

No. 756,850.

PATENTED APR. 12, 1904.

W. E. HAMILTON.
ELECTRICAL WIRE STATION.
APPLICATION FILED JUNE 18, 1903.

NO MODEL.

8 SHEETS—SHEET 1.

Fig. 2.

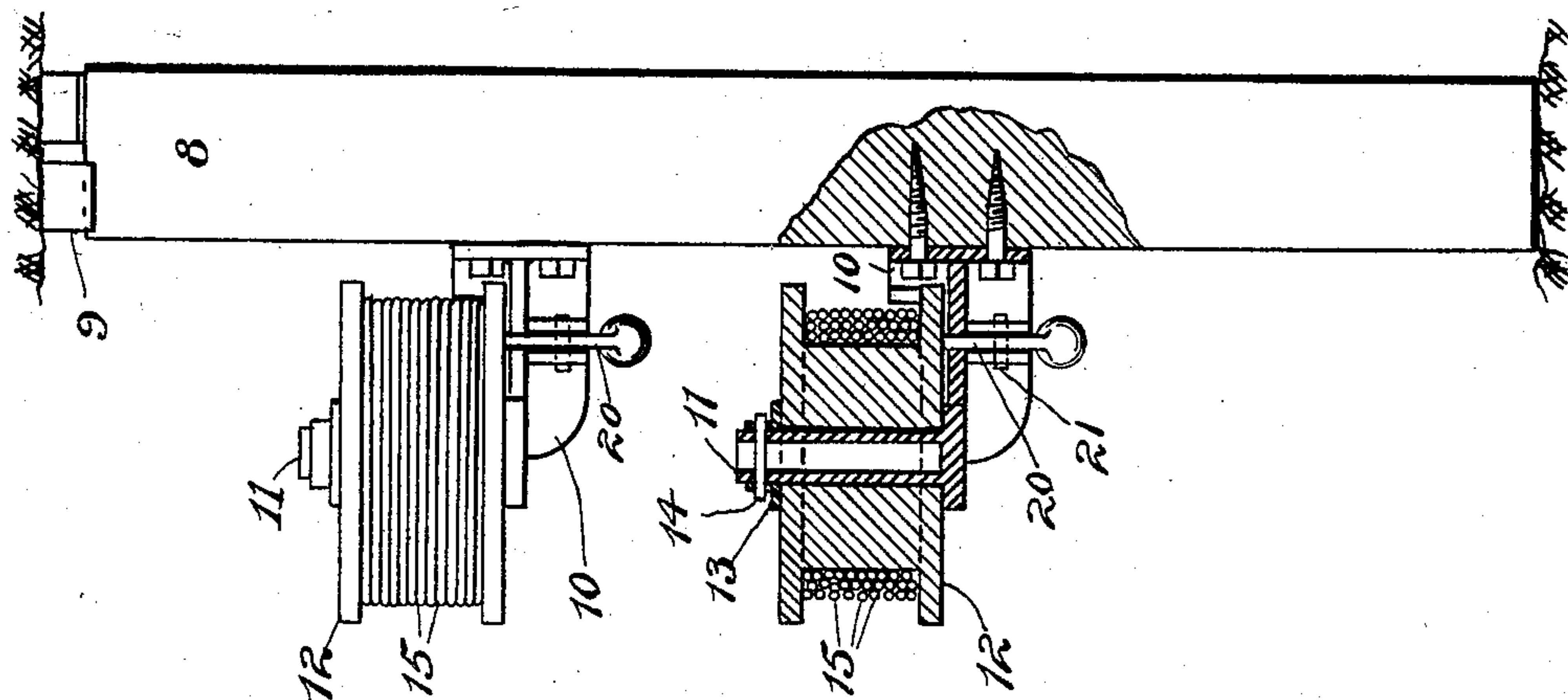
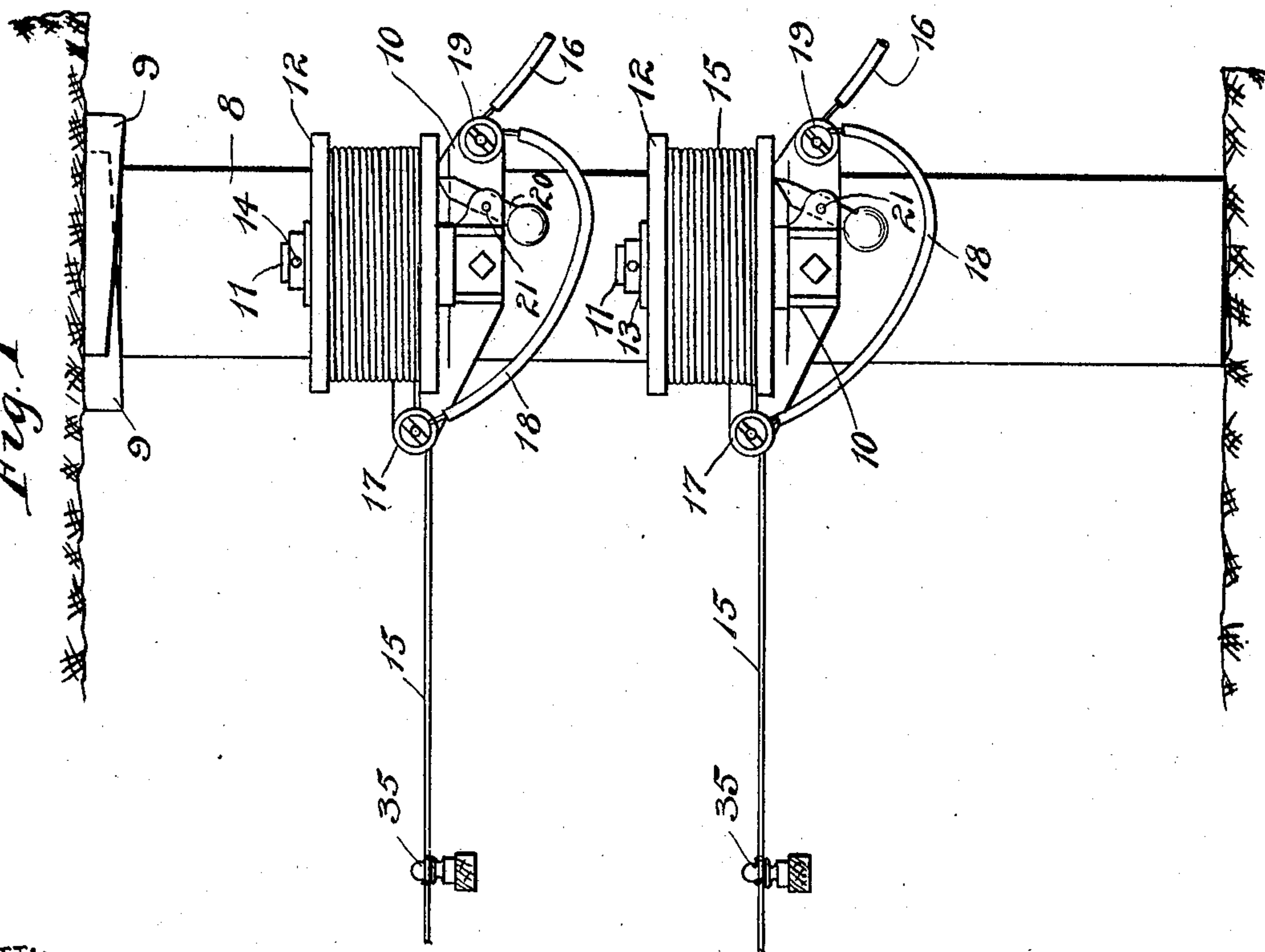


Fig. 1



Witnesses:

M. Siktberg.
W. R. Rowland

Inventor,

William E. Hamilton,

By

Glenn S. Noble

Att'y.

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3 SHEETS—SHEET 2.

Fig. 4.

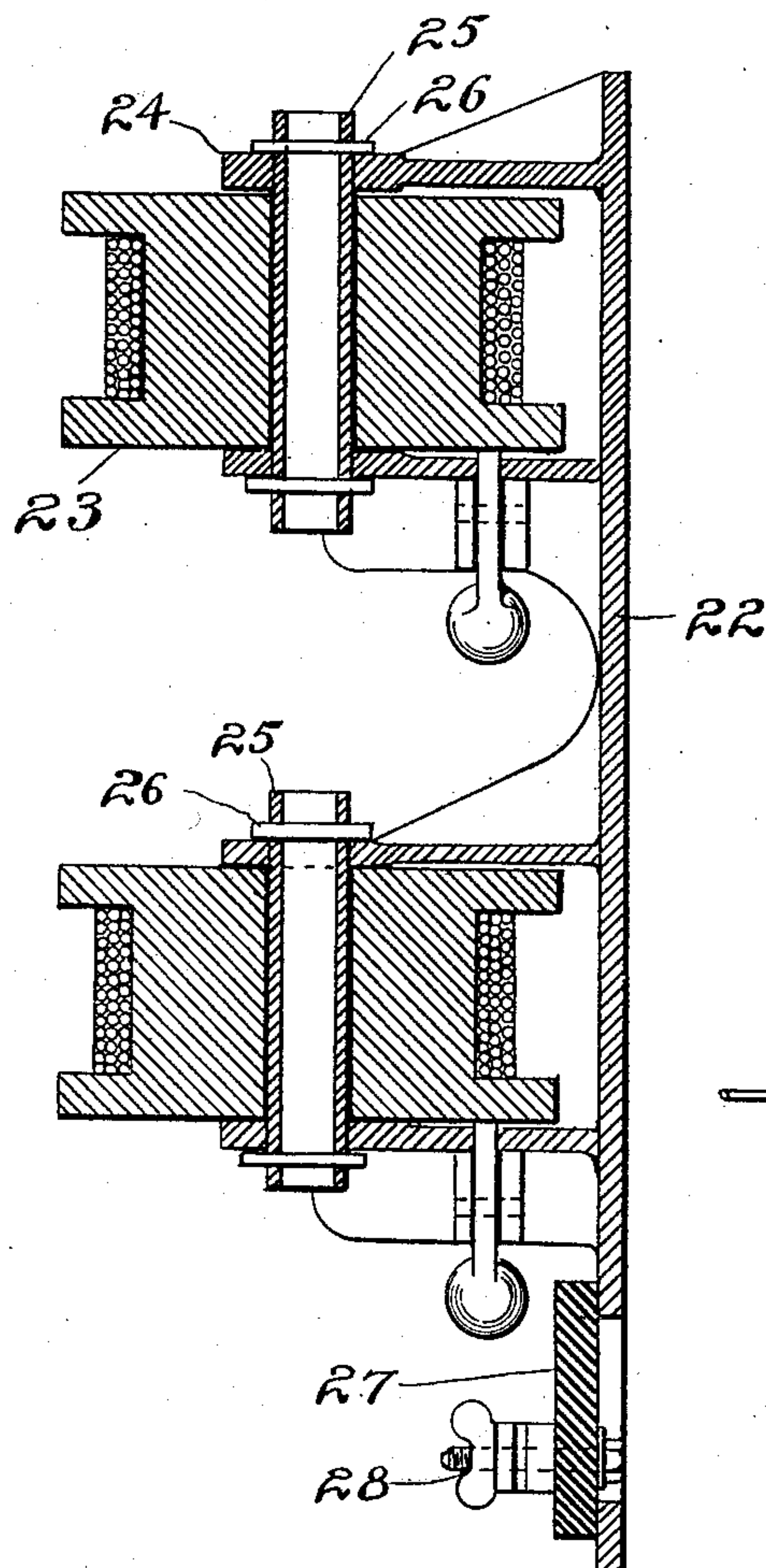
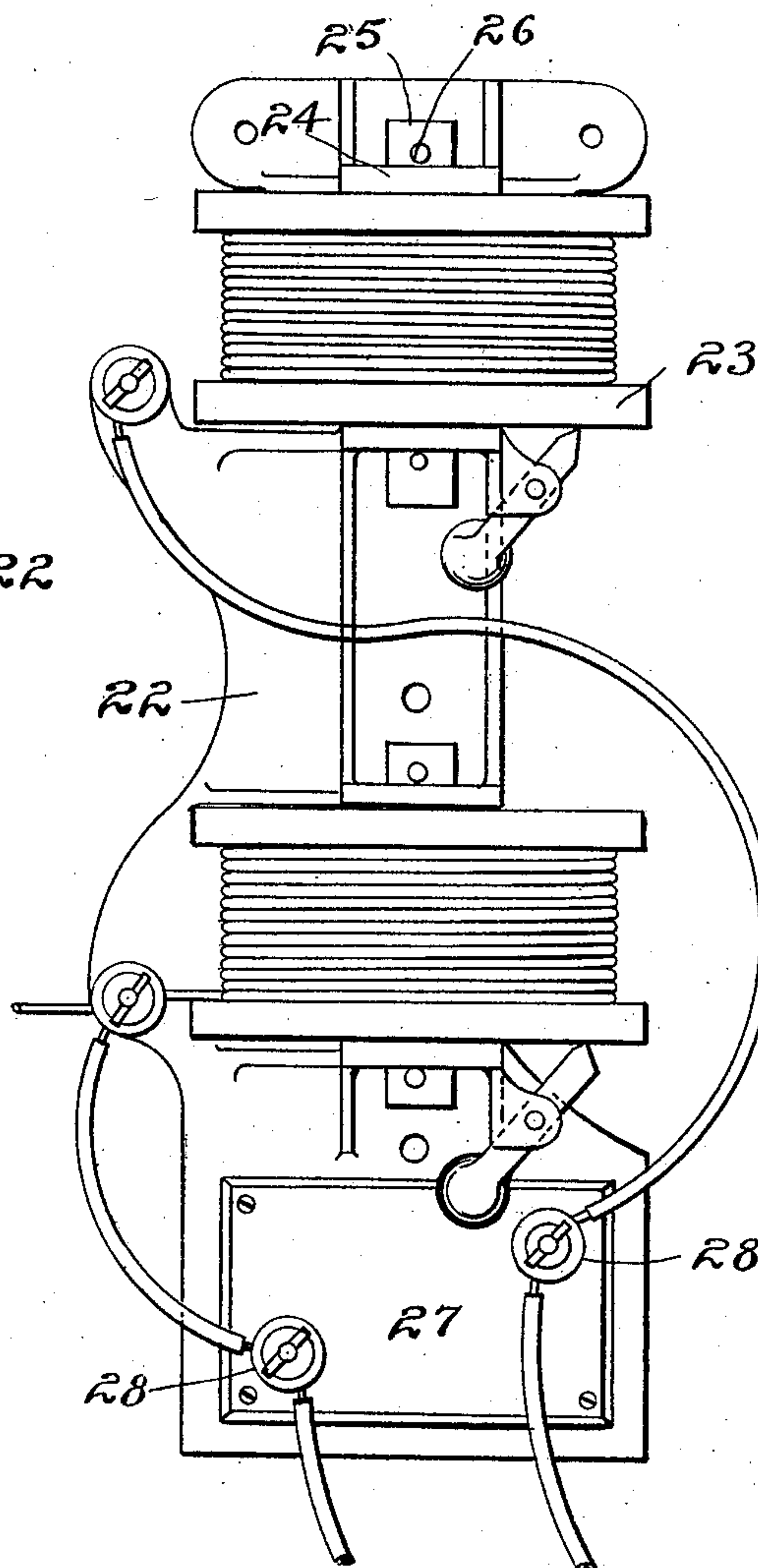


Fig. 3.



Witnesses:

M. Siktberg.

W. R. Rowland

Inventor,

William E. Hamilton,

By Glenn S. Noble

Att'y.

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3 SHEETS—SHEET 3.

Fig. 5

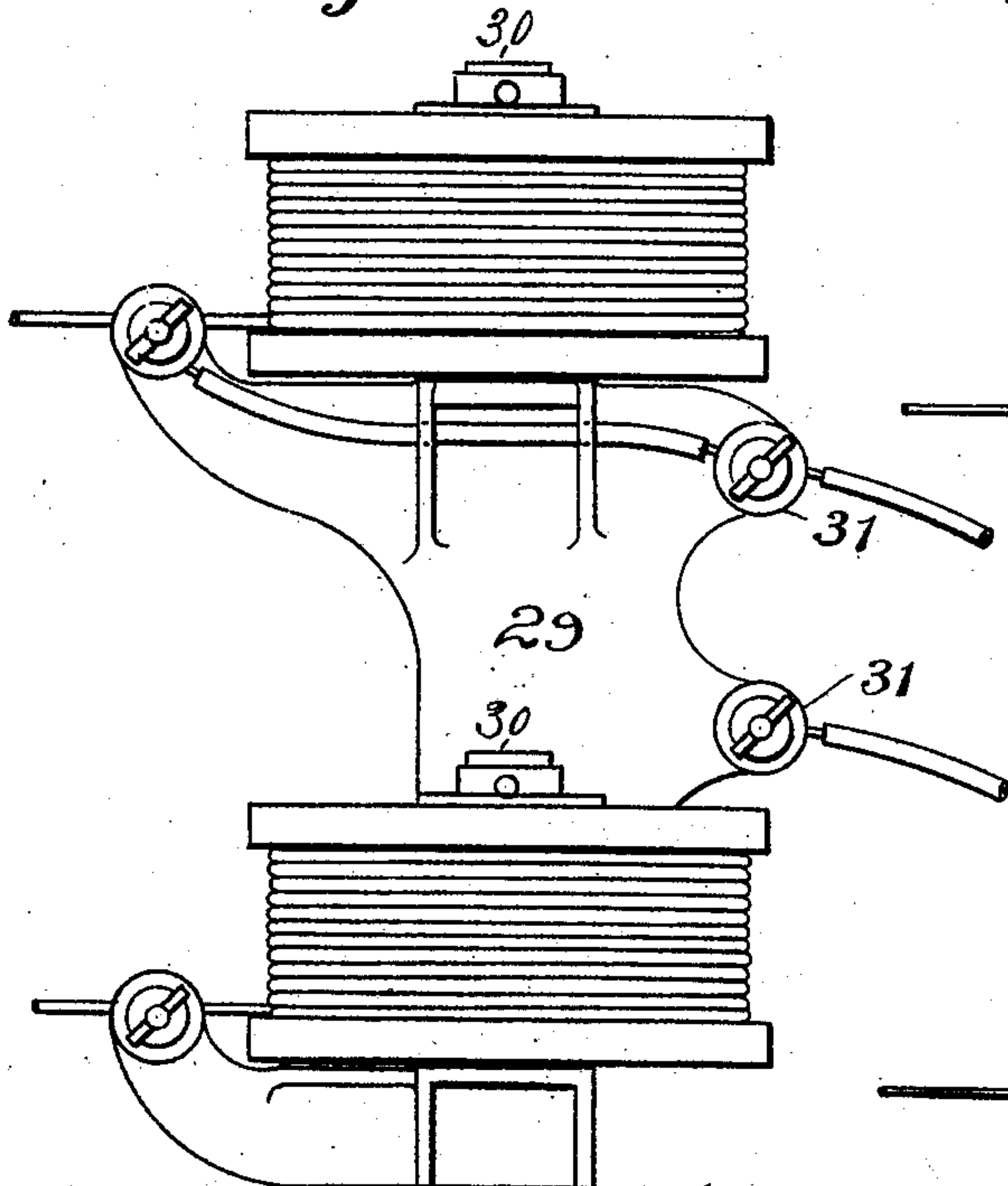


Fig. 6

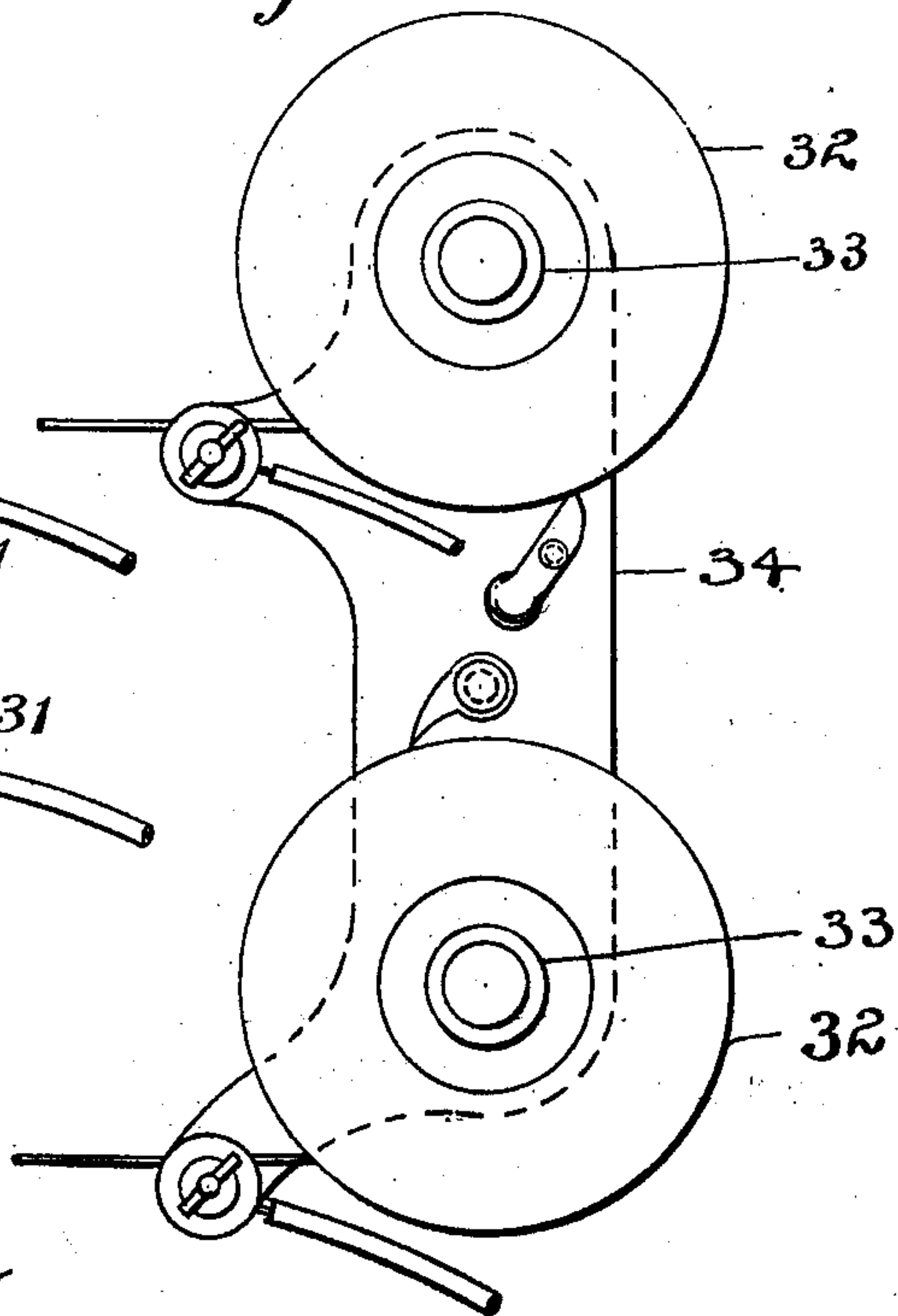
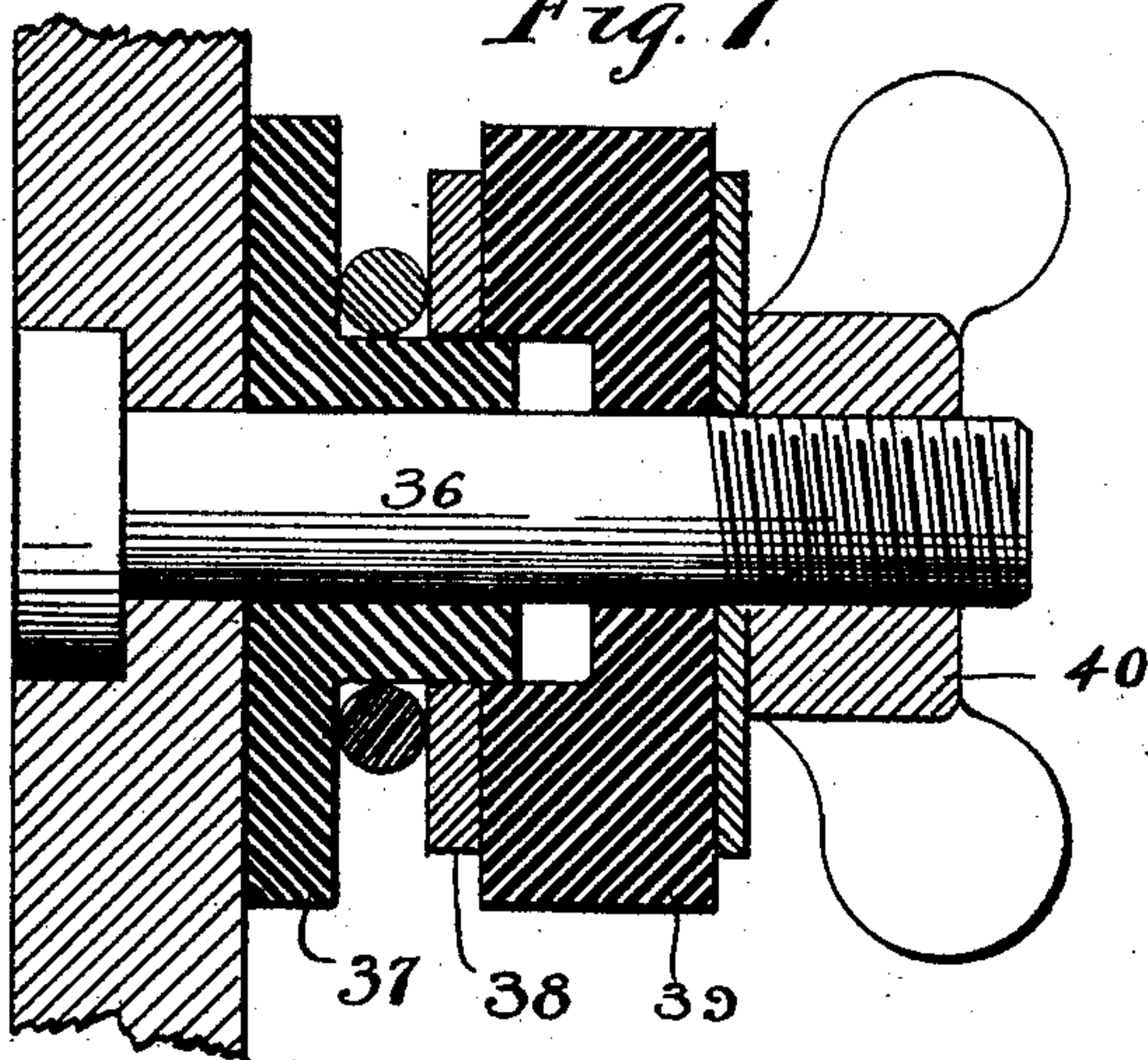


Fig. 7



Witnesses:

M. S. Koberg.

W. R. Rowland.

Inventor,

William E. Hamilton,

By *Glenn S. Noble*

Att'y.

UNITED STATES PATENT OFFICE.

WILLIAM E. HAMILTON, OF COLUMBUS, OHIO.

ELECTRICAL-WIRE STATION.

SPECIFICATION forming part of Letters Patent No. 756,850, dated April 12, 1904.

Application filed June 18, 1903. Serial No. 162,102. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. HAMILTON, a citizen of the United States, and a resident of Columbus, in the county of Franklin, in the State of Ohio, have invented certain new and useful Improvements in Electrical-Wire Stations, of which the following is a specification.

This invention relates more particularly to means for furnishing a convenient connection between electrical conductors and machines that are adapted to be run by electricity and located at a distance from the main wires or conductors. Its objects are to provide an apparatus of the character indicated which will be simple and durable in construction and convenient to set up to form the desired electrical connections. It is also intended to take the place of expensive and cumbersome apparatus which employs insulated cable and is usually attached to the machines employing electricity, such as are now commonly used. An example are those used in mining which are located in chambers and receive their electrical energy from wires in the main entry.

In the drawings accompanying this application, Figure 1 is a front view of an apparatus embodying this invention shown in connection with a mine-post and illustrating the method of carrying the wire to the main entry. Fig. 2 is a side elevation of the same shown with parts broken away and others in cross-section. Figs. 3 and 4 show front and sectional views, respectively, of a more elaborate form of construction adapted for use in factories or the like and is provided with a switchboard. Figs. 5 and 6 show further modified forms, and Fig. 7 is a sectional detail of a binding-post adapted to be used with this device.

As shown in Fig. 1, a post 8, such as commonly used in mines, is securely wedged by wedges 9 between the floor and roof of the mine in a position convenient to the machine to be operated. Rigidly secured to the post 8 are brackets 10, having spindles 11, formed either integrally therewith or secured thereto. On the spindles 11 are spools or reels 12, which are held in position by washers 13 and cotter-pins 14. The reels 12 are preferably made of

wood or other non-conductive material or may be insulated in any well-known manner from the brackets. On the reels 12 is wound a sufficient amount of copper wire or other conductor 15 to reach from the cross-entry to the face of the room or as far in as necessary to connect with the short insulated cable 16, leading to the machine to be operated. The wire 15 passes through the binding-post 17, by means of which it may be clamped at any desired point. The binding-post 17 is formed in any suitable manner, so that the wire will be insulated from the iron bracket and make an electrical connection with the short cable 18, which connects from the binding-post 17 to a terminal post 19, as shown in Fig. 1. This terminal post is similar to the post 17 and provides means for connecting the cable 18 to the insulated cable 16, which connects directly with the machine to be operated. A dog or pawl 20 is pivoted at 21 to the bracket 10 and is adapted to engage the lower surface of the reel 12 to prevent the same from unwinding when not desired.

In the device shown in Figs. 3 and 4 the bracket 22 is adapted to carry two reels 23, and for this purpose is provided with lugs or arms 24, which are provided with holes for a pipe or other spindle 25, which is held by means of pins 26 to carry the reels 23. The reels are provided with retaining-pawls as above described. At the base of the bracket is a switchboard 27, which is provided with binding-posts 28, with which the various cables connect, as above described.

In the modifications shown in Figs. 5 and 6 the general arrangement is substantially the same. In Fig. 5 the double bracket 29 is provided with vertical reel-spindles 30, as shown in Fig. 2, and with binding-posts 31 for the cable connections, as above described. In Fig. 6 the arrangement is substantially as heretofore described, but the reels 32 are mounted on horizontal spindles 33 on the brackets 34.

Any convenient form of binding-post may be used with this apparatus, but I have shown in Fig. 7 a preferred form of binding-post, in which a bolt 36, having its head countersunk in the bracket, carries an insulated sleeve 37,

around which the wires are bent. A clip or washer 38 around this sleeve is pressed against the wires to make a suitable contact by means of a recessed insulator 39, which engages the sleeve 37 and the bolt 36, and is clamped in position by means of a wing-nut 40.

The method of installing and operating this apparatus is as follows: The post 8 is rigidly secured in position, as shown in Fig. 1. The brackets carrying the spindles are next fastened to the post at a suitable distance apart, and the reels, one of which contains the wire for the positive and the other the wire for the negative connections, are placed in position. A sufficient amount of the wire is then unwound to reach to the main conductors and is connected therewith. The pawl having been depressed to allow the unwinding is released to prevent further unwinding and the post 17 securely clamped on the wire. It will be noted that if the distance from the post to the main conductor is too great for the strength of the wire, insulating-supports 35 may be provided at convenient distances. It is also obvious that the reel may be unwound to make connection with the main line and afterward placed in position on the spindle. When the face of the room in which a machine—for instance, a coal-cutting machine—has advanced so far that the short cable 16, which accompanies each machine, does not reach from the binding-post to the machine, the wedges are knocked out and the post carrying the reels is set nearer to the face. To do this, it is only necessary to loosen the binding-posts and disengage the pawls to allow the reels to unwind as they are moved forward. When they are again set in position, the wire is clamped and the pawl engages the reel, as previously described.

Having thus described this invention, which I do not wish to limit to the exact forms or details of construction herein shown, what I claim, and desire to secure by Letters Patent, is—

1. In an electrical-wire station, the combination of means for holding a supply of wire, means for paying out said wire, and means for temporarily clamping said wire adjacent to the holding means, said clamp being adapted for making electrical connection with auxiliary cables.

2. In an electrical-wire station, the combination of a bracket, a reel supported on said bracket, and a binding-post on said bracket for engaging the wire drawn off from said reel.

3. In combination, a bracket provided with one or more spindles, reels mounted on said spindles, electrical conductors wound on said reels, and a binding-post adjacent to said reels adapted to clamp said conductor and form an electrical connection between the same and an auxiliary conductor adapted to connect with a machine using an electrical current whereby

the current is cut off from any wire remaining wound on the reels.

4. A portable electrical-wire station comprising one or more brackets adapted to be mounted on suitable supports, reels formed of insulating material, mounted on said brackets, electrical conductors wound on said reels, binding-posts adjacent to said reels adapted to engage said conductors and form an electrical connection between the same and other conductors whereby the current is cut off from any wire remaining wound on the reels.

5. In a device for holding a quantity of wire forming an electrical terminal, the combination of a suitably-mounted reel adapted to hold said wire, a binding-post adapted to engage said wire to clamp the same, a pawl pivotally mounted adjacent to said reel and adapted to engage the same to prevent unwinding when not desired.

6. In an electrical-wire station the combination of a bracket, a spool revolvably mounted on said bracket, electrical conductors wound on said spool and extending therefrom, a pawl mounted on said bracket and engaging said spool, an insulated binding-post engaging said wire from the spool, a second insulated binding-post, a conductor connecting between said posts and a conductor leading from said second post adapted to make electrical connection with a machine to be operated.

7. In an electrical-wire station for mines and the like, the combination of a post, a plurality of electrical-conductor reels formed of insulated material, means for mounting said reels on said posts, electrical conductors wound on said reels and extending therefrom, binding-posts adapted to insulate said conductors and clamp the same, and secondary conductors engaged by said posts and forming electrical connections with the first-named conductors.

8. In a portable electrical terminal station, the combination with a movable support comprising a post, brackets secured to said post, insulated reels revolvably mounted on said brackets, means for preventing said reels from turning when not desired, electrical conductors wound on said reels and extending therefrom, and means for forming connections between said conductors and auxiliary conductors.

9. In combination, a bracket, arms extending from said bracket, insulated reels pivotally mounted between said arms, pawls mounted on said bracket and engaging said reels, electrical conductors wound on said reels, binding-posts adapted to engage said conductors, a switchboard mounted on said bracket and insulated conductors connecting between said binding-post and said switchboard.

WILLIAM E. HAMILTON.

Witnesses:

D. H. LASLEY,
P. G. FLICK.