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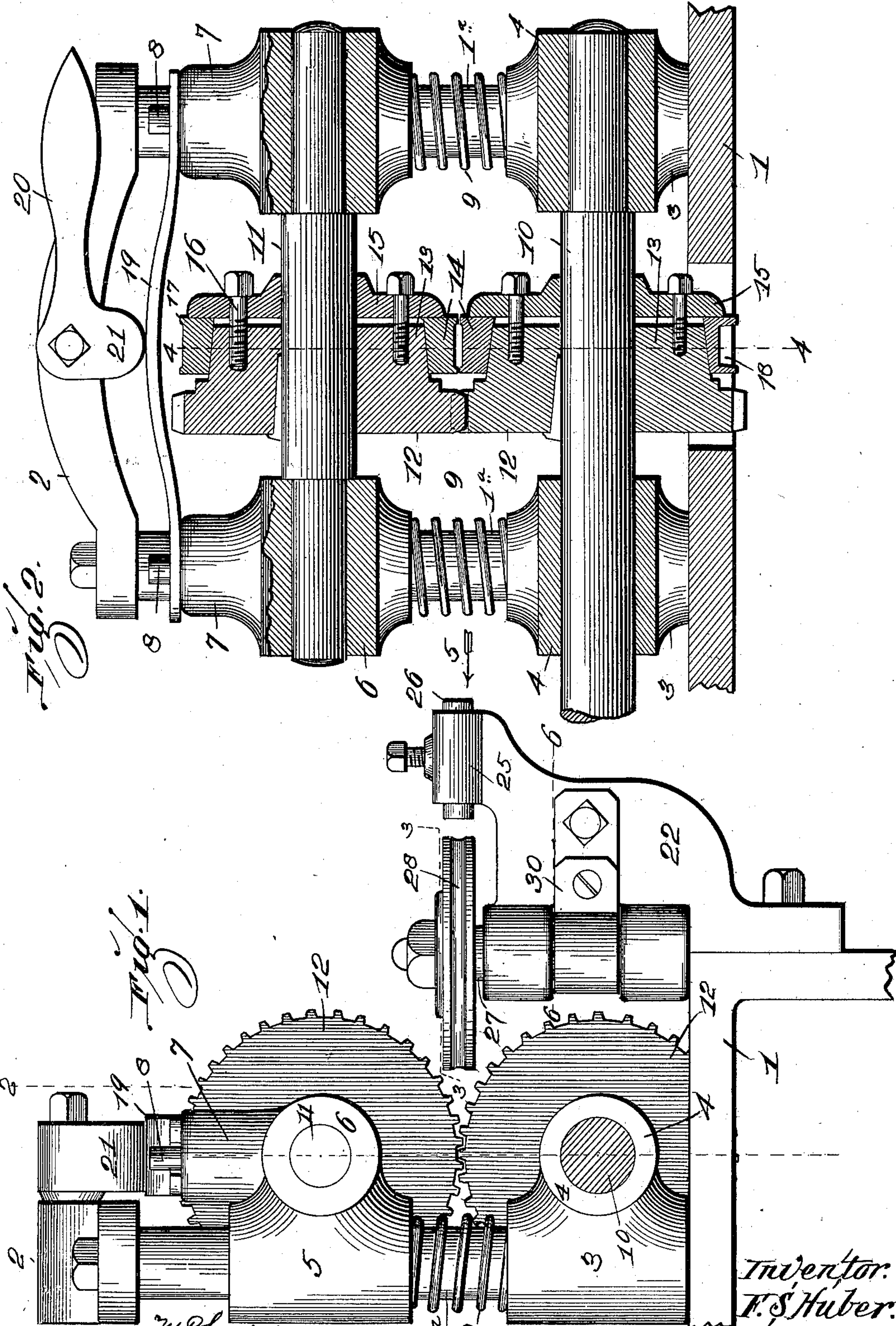
Patented June 13, 1899.

F. S. HUBER.  
WIRE FEEDING DEVICE.

(Application filed Sept. 27, 1898.)

(No Model.)

2 Sheets—Sheet 1.



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By Wigdon & Logan Attys



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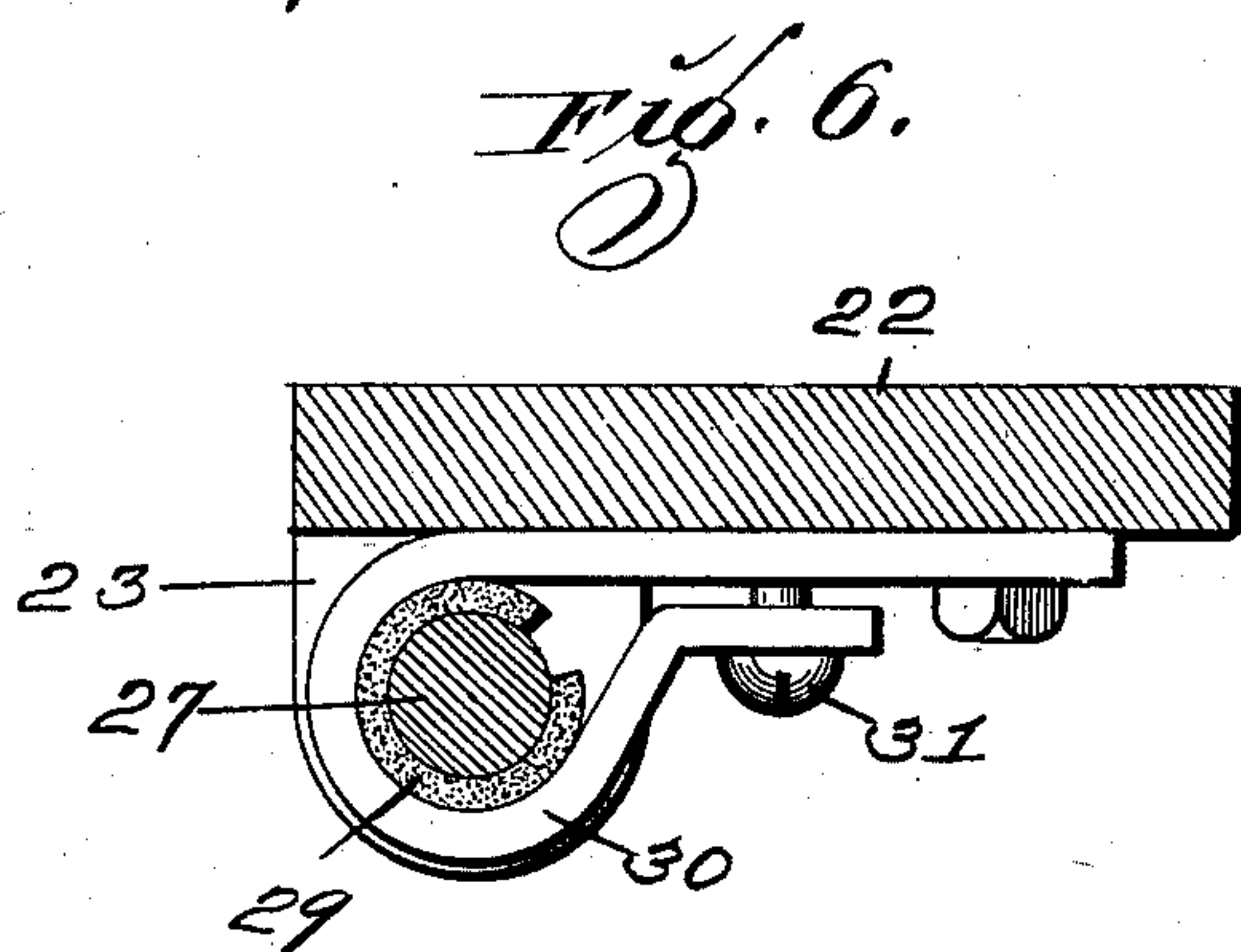
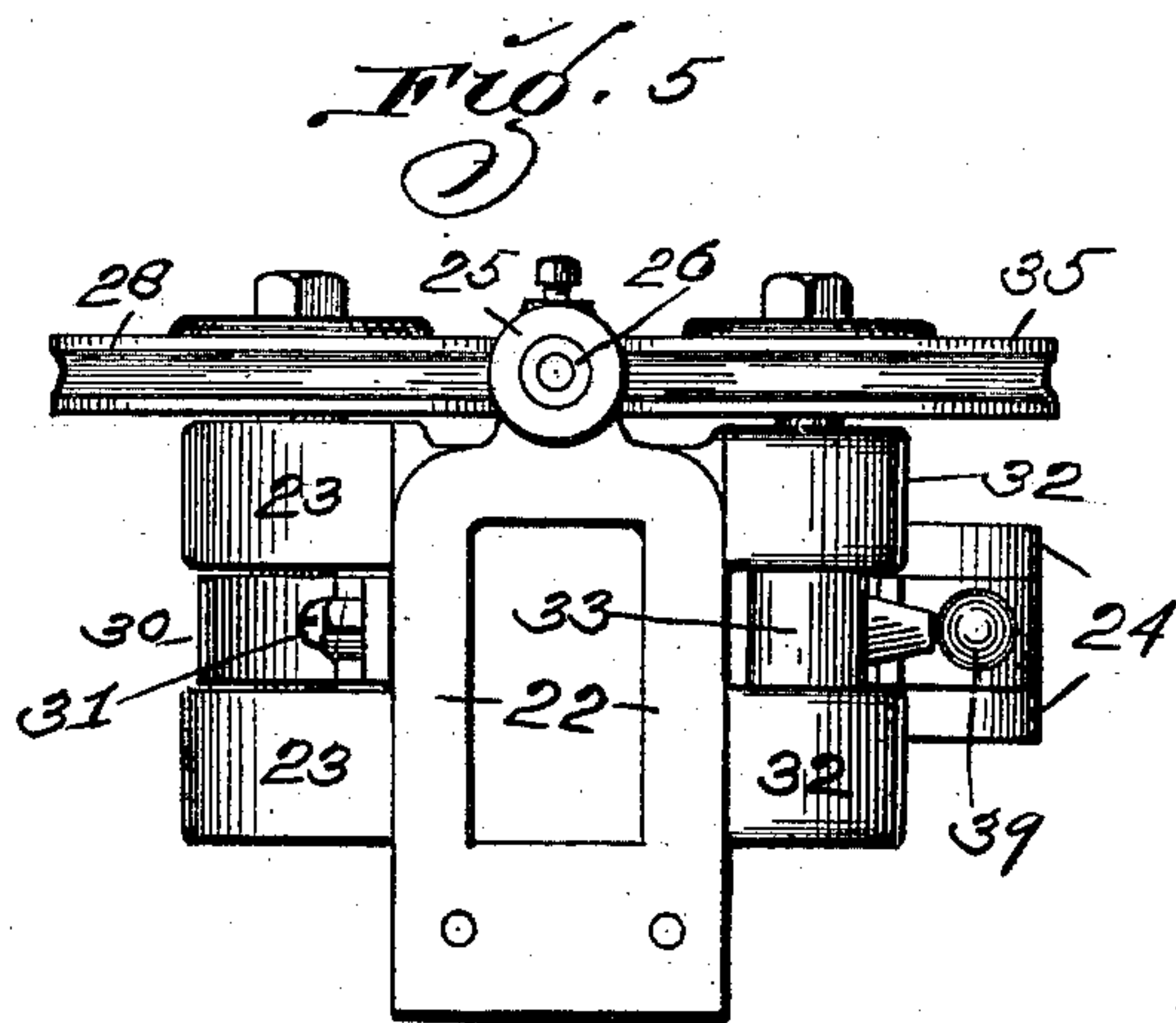
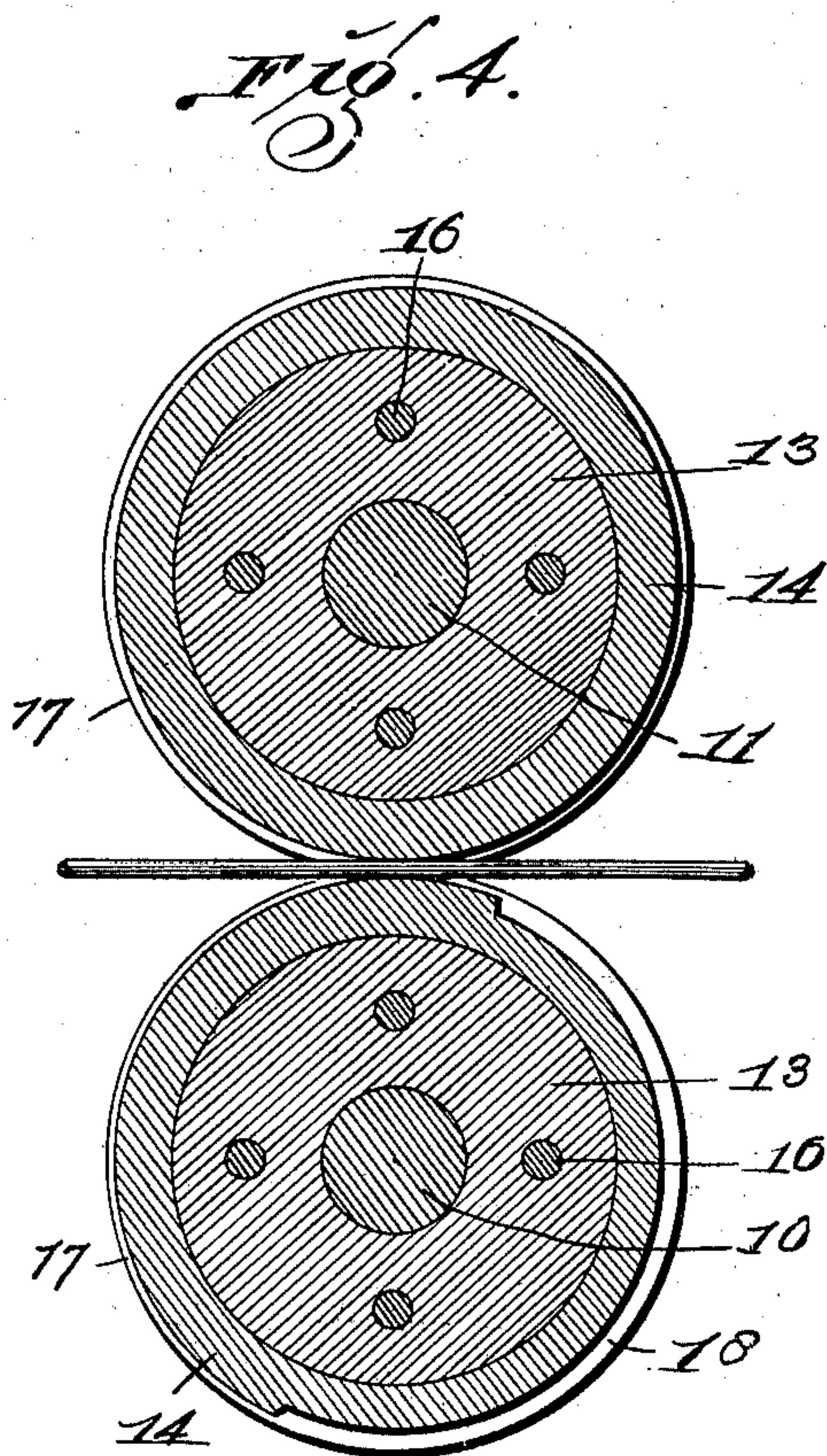
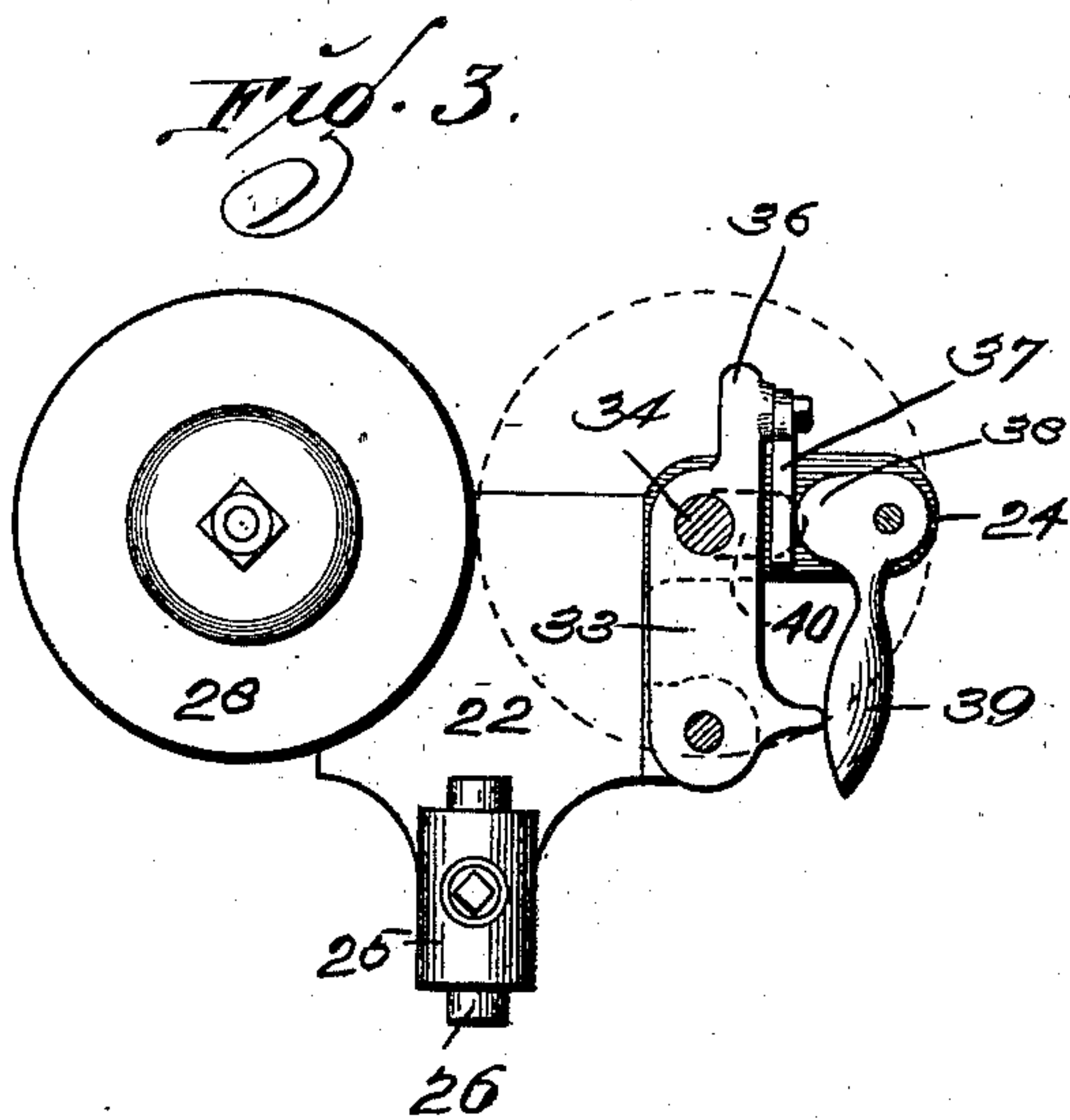
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# UNITED STATES PATENT OFFICE.

FRANK S. HUBER, OF ST. LOUIS, MISSOURI.

## WIRE-FEEDING DEVICE.

SPECIFICATION forming part of Letters Patent No. 626,999, dated June 13, 1899.

Application filed September 27, 1898. Serial No. 692,012. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK S. HUBER, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Wire-Feeding Devices, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to wire-feeding devices; and it consists of the novel construction, combination, and arrangement of parts hereinafter shown, described, and claimed.

The object of my invention is to provide means whereby a continuous length of wire is delivered into a wire-machine with an intermittent movement.

Figure 1 is a side elevation of my improved wire-feeding device. Fig. 2 is a vertical sectional view taken approximately on the line 2 2 of Fig. 1. Fig. 3 is a detail sectional view taken approximately on the line 3 3 of Fig. 1. Fig. 4 is a detail vertical sectional view taken approximately on the line 4 4 of Fig. 2. Fig. 5 is a rear elevation of the wire-straightening tube and the feed-rolls, which view is taken looking in the direction indicated by the arrow 5, Fig. 1. Fig. 6 is a detail sectional view taken approximately on the line 6 6 of Fig. 1.

In the construction of the device as shown, 1 indicates a portion of the frame of a barbed-wire or other machine on which my improved feeding device is located, and upon the top plate of said machine is arranged a pair of standards 1<sup>a</sup>, the upper ends of said standards being joined by the bow-shaped bar 2. Seated upon the lower ends of the standards 1<sup>a</sup> and immediately on top of the top plate of the wire-machine are the blocks 3, with the rear sides of which are formed integral the horizontally-arranged and alined bearings 4. Arranged for vertical movement upon the upper ends of the standards 1 are the blocks 5, with the rear sides of which are formed integral the horizontally-arranged and alined bearings 6, and extending upwardly from each of said bearings 6 is a lug 7, which carries a smaller lug or projection 8 on its upper side. Located around the standards 1, between the blocks 3 and 5, are the expansive coil-springs 9. Rotatably arranged in

the alined bearings 4 is a shaft 10, which is extended beyond one of the bearings 4 and provided with suitable driving mechanism, and rotatably arranged in the alined bearings 6 is a shaft 11. Upon these shafts, between the pairs of bearings 4 and 6, are located the wire-engaging rolls, which are constructed in the following manner:

A pair of meshing pinions 12, provided with laterally-projecting lugs 13, having beveled peripheries, are keyed one on each of the shafts 10 and 11, and removably located upon each of the lugs 13 is a ring 14, having its inner face beveled to fit the beveled periphery of the lug 13, upon which it is located. Retaining-plates 15 engage the outside faces of each of the rings 14, and bolts 16 are passed through said retaining-plates and into the lugs 13. The edges of each of the rings 14 are provided with flanges 17, and a portion of the periphery of one of the rings 14, preferably the lower one, is grooved or cut away, as indicated by 18. The length of this groove or cut-away portion regulates the length of wire that is intermittently fed into the wire-machine. A leaf-spring 19 has its ends bifurcated and seated upon each of the lugs 7, said bifurcated ends engaging the smaller lugs 8, and a hand-lever 20 is fulcrumed upon the side of the bar 2, said hand-lever 20 being provided with an eccentric head 21, which engages upon the top or center of said leaf-spring 19.

Rigidly bolted to the frame 1 of the wire-machine, directly in front of the pair of feed-rolls just described, is a specially-formed bracket 22, with the forward sides of which are formed integral the pairs of laterally-projecting ears 23 and 24. Formed integral with the rear upper side of said bracket 22 is a horizontally-arranged sleeve 25, in which is removably located the wire-straightening tube 26. Rotatably arranged in the pair of ears or bearings 23 is the vertical shaft 27, upon the upper end of which is rigidly fixed a horizontally-arranged check-roll 28, the periphery of which is provided with a shallow groove. Located around the shaft 27, between the ears or bearings 23, is a washer 29, of leather or analogous material, and passing around said washer is a resilient friction-



spring 30, one end of which is rigidly fixed to one side of the bracket 22, the opposite end being engaged by an adjusting-screw 31.

A pair of ears 32 is formed integral with the side of the bracket 22, whereon the ears 24 are formed, and between said ears 32 is pivotally held a block 33, that extends forwardly between the ears 24, and in the forward end of said block 33 is arranged a vertical shaft 34, upon the upper end of which is rotatably arranged a check-roll 35, that mates with the check-roll 28, previously described. The forward end of the block 33 is provided with a forward extension 36, and rigidly seated on the side of the forward end of said extension is a leaf-spring 37, the free end of which is engaged by the eccentric head 38 of a hand-lever 39, that is journaled between the outer ends of the ears 24.

It is essential that the top one of the pair of ears 24 be provided with a short slot, through which the shaft 34 moves when the hand-lever 39 is swung outwardly to allow the check-roll 35 to move away from the fixed check-roll 28. This slot is indicated by dotted lines 40, Fig. 3.

The operation of my improved wire-feeding device is as follows: With all the parts in operative position and with suitable driving mechanism applied to the shaft 10 the shaft 11 will be rotated uniformly with the said shaft 10, and the wire after passing through the straightening-tube 26 and between the check-rolls 28 and 35 will be engaged by the feed-rolls and will pass from thence into the wire-machine. While the grooved or cut-away portion 18 in the lower one of the rings is traveling past the solid periphery of the upper ring the wire will not be engaged or drawn through between said rolls. Therefore it will be fed to the wire-machine with an intermittent movement. The check-rolls engage and hold the wire at all times while it is being drawn into the wire-machine, and said check-rolls prevent the wire from pulling or kinking immediately in front of the feed-rolls during the time said rolls are not engaging or pulling the wire through.

The proper degree of friction that it is desired to give the shaft 27 is obtained by tightening or loosening the screw 31, and when it is desired to throw the check-roll 35 away from the fixed check-roll 28 the operator swings the handle 39 laterally, thus drawing the eccentric head 38 away from the free end of the leaf-spring 37.

When it is desired to separate the feed-rolls, the operator swings the handle 20 upwardly, thus removing the eccentric head 21 from the leaf-spring 19, and as the pressure is released from the blocks 5 they go with the shaft 11 and the upper one of the feed-rolls will be elevated a slight distance by the action of the coil-springs 9. If desired, the rings may be used upon the lower feed-roll, which rings are provided with grooves or cut-away portions of different lengths, thereby provid-

ing means for a short or long intermittent feed.

A device of my improved construction possesses superior advantages in point of simplicity, durability, and general efficiency and is applicable for all barb-wire machines or any wire-machine requiring an intermittent feed.

I claim—

1. A wire-feeding device, constructed with a pair of standards, a pair of blocks upon each standard, alined bearings integral with said blocks, shafts journaled in said bearings, meshing pinions upon said shafts, each of said pinions being provided with an integral lug, and a ring removably located upon each of said lugs, a portion of the periphery of one of said rings being grooved, substantially as specified.

2. A wire-feeding device, constructed with a pair of standards, a pair of blocks upon each standard, alined bearings integral with said blocks, shafts journaled in said bearings, meshing pinions upon said shafts, each of said pinions being provided with an integral lug, a ring removably located upon each of said lugs, a portion of the periphery of one of said rings being grooved, and a pair of check-rolls arranged immediately in front of the meeting peripheries of the rings, substantially as specified.

3. A wire-feeding device, constructed with a pair of standards, a pair of blocks upon each standard, alined bearings integral with said blocks, shafts journaled in said bearings, meshing pinions upon said shafts, each of said pinions being provided with an integral lug, a ring removably located upon each of said lugs, a portion of the periphery of one of said rings being grooved, a pair of check-rolls arranged immediately in front of the meeting peripheries of the rings, and means whereby one of said check-rolls is swung laterally, substantially as specified.

4. A wire-feeding device, constructed with a pair of standards, a pair of blocks upon each standard, alined bearings integral with said blocks, shafts journaled in said bearings, meshing pinions upon said shafts, each of said pinions being provided with an integral lug, a ring removably located upon each of said lugs, a portion of the periphery of one of said rings being grooved, a pair of check-rolls arranged immediately in front of the meeting peripheries of the rings, means whereby one of said check-rolls is swung laterally, a tension device for the opposite roll, and a wire-straightening tube removably located immediately in front of the meeting peripheries of the check-rolls, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK S. HUBER.

Witnesses:

EDWARD E. LONGAN,  
M. P. SMITH.