

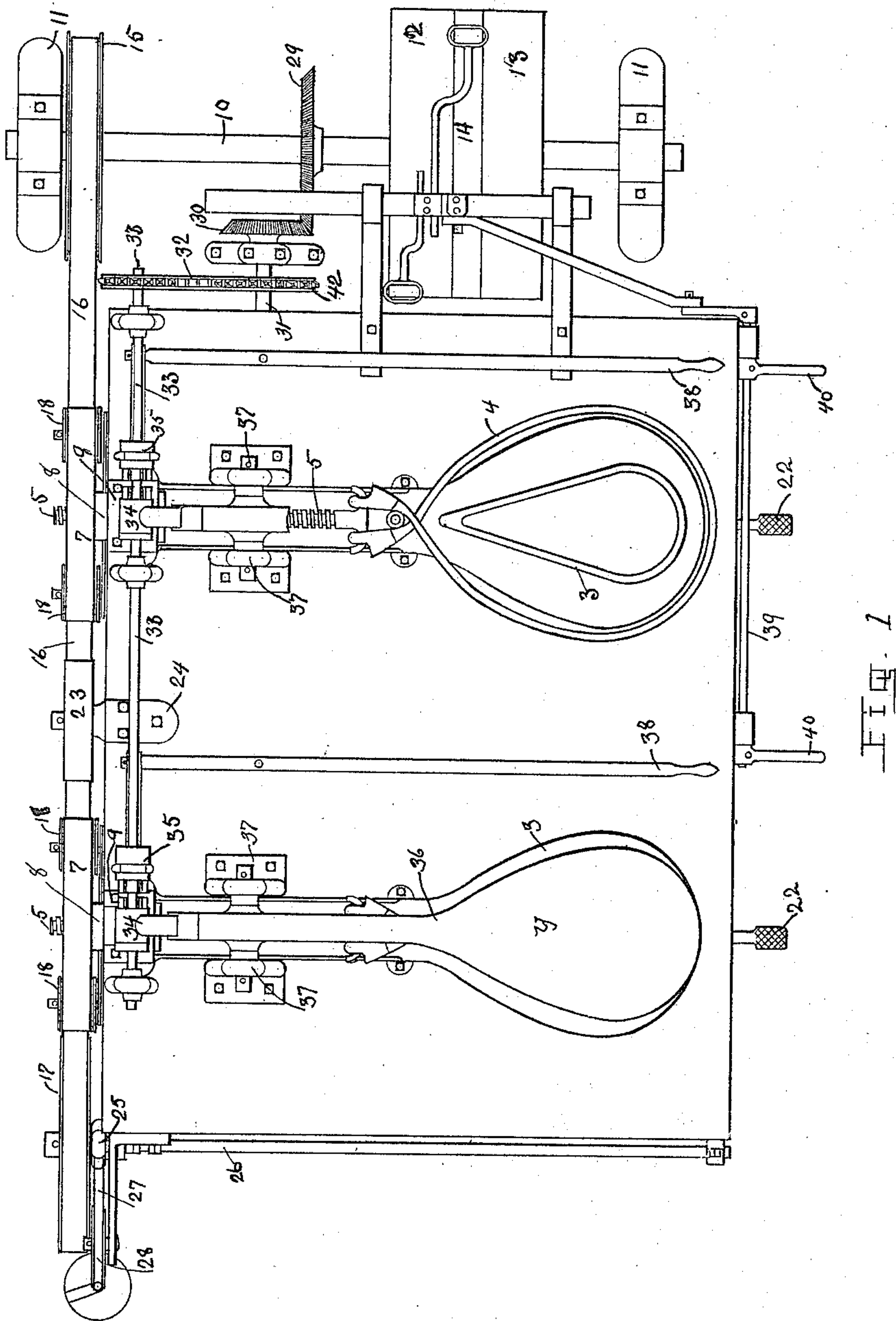
(No Model.)

W. B. SHADBURN.
COLLAR MACHINE.

3 Sheets—Sheet 1.

No. 572,912.

Patented Dec. 8, 1896.



WITNESSES:

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INVENTOR

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(No Model.)

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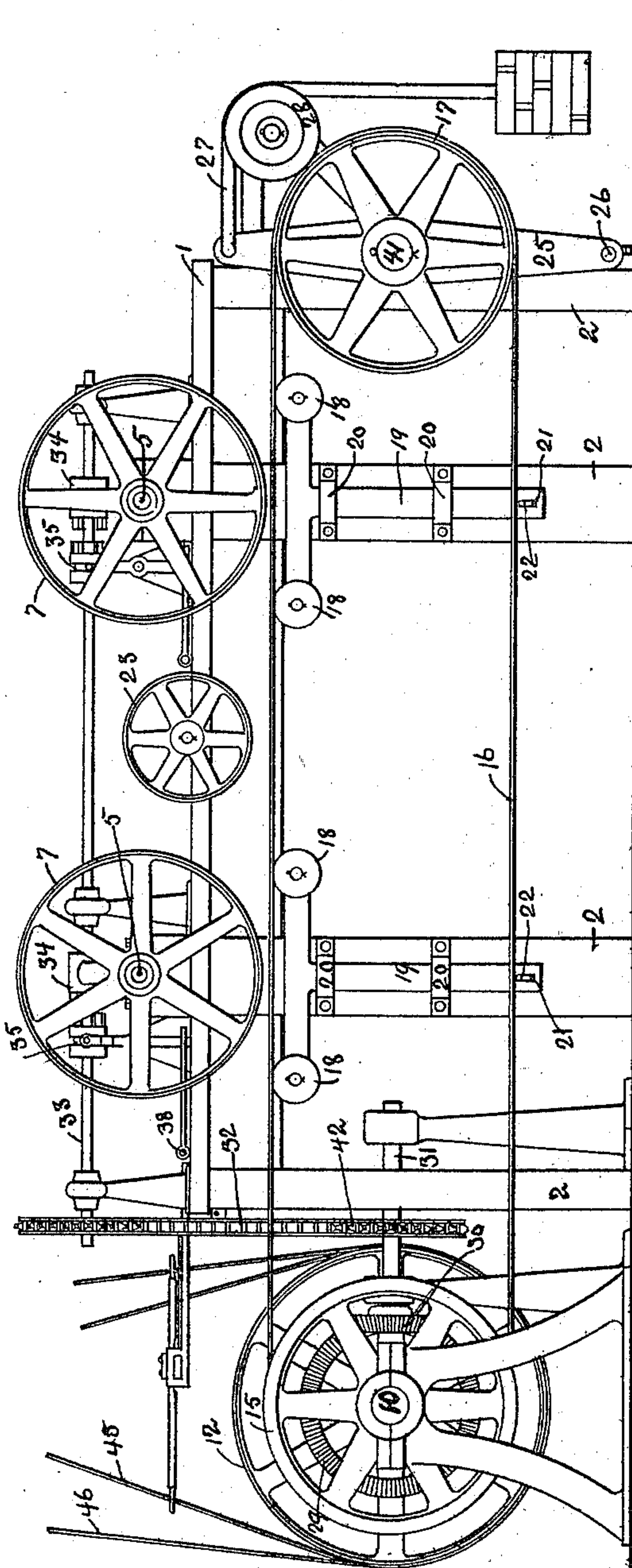


FIG. 2.

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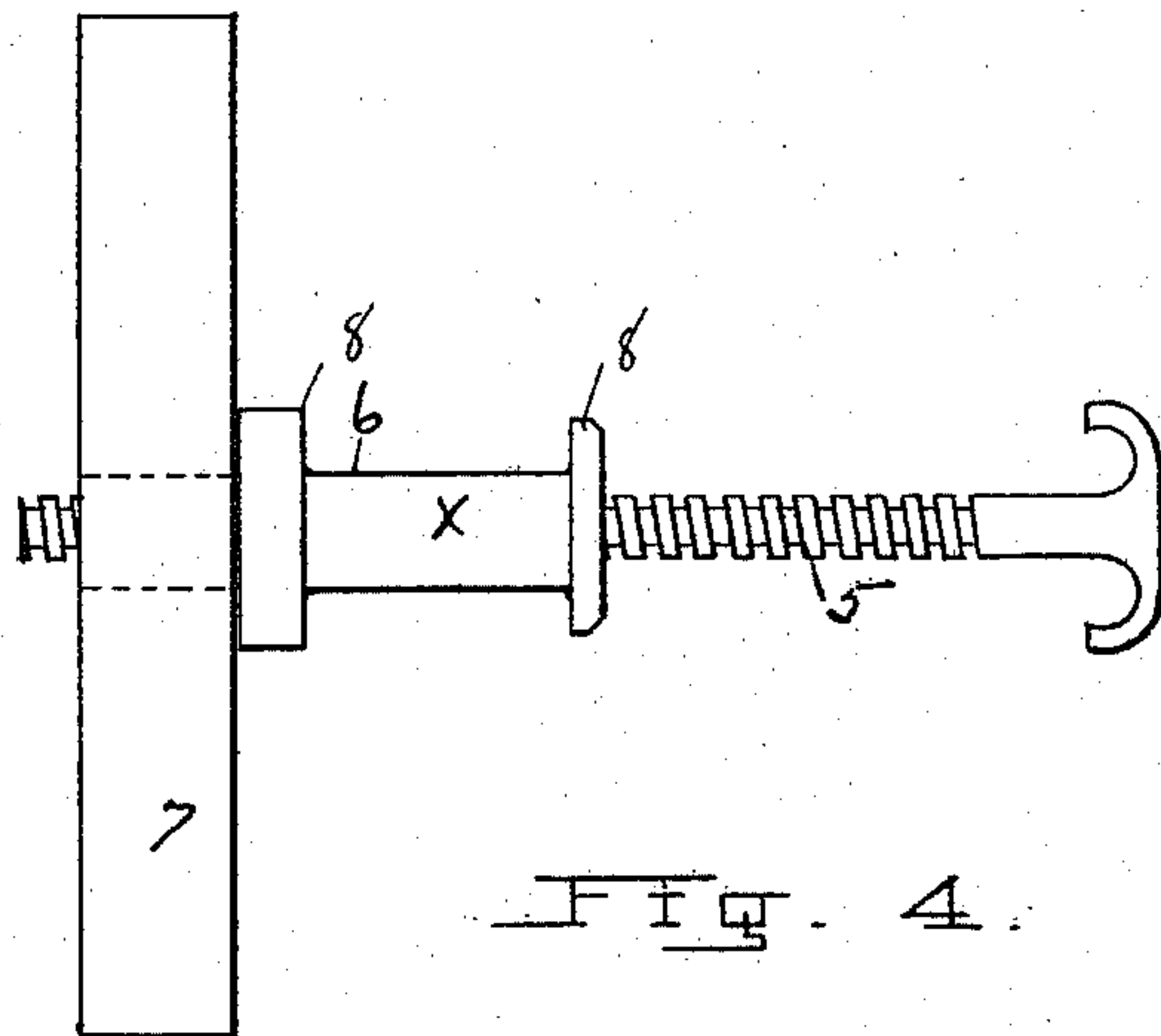
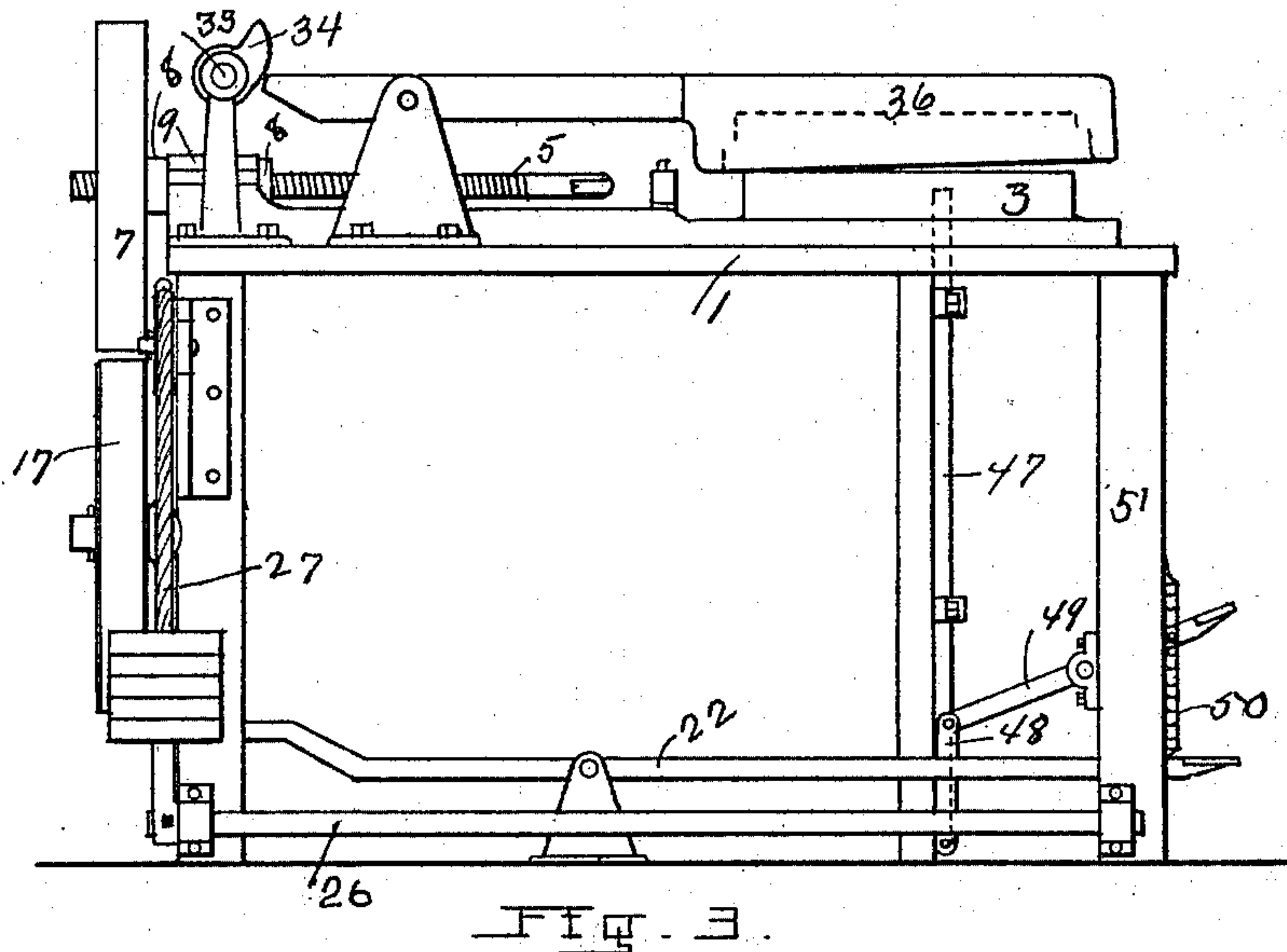
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COLLAR MACHINE.

No. 572,912.

Patented Dec. 8, 1896.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WYLIE B. SHADBURN, OF BUFORD, GEORGIA.

COLLAR-MACHINE.

SPECIFICATION forming part of Letters Patent No. 572,912, dated December 8, 1896.

Application filed August 30, 1895. Serial No. 561,029. (No model.)

To all whom it may concern:

Be it known that I, WYLIE B. SHADBURN, a citizen of the United States, residing at Buford, in the county of Gwinnett and State of Georgia, have invented a new and useful Improvement in Machines for Shaping Horse-Collars, of which the following is a specification.

My invention relates to improvements in mechanism for shaping horse-collars; and it consists in a framework adapted to support a number of collar blocks and dies, mechanism for pressing the collar against the block, and suitable mechanism for operating the dies that shape the collar, all of which will be more fully described hereinafter, and pointed out in the appended claims.

The object of my invention is to provide a power-press for shaping horse-collars, thus enabling me to effect a large saving in labor and to produce a more uniform quality of collars than can be made by hand.

Figure 1 is a plan view of a mechanism which embodies my invention. Fig. 2 is a back elevation of same, and Fig. 3 is an end view. Fig. 4 is a detail of the screw-nut and box.

The table 1 and its legs 2 constitute the framework of my invention. At convenient intervals on the top of the table there is bolted a collar block or form around which the collar is squeezed, and the shape or outline of the block 3 determines the shape of the collar. A wire rope 4 is suitably secured to a screw 5. This rope forms a loop and is of sufficient length to allow a collar to be placed easily between same and the block. The other end of the screw 5 works in a nut 6, to one end of which the pulley 7 is secured. As shown in Fig. 4, the nut 6 is screw-threaded only on part of its length, and is provided with flanges 8 on the outside. The bearing or box 9 is in length slightly shorter than the distance between the flanges and is secured to the table 1 by means of bolts. The surface X of the nut forms the bearing in the box 9, and the pulley 7 is secured to the other end of the nut. It is obvious that when the pulley 7 revolves in one direction the screw 5 will draw the wire loop 4 tight around the block 3, and when revolved in the opposite direction the loop will become loosened. The

shaft 10 is supported in ordinary hangers, and has loosely mounted upon it the wide-faced pulleys 12 and 13 and the keyed pulleys 14 and 15. Along the back of the machine runs a belt 16, that passes around the flanged pulleys 15 and 17, the upper part of the belt passing between the pulley 7 and the small idlers 18. Idlers 18 are supported by a T-shaped piece 19, the vertical part of the piece 19 passing through guides 20. A slot 21 is made in the end of the piece 19 in which is fitted the end of the pivotal foot-lever 22. The idler 23 is supported by the bearing 24, bolted to the table. When the belt 16 is pressed against the pulley 7 by means of the idlers 18, the idler 23 will hold the belt 16 from off the face of the adjoining pulley.

The pulley 17 is supported in a bearing 41, that is fixed on the pivotal lever 25. The lower end of the lever 25 is loosely pivoted on the shaft 26, and to the upper end of the lever there is secured a rope 27, that passes over a pulley 28 and supports a mass of sufficient weight to keep the required amount of tension in the belt 16. To the shaft 10 there is secured a beveled wheel 29. The beveled wheels 29 and 30 mesh and revolve the counter-shaft 31, to which is secured a sprocket wheel or pulley 42, and a chain or belt 32 connects the counter-shaft 31 to the shaft 33.

The shaft 33 is suitably supported by bearings placed at convenient intervals and secured to the top of the table. The object of the shaft 33 is to carry the mechanism that operates the pounder, and this mechanism consists of a clutch 35, adapted to slide longitudinally on a feather fixed in the shaft, and a clutch-cam 34, that can freely revolve on the shaft when the clutch 35 is not in position to secure same to the shaft. When the clutch-jaws on the cam are in gear with the clutch 35, the cam-surface 34 is adapted to revolve and operate the hammer or pounder 36. The pounder 36 is pivoted in the boxes 37 and is adapted to fit over the collar-block, as shown at Y. The clutch 35 is made to slide longitudinally by means of the pivotal hand-lever 38.

Running along the front side of the machine is a shaft 39, provided with hand-levers 40, adapted to operate, with suitable connec-

tions, the open and cross belts that run on the pulleys 12, 13, and 14.

Referring to Fig. 3, the rod 47 is placed vertically under the pounder 36 and is connected at one end to a link 48, which in turn is connected to the pivotal foot-lever 49. This is designed to lift the pounder away from the block when not in use or when placing the collar on the block by pressing the foot-lever 49 and catching the end of same under the lug 50, which is secured to the post 51.

The operation of my machine is as follows: The pounder 36 being held up from the block by the foot-lever and the wire loop 4 loosened, the operator places the collar, as it comes from the stuffing-machine, on the collar-block and adjusts the loop between the rim of the collar and the body of same. The belt 45 is thrown on the pulley 14, which causes the belt 16 to travel in the right direction to draw the loop against the collar, and pressure applied to the foot-lever 22. This throws the belt 16 in contact with the pulley 7, and the loop is drawn against the collar until the friction of the belt 16 on the pulley 7 equals the power applied on the collar by the loop. The pounder is allowed to fall into position and the clutch 35 thrown into gear with the cam that operates on the pounder. The cam will cause the pounder to rise and fall until the collar is sufficiently hammered. The operator will then throw the clutch out, lift the pounder by means of the foot-lever 49, and shift the cross-belt 45 onto the pulley 14, which will cause the belt 16 to travel in the opposite direction. Pressure is again applied to the foot-lever 22 until the loop has released the collar, or, if desired, the collar may remain on the block under pressure until the operator performs the operation above described on all of the blocks at hand, and then release same as each block is wanted for another collar.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a horse-collar machine, the combination with a suitable supporting-frame, and a shaping-block secured upon said supporting-frame; of a loop surrounding said block; means for drawing said loop tight upon a collar on said block, and means for releasing the same; a pounder adapted to shape the collar; and means for operating said pounder, substantially as described.

2. In a horse-collar machine, the combination with a suitable supporting-frame, and a plurality of shaping-blocks secured upon said frame; of a plurality of loops, one for each of said shaping-blocks; means for drawing one or more of said loops tight at one time; and means for releasing the same; a plural-

ity of pounders, and means for operating one or more of said pounders at one time, substantially as described.

3. In a horse-collar machine, the combination with a suitable supporting-frame, and a shaping-block secured upon said frame; of a loop surrounding said shaping-block; means for drawing said loop tight upon a collar on said shaping-block, and means for releasing the same; a pounder pivoted upon said supporting-frame; a cam mounted upon said shaft and adapted to operate said pounder; and means for rotating said shaft, substantially as described.

4. In a horse-collar machine, the combination with a suitable supporting-frame, and a shaping-block secured upon said frame; of a loop surrounding said shaping-block; means for drawing said loop tight upon a collar on said shaping-block, and means for releasing the same; a pounder pivoted upon said frame; a shaft journaled in said frame; a cam mounted loosely upon said shaft, and adapted to operate said pounder; means for rotating said shaft; and means for throwing said cam into and out of action during the rotation of said shaft, substantially as described.

5. In a horse-collar machine the combination with a suitable supporting-frame and a plurality of shaping-blocks secured upon said frame; of loops surrounding said shaping-blocks; means for tightening one or more of said loops at one time; means for releasing the same either singly or together; a plurality of pounders pivoted upon said support; a shaft journaled upon said support; means for rotating the same; a plurality of cams loosely mounted upon said shaft and adapted to operate said pounders; and means for throwing each of said cams into and out of action during the rotation of said shafts substantially as described.

6. In a horse-collar machine the combination with a suitable supporting-frame and a plurality of shaping-blocks secured upon said frame; of loops surrounding said shaping-blocks; means for tightening one or more of said loops at one time; means for releasing the same either singly or together; a plurality of pounders pivoted upon said support; a shaft journaled upon said support; means for rotating the same; a plurality of cams loosely mounted upon said shaft and adapted to operate said pounders; means for throwing each of said cams into and out of action during the rotation of said shafts and means for holding each of said pounders out of contact with said shaping-block when desired, substantially as described.

WYLLIE B. SHADBURN.

Witnesses:

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R. L. NEAL.