

G. SQUIRE.
 BARREL HEADING MACHINE.
 APPLICATION FILED JAN. 12, 1917.

Patented July 24, 1917.
 2 SHEETS—SHEET 1.

1,234,577.

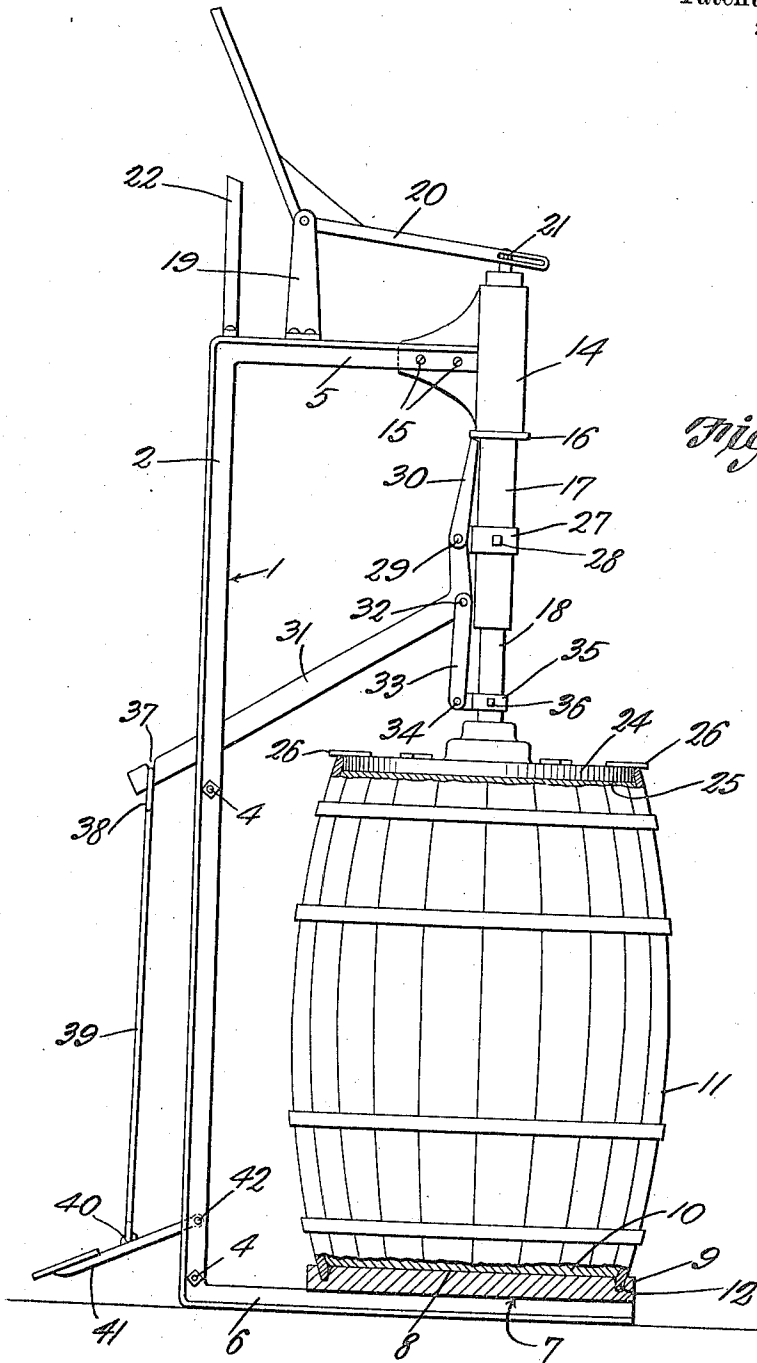


Fig. 1.

Witnesses

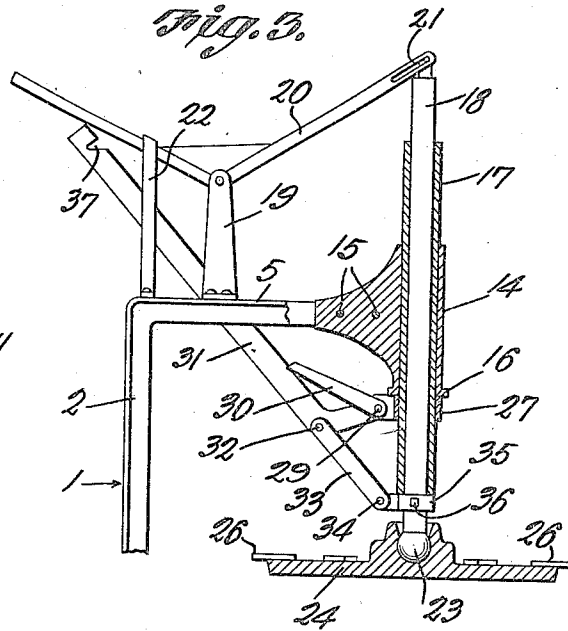
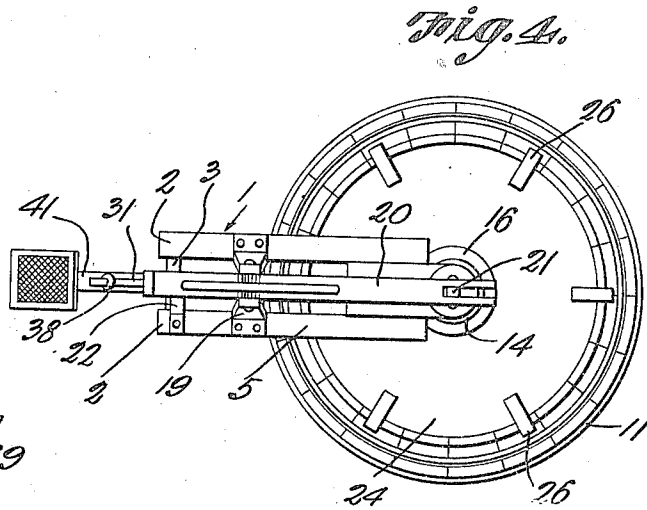
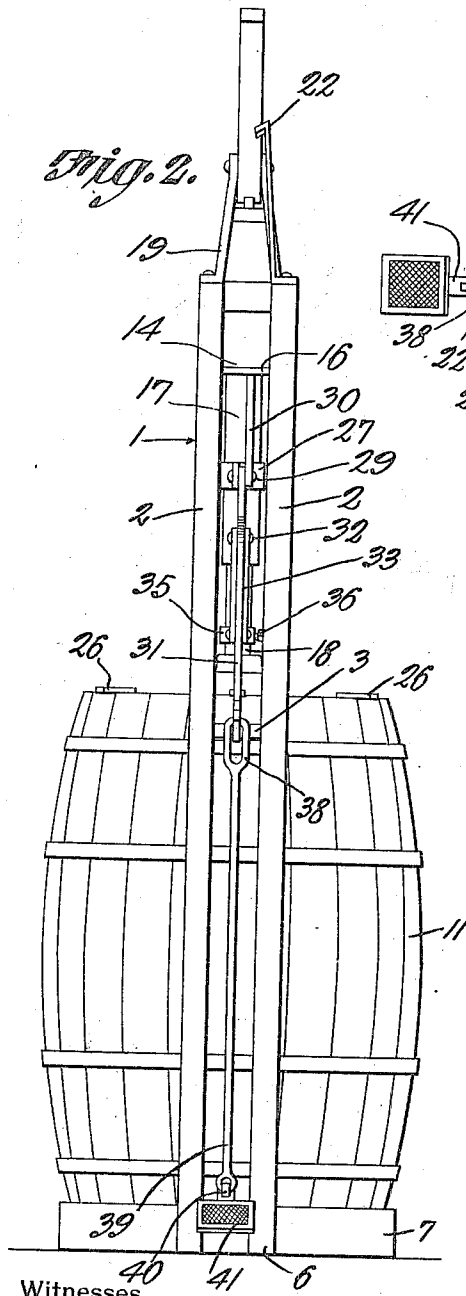
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UNITED STATES PATENT OFFICE.

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BARREL-HEADING MACHINE.

1,234,577.

Specification of Letters Patent.

Patented July 24, 1917.

Application filed January 12, 1917. Serial No. 142,017.

To all whom it may concern:

Be it known that I, GAYLE SQUIRE, a citizen of the United States, residing at Hastings, in the county of Saint Johns and State of Florida, have invented a new and useful Barrel-Heading Machine, of which the following is a specification.

The device forming the subject matter of this application is adapted to be employed for forcing heads into barrels, and one object of the invention is to provide novel means for actuating the plunger which, in its turn, controls a follower whereby the head of the barrel is thrust into place.

Another object of the invention is to provide novel means whereby the plunger is mounted in such a way that it can be raised readily when not in use.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the present invention appertains.

In the accompanying drawings:—

Figure 1 shows in side elevation, a barrel heading machine constructed in accordance with the present invention;

Fig. 2 is a rear elevation of the structure shown in Fig. 1;

Fig. 3 is a fragmental side elevation showing a portion of a barrel heading machine constructed in accordance with the present invention, parts being broken away, and the follower being elevated into the position which it will assume when the device is not in use; and

Fig. 4 is a top plan of the barrel heading machine hereinafter described.

The device forming the subject matter of this application includes a standard 1 which may be made up of parallel angle members 2 held apart by spacers 3 and united by securing elements 4. The upper ends of the angle members 2 are bent at right angles to the body portions thereof, to form a top 5, the lower ends of the angle members 2 being similarly bent to form a bottom 6 with which is connected a base 7 including a central upstanding disk 8 and a rim 9. The numeral 11 indicates the barrel which is to be headed, and it is to be observed that the bottom 10 of the barrel 11 rests on the disk 9, so that the bottom of the barrel cannot be pushed out when the mechanism hereinafter described is actuated. The rim 9 engages the outside of the chine 12 of the barrel and

prevents the lower ends of the staves of the barrel from spreading.

A tubular guide 14 is attached to the outer end of the top 5 of the supporting structure, by means of securing elements 15. At its lower end, the guide 14 is supplied with a flange 16.

A sleeve 17 is mounted to reciprocate vertically in the guide 14. A plunger 18, preferably in the form of a rod, is mounted to reciprocate in the sleeve 17. A fulcrum bracket 19 is carried by the top 5 of the supporting structure. A lever 20, comprising angularly disposed parts, is fulcrumed intermediate its ends on the bracket 19. One end of the lever 20 is united by a lost motion connection 21 of any desired sort with the upper end of the plunger 18, the lost motion connection in the present instance being shown in the form of a pin and slot union. Fixed to and upstanding from the top 5 of the supporting structure is a keeper 22 wherewith the outer end of the lever 20 is adapted to engage, under circumstances to be pointed out hereinafter. The keeper 22 may be slightly resilient, in order that it may engage automatically with the outer end of the lever 20, when the outer end of the lever is depressed.

The lower end of the plunger 18 is united by a ball and socket joint 23 with a follower 24 whereby the head 25 is thrust into place in the upper end of the barrel 11. The part 24 is supplied with outstanding peripheral fingers 26, which, coöperating with the upper end of the barrel 11 serve to prevent the head 25 from being crowded too far into the barrel, under the action of the follower 24. A collar 27 surrounds the sleeve 17 and is held thereto by a set screw 28. The collar carries a pivot element 29 on which is mounted to swing a latch 30, adapted to coöperate with the flange 16 of the guide 14 in a manner which will be set forth hereinafter. The pivot element 29 constitutes a fulcrum for the inner end of an angular lever 31 carrying at its elbow, a pivot element 32 engaged with one end of a link 33, the other end of which is united by means of a pivot element 34 with a collar 35 surrounding the plunger 18 and held adjustably thereon by means of a set screw 36. The outer end of the lever 31 is moved between the constituent bars 2 of the standard 1 and is supplied in its upper edge with a notch 37 adapted to

engage a loop 38 carried by the upper end of the rod or connection 39 pivoted at 40 to a pedal 41 fulcrumed at 42 on the standard 1 near to the lower end thereof.

5 In practical operation, the outer end of the lever 20 may be swung downwardly, until the same engages automatically with the keeper 22, as shown in Fig. 3. Under such circumstances, the plunger 18 is elevated,
10 and the sleeve 17 is slid upwardly by contact with the collar 35 on the plunger, until the collar 27 on the sleeve engages with the lower end of the guide 14. By this operation, the follower 24 is elevated sufficiently
15 so that an operator may put additional material in the barrel 11, roll the barrel into place on the base 7, put the head 25 into the barrel, or perform other necessary operations.

20 When it is desired to head up the barrel, the outer end of the lever 20 is disengaged from the keeper 22, and then the plunger 18 and the sleeve 17 will slide downwardly. When pressure is exerted on the pedal 41,
25 the connection 39 will impart vertical swinging movement to the lever 31, the same tilting on its fulcrum 29, the latch 30 having previously been engaged beneath the flange 16 of the guide 14, as shown in Fig. 1.
30 When the operation above described is carried out, the plunger 18 will move downwardly under the action of the link 33, and the follower 24 will force the head 25 into the barrel 11. When the lever 31 is disposed as shown in Fig. 1 of the drawings,
35 the inner edge of the elbow or angle of the lever 31 abuts against the lower end of the sleeve 19, or is disposed closely adjacent thereto, the pivot element 32 passing inwardly beyond the line connecting the pivot
40 element 29 and the pivot element 34. Consequently, after the lever 31 has been disposed as shown in Fig. 1, the lever will remain in the position there delineated, and will hold
45 the head 25 of the barrel in place until such a time as the lever 31 is moved upwardly by an operator, to unlock the toggle joint formed by the link 33 and that end of the lever 31 which is pivoted at 29 to the collar
50 27.

Having thus described the invention, what is claimed is:—

1. In a barrel heading machine, a supporting structure; a sleeve mounted to reciprocate in the supporting structure; a plunger
55 mounted to reciprocate in the sleeve; a latch mechanism carried by the sleeve and cooperating with the supporting structure to hold the sleeve against upward movement; a follower carried by the plunger; and
60 means carried by the sleeve and assembled with the plunger for depressing the plunger.

2. In a barrel heading machine, a support-

ing structure; a sleeve mounted to reciprocate in the supporting structure; a plunger
65 mounted to reciprocate in the sleeve; means carried by the sleeve and coacting with the supporting structure to hold the sleeve depressed; means assembled with the sleeve
70 and with the plunger for depressing the plunger; means assembled with the plunger for raising the plunger when the depressing means is not in use; and a follower carried
by the plunger.

3. In a barrel heading machine, a supporting structure; a sleeve mounted to reciprocate in the supporting structure; a latch pivoted to the sleeve and coacting with the supporting structure to hold the sleeve against
75 upward movement; a plunger mounted to reciprocate in the sleeve; a follower carried by the plunger; a lever fulcrumed on the sleeve; a link connecting the lever with the plunger and constituting means for depressing
80 the plunger; and means under the control of an operator and assembled with the plunger and independent of the lever, for raising the plunger.

4. In a barrel heading machine, a supporting structure; a sleeve mounted to reciprocate in the supporting structure; means for
90 holding the sleeve releasably against sliding movement with respect to the supporting structure; a plunger mounted to slide in the sleeve; a follower carried by the plunger;
95 means for depressing the plunger; and means under the control of an operator for raising the plunger when the depressing means is not in use.

5. In a device of the class described, a supporting structure including a guide; a sleeve
100 mounted to reciprocate in the guide; a collar carried by the sleeve; means for holding the collar adjustably on the sleeve; a pivot element carried by the collar; a latch mounted
105 on the pivot element and coacting with the guide to hold the sleeve depressed; an angular lever fulcrumed on the pivot element; a plunger mounted to reciprocate in the sleeve; a follower carried by the plunger; a collar
110 mounted on the plunger; means for holding the collar in adjusted positions on the plunger; a link having one end pivoted to the collar of the plunger; a pivot element uniting the other end of the link with the lever
115 at the angle thereof; a second lever mounted to swing on the supporting structure; and a connection between the last specified lever and the plunger.

In testimony that I claim the foregoing
120 as my own, I have hereto affixed my signature in the presence of two witnesses.

GAYLE SQUIRE.

Witnesses:

CYRUS H. SMITHDEAL,
E. D. SMITHDEAL.