

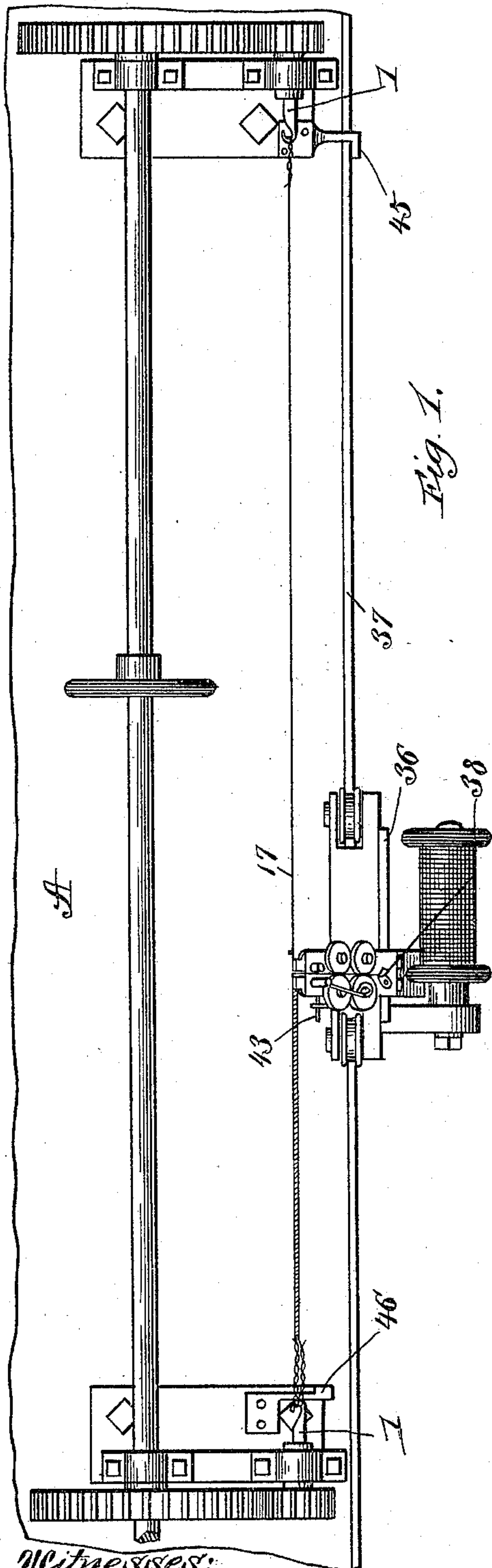
(No Model.)

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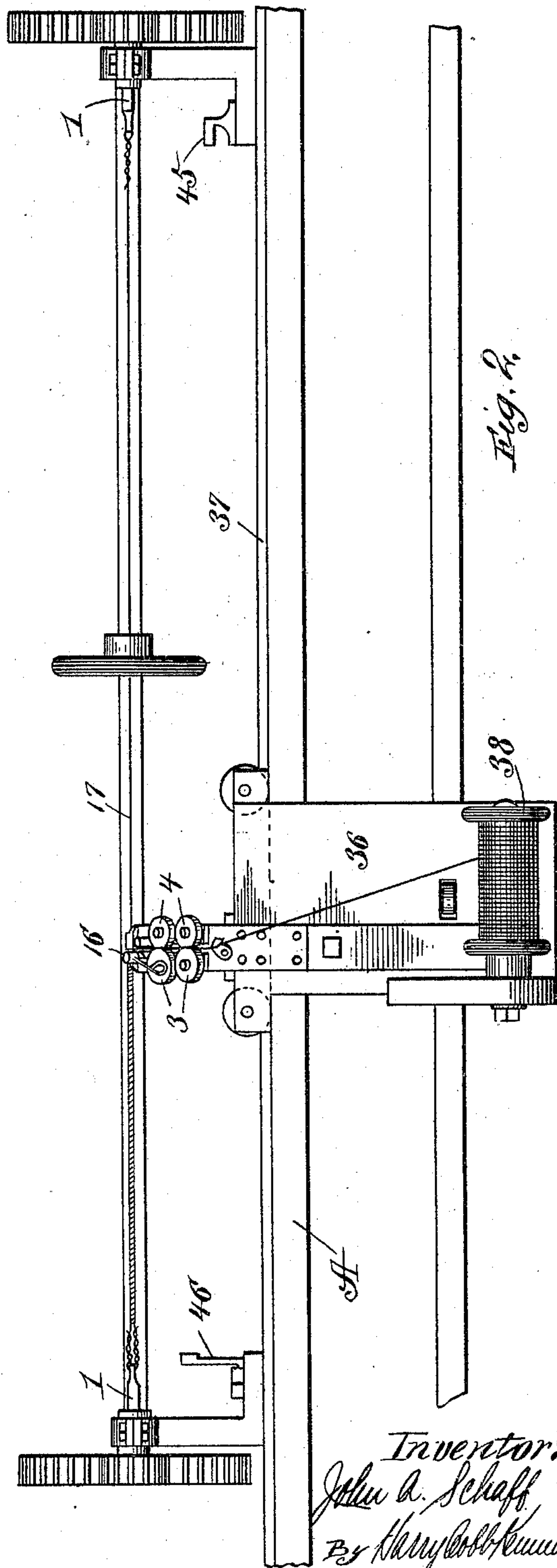
J. A. SCHAFF.
MACHINE FOR COVERING PIANO WIRES.

No. 584,708.

Patented June 15, 1897.



Witnesses:
Jno. A. Christy, Jr.
Rudolph W. Ritz



Inventor:
John A. Schaff
By Harry C. Kennedy
Atty.

(No Model.)

2 Sheets—Sheet 2.

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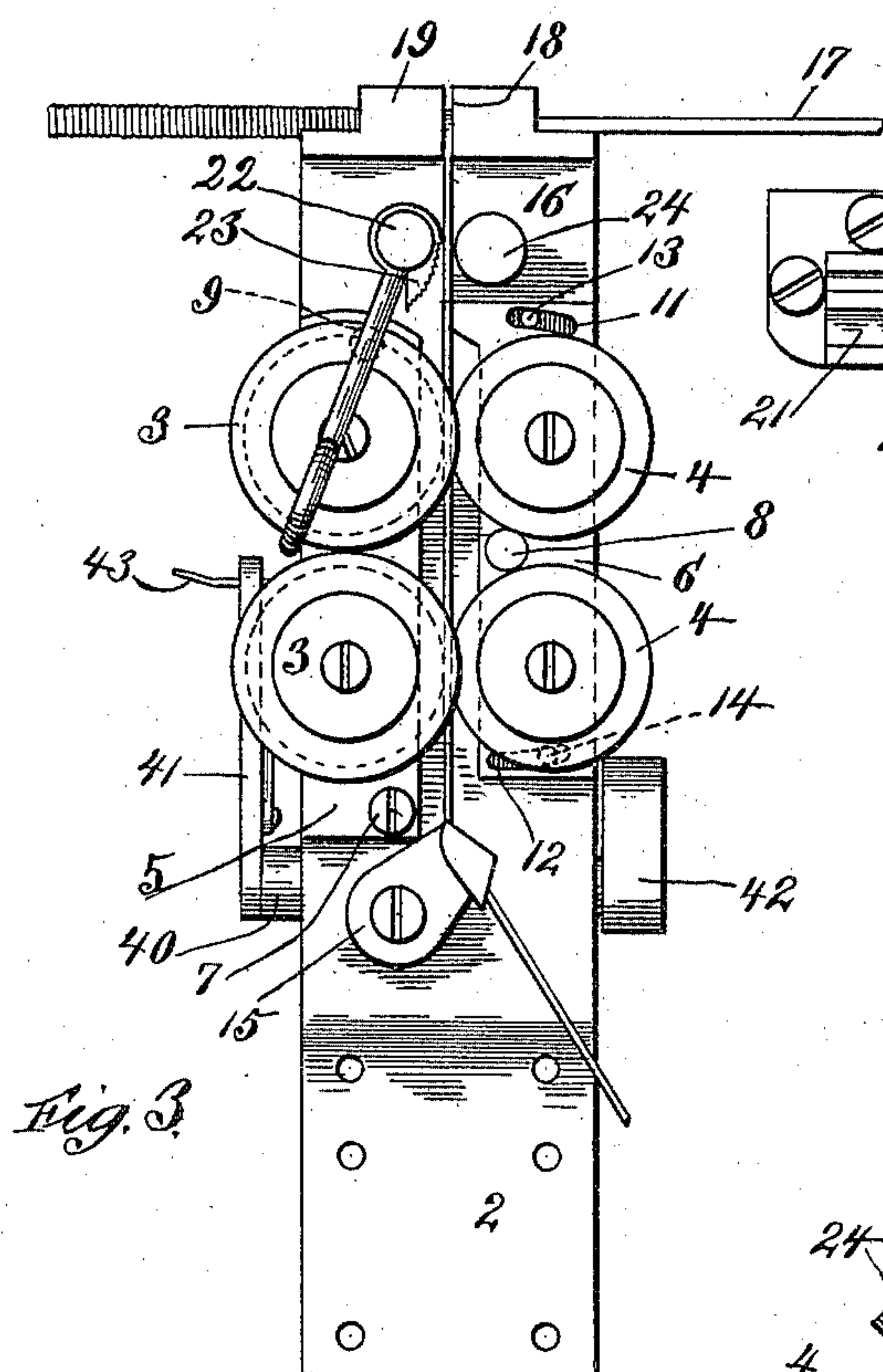


Fig. 3.

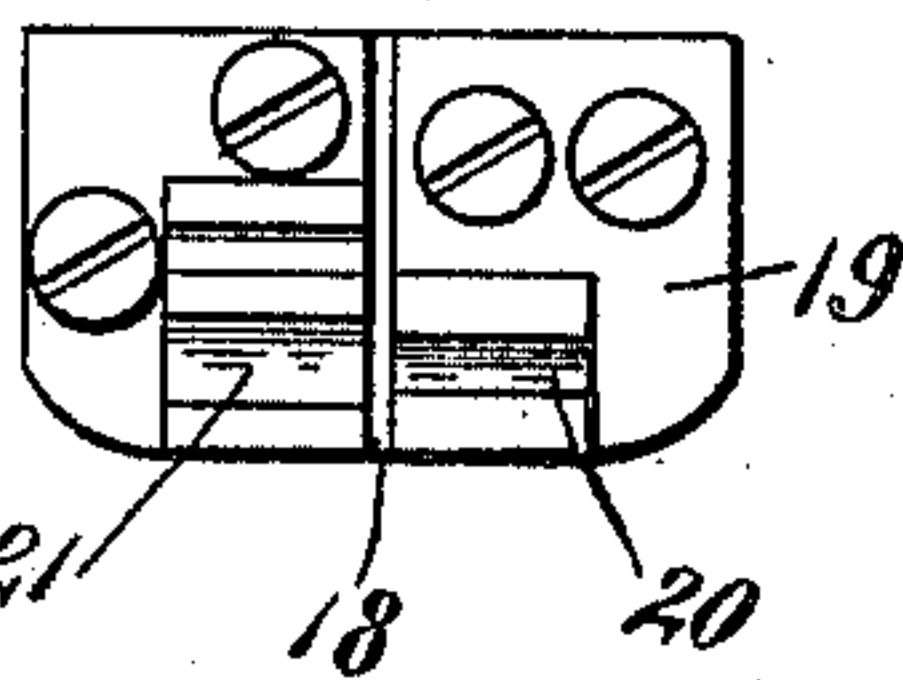


Fig. 6.

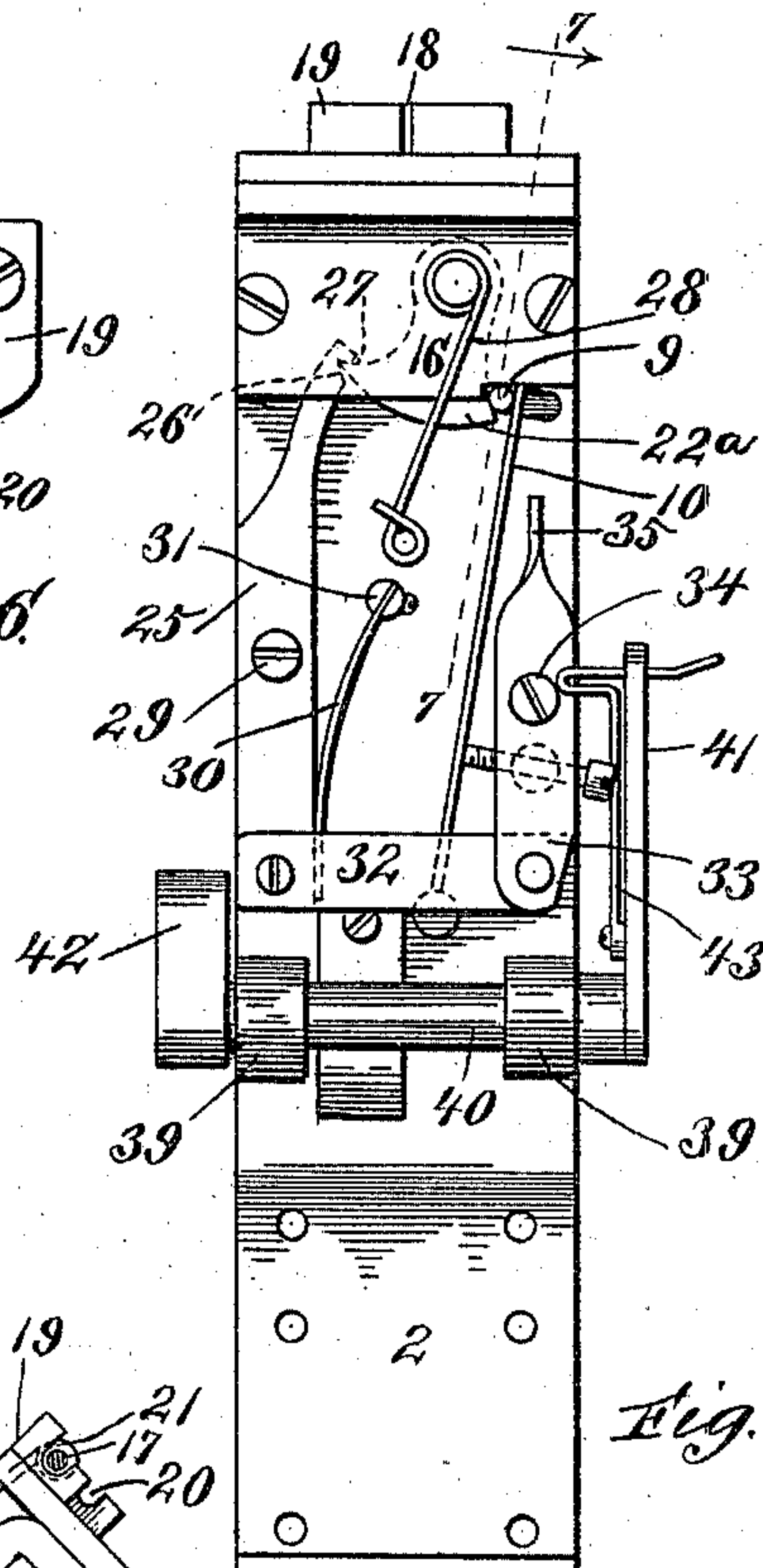


Fig. 4.

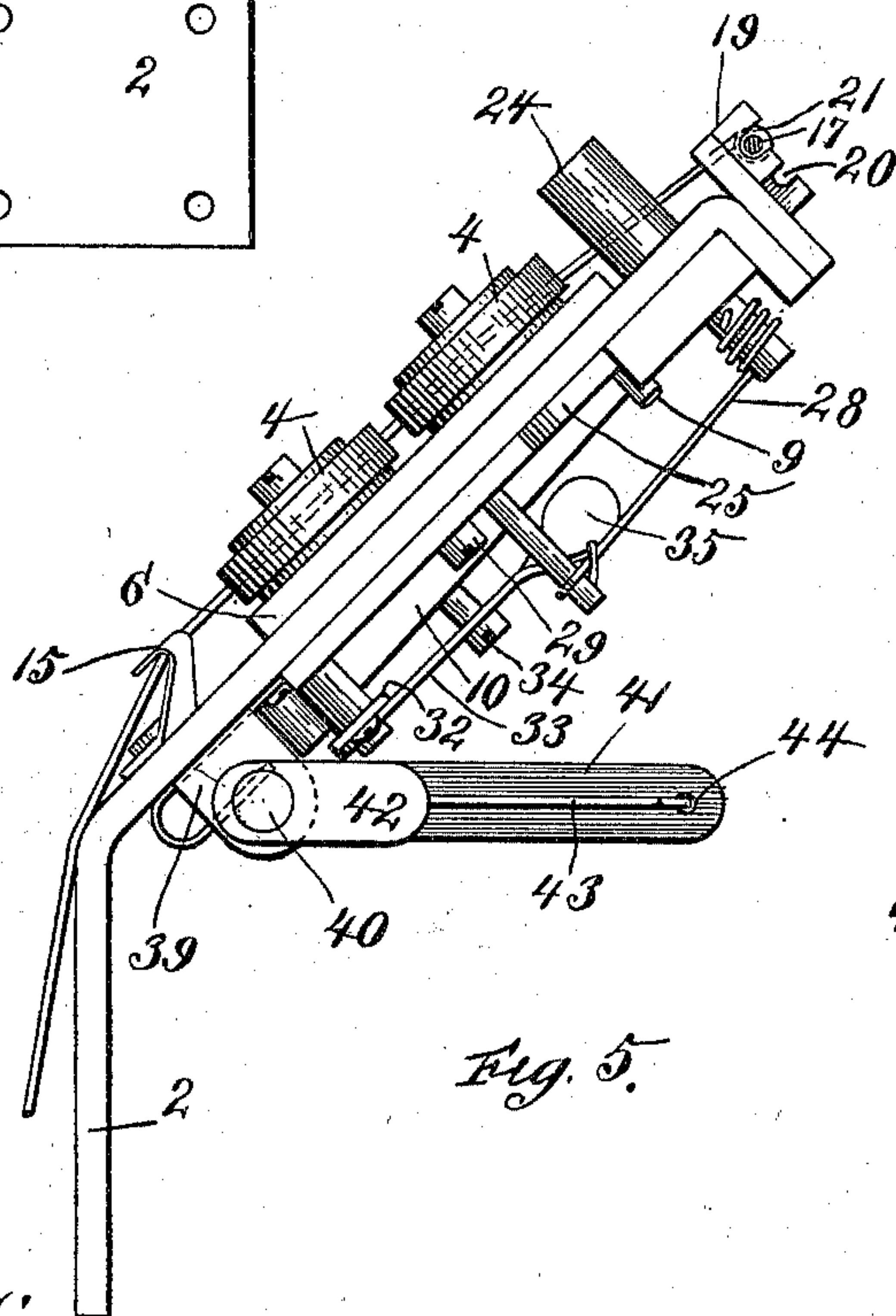


Fig. 5.

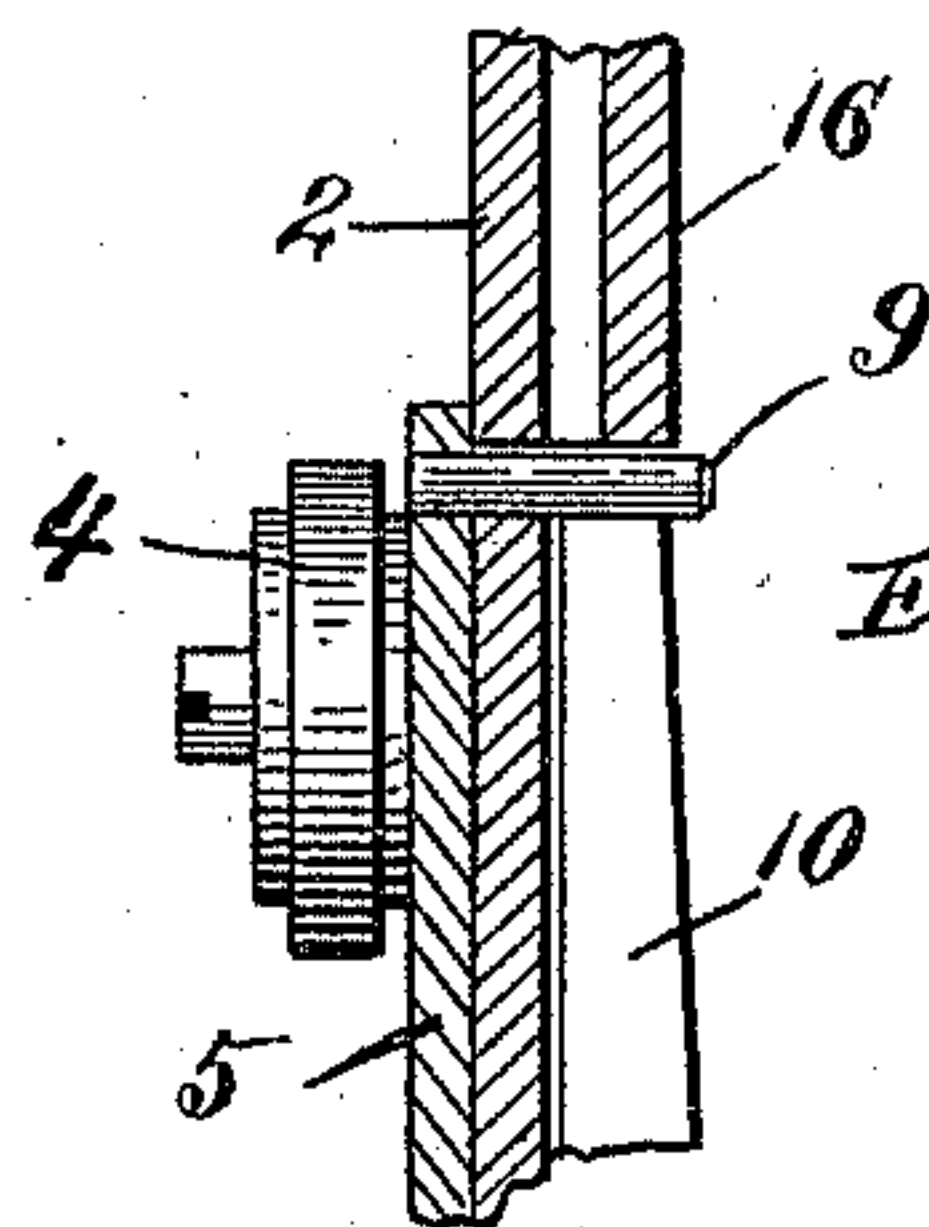


Fig. 7.

Witnesses:
for A. Christian, wry.
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UNITED STATES PATENT OFFICE.

JOHN A. SCHAFF, OF CHICAGO, ILLINOIS.

MACHINE FOR COVERING PIANO-WIRES.

SPECIFICATION forming part of Letters Patent No. 584,708, dated June 15, 1897.

Application filed July 29, 1896. Serial No. 557,549. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. SCHAFF, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Machines for Covering Piano-Wires; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a novel construction in attachments for machines for covering piano-wires, the object being to provide an attachment by means of which the wire will be evenly and quickly covered; and it consists in the features of construction and combinations of parts hereinafter fully described and claimed.

In the accompanying drawings, illustrating my invention, Figure 1 is a top plan view of a machine for covering piano-wires provided with my attachment. Fig. 2 is a front elevation of the same. Fig. 3 is a detail top plan view of the attachment. Fig. 4 is a bottom plan view of same. Fig. 5 is a side elevation of same. Fig. 6 is a detail view in elevation of a portion of my attachment. Fig. 7 is a detail sectional view of another portion of the same.

Referring now to said drawings, A indicates the machine, in which the piano-wires to be covered are strung. The said wires are attached at their ends to hooks 1, which are rapidly revolved to revolve said wire.

I will first describe my attachment in detail and afterward its operation in the machine.

My attachment consists of a plate 2, of iron or any other suitable material, upon which two sets of rollers 3 and 4 are pivotally mounted upon plates 5 and 6. Said rollers 3 are mounted upon said plate 5 and are provided with peripheral grooves, within which corresponding flanges on the faces of the rollers 4 fit. Said plate 5 is pivoted to said plate 2 at 7, and said plate 6 is pivoted thereto at 8, said pivot 8 lying between said rollers 4. Said plate 5 is provided at its other end with a pin 9, which passes through a slot in said plate 2, and is engaged at its lower end by a spring

10, which serves to press said plate 5 toward said plate 6, thus keeping said rollers 3 and 4 in close contact. By means of my way of pivoting said plates 5 and 6 the pressure on each pair of said rollers is at all times equal. Said plate 6 is also provided with slots 11 and 12, through which pins 13 and 14 on said plate 2 extend to act as stops to limit the movement of said plate 6. Mounted upon said plate 2 in the rear of said rollers 3 and 4 is a hook 15, which acts as a guide to feed the wire evenly to said rollers from a certain point. The covering-wire is drawn by the wire 17 through said hook 15, between said rollers 3 and 4, and thence through stopping devices 16, which are automatically operated to hold the said covering-wire so that it can be severed by hand or otherwise at the desired point. Said covering-wire passes thence through a notch 18 in a shoulder 19, at the front end of said plate 2, to the wire 17, upon which it is wound. Said shoulder 19 is provided with grooves 20 and 21 on each side of said notch 18, said groove 20 being smaller than said groove 21 to receive the uncovered wire 17, and said groove 21 being adapted to receive the covered wire, which is obviously thicker than said uncovered wire. Said stopping devices consist of a spring-operated revolving post 22, pivoted to said plate 2, and carrying an eccentric projection 23, provided with teeth, between which and a lug 24 said covering-wire is caught. Said revolving post 22 is provided with a trip 22^a below said plate 2, which is adapted to be engaged by a lever 25, provided with a notch 26, which is adapted to receive the corner 27 of said trip 22^a and hold the same in position against the action of a spring 28, which engages said post 22 and tends to throw the same over, so that said eccentric projection 23 rests against said lug 24, in which position it will catch and hold said covering-wire. Said lever 25 is pivoted to said plate 2 by a screw 29 and is engaged at its other end by a spring 30, which tends to hold it normally in engagement with said trip 22^a. Said spring 30 is secured at its other end to a lug 31, secured to said plate 2. A rod 32 is pivotally secured to said lever 25 at one end and to a lever 33 at its other end, said lever being provided with a flat thumb-piece 35 and pivoted at 34

upon the plate 2. Said lever 25 can obviously be disengaged to trip said revolving post 22 by pressing said thumb-piece inwardly. The rear end of said plate 2 is bent downwardly and is adapted to be secured to a carriage 36, running on a track 37 on said machine A and carrying a spool 38, of soft wire, which is drawn therefrom through said attachment. Pivoted in bearings 39 on said plate 2 is a shaft 40, carrying arms 41 and 42. Said arm 41 is long enough to cover said thumb-piece 35 and is provided with a spring 43, secured thereto adjacent said shaft 40 and extending to a point opposite said thumb-piece 35, and is there bent inwardly to a point adjacent said thumb-piece, and thence outwardly through an opening 44 in the end portion of said arm 41. Obviously by pressing upon the outer end of said spring 43 said post 22 would be tripped. Said arm 42 is shorter than said arm 41 for reasons which will be obvious from the description of the function of said arms hereinafter given. Said covering-wire is wound spirally upon said wire 17, the various helices of same lying side by side in close contact. By means of the side pressure exerted by the last-wound helix upon said covering-wire the carriage 36 is moved. In this manner the equal contact of all such helices is assured and a perfect piano-wire results.

In covering piano-wires it is usual to begin at the left and wind toward the right, the covering-wire being secured in any well-known way and extending from a point some distance from the left end of the wire to a point some distance from the right end thereof. The carriage is therefore started from the desired point at the left end of the wire 17, which may be determined in any suitable manner, and is then allowed to run toward the right end, where it is stopped by a lug 45, against which the free end of the lever 25 abuts, thus tripping the post 22 and catching and stopping the covering-wire which is severed at the outer end of said notch 18 and gives a perfect finish to that end of the covering. While said carriage is moving from left to right the arms 41 and 42 are in the position shown in Fig. 5—that is, said arms are turned down, so that said arm 42 will pass below said lug 45 and permit the lever 25 to strike the same. When only a single cover is desired on the wire, the same is removed as soon as the carriage has reached this point and the covering-wire cut. When, however, it is desired to put another cover over said first one, said arms 41 and 42 are turned up and the carriage placed so that said arm 42 abuts against said lug 45. The trip 22^a is again locked against the action of the spring, and the end of the covering having been secured to the wire 17 in the usual manner the machine is again started, and the carriage moves toward the left until the end of the spring 43 abuts against a lug 46 at the left end of the machine and again trips the post 22, when said cover-

ing-wire is severed. Said second covering usually extends from a point about one-half inch from the right end of the first covering to a point one-half inch from the left end thereof. To this end I make the arm 42 of sufficient width to make up the difference in extent of the two coverings provided for the severing of the second covering-wire at the required point.

I claim as my invention—

1. The herein-described devices for covering piano-wires consisting of a carriage carrying a spool of wire, and devices mounted upon said carriage and adapted to guide said wire, consisting of a plate having interacting rollers mounted thereon between which said covering-wire runs, stopping devices situated in front of said rollers, and devices for automatically operating said stopping devices, substantially as described.

2. In a machine for covering piano-wires the combination with a carriage carrying devices for feeding said covering-wire and devices for stopping the same, of a bed upon which said carriage is adapted to run and provided with devices adapted to coact with said stopping devices to operate the same to stop said covering-wire, at the desired point, substantially as described.

3. In a machine for covering piano-wires the combination with a carriage carrying devices for feeding the covering-wire and devices for stopping the same adapted to be operated by a trip, of a bed upon which said carriage is adapted to run and provided with devices for operating said trip to stop said wire at the desired point, substantially as described.

4. In a machine for covering piano-wires a carriage suitably mounted in position and carrying a spool of covering-wire, and devices carried by said carriage for feeding said wire and stopping the same consisting of a plate 2, rollers 3 and 4, plates 5 and 6 pivotally mounted upon said plate 2, and having said rollers 3 and 4 mounted thereon and adapted to be held in contact with each other by a spring engaging a lug on said plate 5, and spring-actuated stopping devices situated in front of said rollers 3 and 4 consisting of a revolving post pivoted to said plate and carrying an eccentric projection at its other end, a spring-actuated lever pivoted to said plate and adapted to engage said revolving post and hold the same against the action of its actuating-spring, substantially as described.

5. In a machine for covering piano-wires the combination with a carriage carrying a spool of covering-wire and devices for feeding and stopping said covering-wire consisting of a plate 2 having rollers 3 and 4 mounted upon plates 5 and 6 pivotally mounted upon said plate 2, and adapted to be held in contact with each other by a spring engaging a lug on said plate 5, and spring-actuated stopping devices situated in front of said rollers

3 and 4 consisting of a trip mounted upon a revolving post pivoted to said plate and carrying an eccentric projection at its other end, a spring-actuated lever pivoted to said plate
5 and adapted to engage said revolving post and hold the same against the action of its actuating-spring, of a bed upon which said carriage is adapted to run and carrying devices to engage said spring-actuated lever to

release said revolving post and stop said covering-wire, substantially as described.

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

JOHN A. SCHAFF.

Witnesses:

RUDOLPH W. LOTZ,
HARRY COBB KENNEDY.