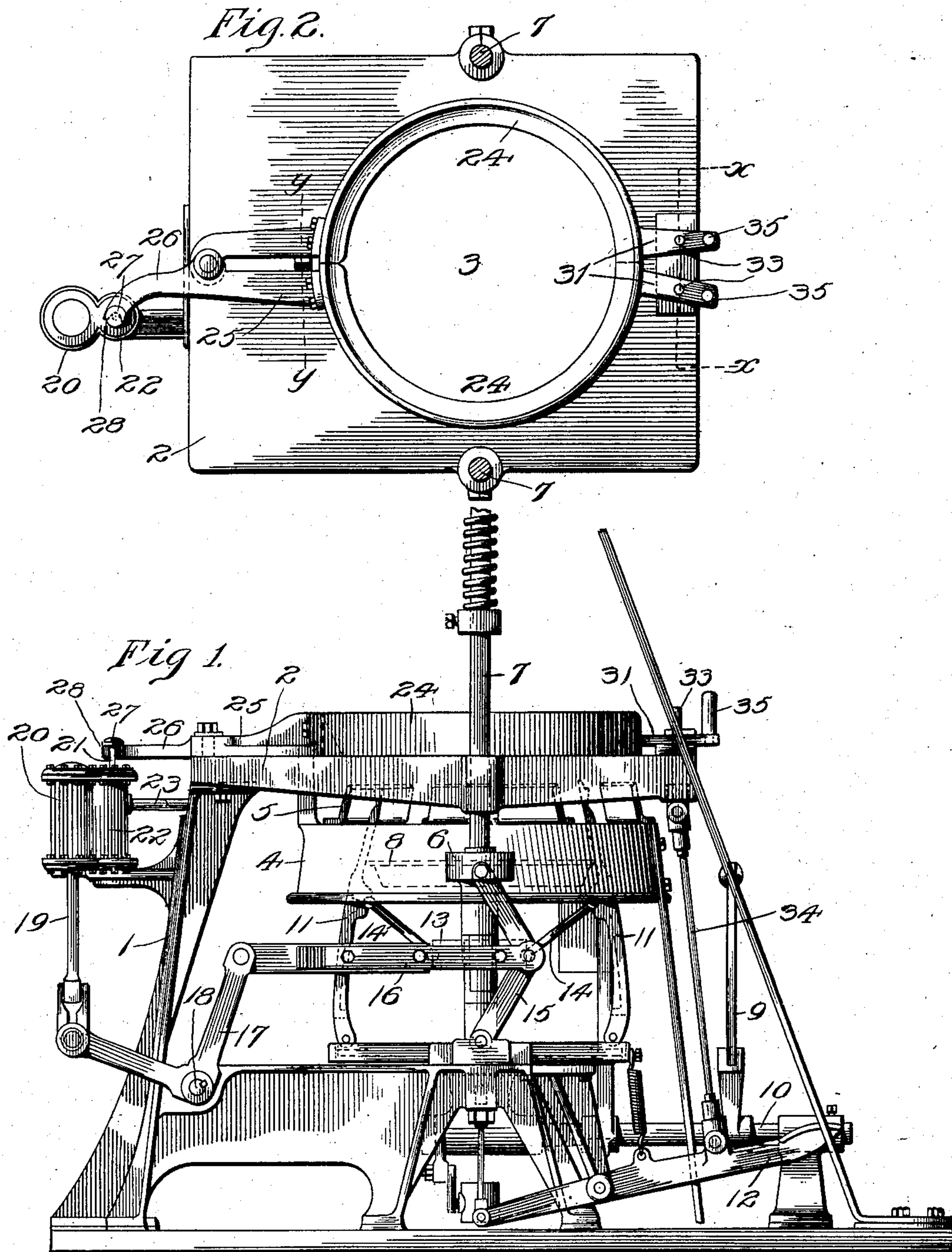
PATENTED JULY 7, 1903.

J. B. STANHOPE.
BARREL HEADING MACHINE.

APPLICATION FILED FEB. 21, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES:

F. J. Hartman.

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INVENTOR.

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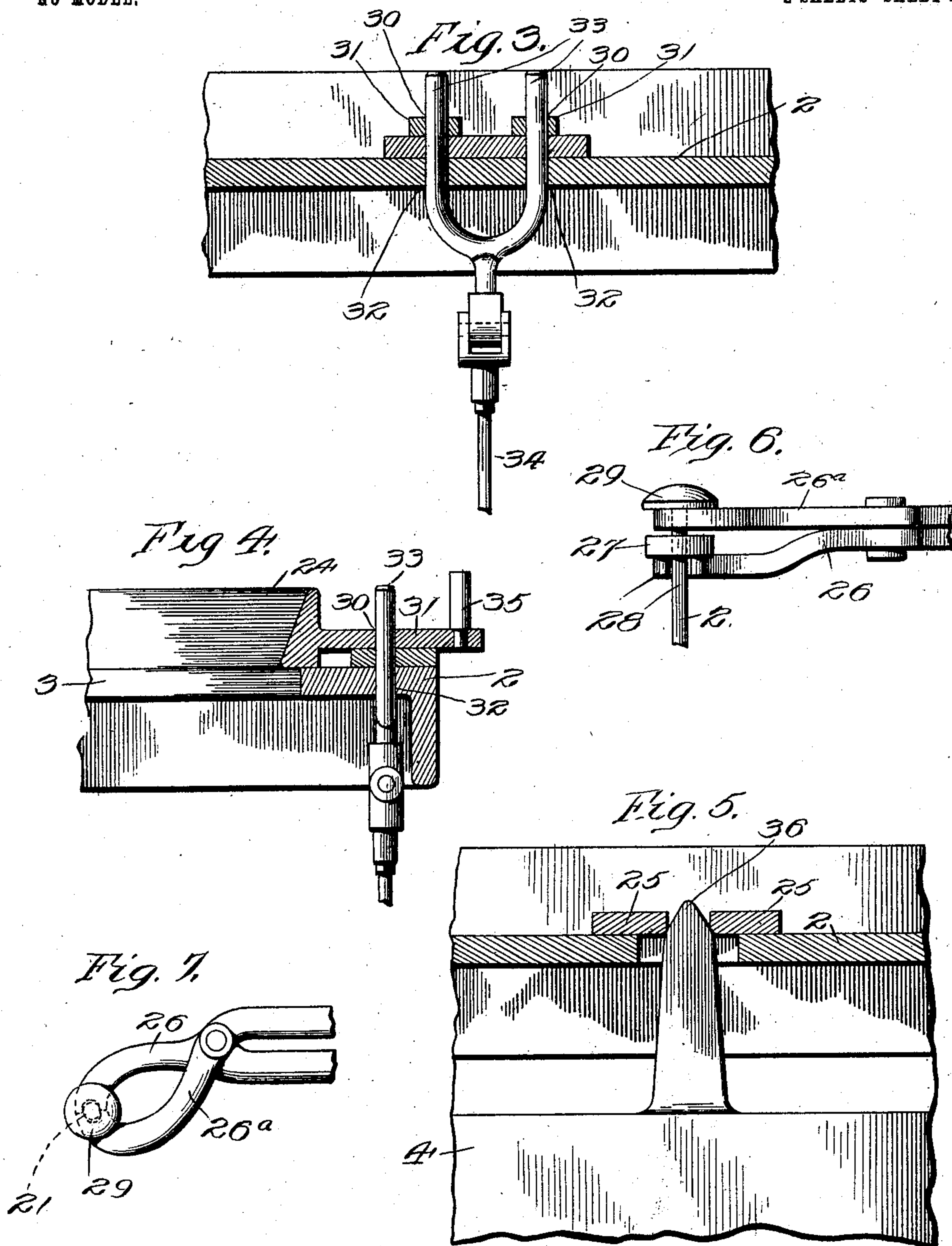
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UNITED STATES PATENT OFFICE.

JOHN B. STANHOPE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO STANHOPE PATENT SLACK BARREL HEADING MACHINE COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

BARREL-HEADING MACHINE.

SPECIFICATION forming part of Letters Patent No. 732,793, dated July 7, 1903.

Application filed February 21, 1903. Serial No. 144,545. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. STANHOPE, a citizen of the United States, residing in the city and county of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Barrel-Heading Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, of which—

10 Figure 1 is a side elevation of a barrel-heading machine embodying my invention, the upper portion thereof being broken away. Fig. 2 is a plan view of Fig. 1, parts being omitted. Fig. 3 is an enlarged section on line

15 *xx*, Fig. 2. Fig. 4 is a sectional side elevation of Fig. 3. Fig. 5 is an enlarged section on line *yy*, Fig. 2. Fig. 6 is a side elevation of a modification. Fig. 7 is a plan view of Fig. 6.

20 This invention relates to improvements in barrel-heading machines such as described in United States Letters Patent No. 545,388, issued to me August 27, 1895. I have shown in the drawings accompanying this specification such parts only of that machine as

25 are deemed sufficient for an understanding of my present improvements. These comprise means for preventing operation of the hoop-driving mechanism when the pivoted halves

30 of the compression-ring are in the closed position, but permitting said mechanism to be operated when said halves are open, also improved means for locking the half-rings in the closed position, all as hereinafter particularly described.

35 Reference being had to the accompanying drawings, 1 denotes the main frame of the machine; 2, the top plate thereof, which has a circular opening 3 to receive the barrel. 4

40 is an annular head below said top plate and registering with the opening therein and having an inwardly-projecting flange 5 at the top for supporting the hoop to be driven onto the barrel. This head has a boss 6, through which

45 passes a rod 7, and there are a similar boss and rod on the opposite side of the head, these bosses being adapted to slide vertically on the rods 7. 8 (marked 44 in said patent) is the circular table (indicated by dotted lines in

50 Fig. 1) for supporting the head to be inserted

in the barrel before the hoop is driven on. Said table is supported by a standard, on which it is adapted to be moved vertically by means of a hand-lever 9 upon a rock-shaft 10, that has a lever connection with said standard. 55

11 denotes the spreader-arms for spreading the barrel-staves, so as to permit the head of the barrel to come into proper position within the end of the barrel. The lower ends of these spreaders are pivoted to a part of the 60 frame of the machine, and they are adapted to be moved inwardly and outwardly—that is, radially—by a foot-lever 12, that has connection with a head 13, which is adapted to slide upon the aforesaid standard that carries the 65 table 8, and which head is connected with the spreader-arms 11 by pivoted rods 14.

The bosses 6 of head 4 are connected with the frame of the machine by toggles 15, one of which is shown in the drawings. A rod 70 16 is connected to the toggles. In the machine of my said patent the said toggles are operated by manual power and the rod 16 is connected to a hand-lever. In my present invention I prefer to use steam or compressed 75 air as the motive power and connect the rod 16 with one arm of a bell-crank lever 17 on a shaft 18. The other arm of said lever is connected with the piston-rod 19 of a compressed-air-engine cylinder 20. 80

21 is a rod for operating a valve within a box 22, into which enters a pipe 23, leading from a source of supply of compressed air. The valve-rod 21 is operated by hand to allow the air to enter from the valve-box into 85 the piston-cylinder upon either side of the piston, as may be required. In the position of the parts shown in the drawings the piston is at the limit of its upward stroke, at which time the head 4 is at its lowest position. 90

24 indicates the half-rings, each of which has an arm 25, that is pivoted on the plate 2.

The general construction and operation of the machine does not materially differ from that of my said patent; but before proceeding 95 to describe my improvements I shall briefly describe the mode of operation of the machine. The parts being in the position shown in the drawings, which correspond with the position shown in Figs. 2 and 9 on said pat- 100

ent, in which the end of the barrel is resting upon the spreader-arms and the half-rings are closed against the barrel and the head to be inserted in the barrel lies upon the table 5 8 (44 in the patent) and the hoop to be driven rests upon the flange 5 of the head 4, the spreader-arms 11 are now expanded by the attendant pressing down the foot-lever 12, thereby spreading the barrel-staves. At 10 about the same time the hand-lever 9 is actuated to cause the table 8 to ascend and bring the barrel-head thereon opposite to the usual groove on the inner side of the barrel. The half-rings are now opened, and the head 15 4, upon whose flange 5 the hoop is supported, is then forced upwardly by the application of power to the toggles 15, and thus drives the hoop onto the barrel. The half-rings must be opened out before actuation of head 4; 20 otherwise the end of the flange 5 would, before the head reaches the limit of its upward movement, strike against the half-rings. In operating the machine shown in my said patent without my improvements hereinafter 25 described it sometimes occurred that the attendant neglected to open the half-rings before actuating the head 4 in driving on the hoop. In order to prevent liability of such accident, I employ means whereby the power cannot 30 be applied to operate head 4 when the half-rings are in the closed position—that is, whereby the act of closing the half-rings prevents the application of such power and the opening thereof permits such application. 35 These means are as follows: I provide the arm 25 of one of the half-rings with an extension 26 beyond its pivot, that is adapted when the half-ring is closed and the valve-rod 21 is in the elevated position to engage 40 under a head or enlargement 27, which I provide on said valve-rod, thus preventing the latter from being pressed down to allow the air to pass into the upper part of the engine-cylinder to actuate the toggle to force up the 45 head. Although not essential, I usually make the free end of the extension forked, as shown, the ends of the forks 28 passing beyond the valve-rod. When the said half-ring is opened out, the end of the extension 26 will be disengaged from the enlargement 27. I some- 50 times also provide the arm of the other half-ring with a similar extension 26^a, as seen in Figs. 6 and 7, and the valve-rod 21 with a second enlargement 29, under which said extension is adapted to pass when the half-ring 55 is closed. As, however, it is customary for the attendant to throw open both half-rings simultaneously, and sometimes they are adapted to be opened automatically by means 60 of weights suitably connected therewith, I usually provide only one of the arms with an extension. When a hand-lever or other device for actuating the head 4 is employed, it may be locked against operation by the clos- 65 ing of the half-rings.

In the machine as heretofore constructed the half-rings were locked in the closed posi-

tion by a hand-lever pivoted upon a lug of one of the half-rings and adapted to be swung into and out of engagement with a lug on the 70 other half-ring, as described in my said patent. I now provide a means whereby these half-rings are automatically locked in the closed position and released at the proper 75 time. These means are as follows: I make a hole 30 in each of two lugs 31, that project laterally from the respective half-rings, and also holes 32 through the plate 2, that sup- 80 ports the half-rings, the holes of the latter registering with those of said lugs. The holes 32 serve as guides for pins 33, which are in the present instance the prongs of a fork that is 85 pivotally connected to a rod 34, which is pivoted to the foot-lever 12. When the latter is pressed down, the pins 33 will be carried below the lugs 31, and the half-rings may then be brought into the closed position, and when the 90 lever returns to the elevated position said pins will pass up through the holes in said lugs, and thus lock the half-rings in the closed position. For convenience in closing and 95 opening the half-rings I provide each of the same with vertical studs 35. When but one of the half-rings is provided with means for preventing the application of power to force up the head 4, as hereinbefore described, I 100 sometimes, in order to insure the opening of the other half-ring before the said head can reach the same, provide the head with an upwardly-extending wedge 36, that is adapted to impinge against the inner side of the arm 105 25 of said other half-ring and open the same before the head shall have moved up to the full extent.

Having thus described my invention, I 105 claim as new and desire to secure by Letters Patent—

1. In a machine of the character described, the combination of the head for holding and driving the hoop, means for actuating the 110 same, the pivoted half-rings and means carried by said half-rings for automatically preventing the operation of said actuating mechanism when said half-rings are in the closed position, substantially as described. 115

2. In a machine of the character described, the combination of the head for holding and driving the hoop, the engine for actuating the same, the rod for operating the valve of said engine, the pivoted half-rings, and the arms 120 adapted to engage said rod and prevent the same from being operated when said half-rings are in the closed position, substantially as and for the purpose described.

3. In a machine of the character described, 125 the combination of the head for supporting and driving the hoop, means for actuating said head, the pivoted half-rings, means carried by one of the latter for automatically preventing the operation of said actuating means, 130 when said last-mentioned half-ring is in the closed position, and the wedge carried by said head, and adapted to impinge against said other half-ring when in the closed position

and to open the same when the head is moved upwardly, substantially as and for the purpose described.

4. In a machine of the character described, 5 the combination of the pivoted half-rings, the rod, the lever for actuating the same, and projections on the free end of said rod adapted to engage said half-rings, when in the closed position and lock them in said position, substantially as set forth. 10

5. In a machine of the character described, the combination of the spring-controlled foot-lever, the pivoted half-rings having the lugs

provided with the holes, the pins adapted to register with said holes when said half-rings 15 are in the closed position, and the rod connected with said pins and said lever, substantially as set forth.

In testimony whereof I have hereunto affixed my signature this 19th day of January, 20 A. D. 1903.

JOHN B. STANHOPE.

Witnesses:

JOHN M. CAMPBELL,
WALTER C. PUSEY.