

(No Model.)

2 Sheets—Sheet 1.

J. P. COLEMAN.
SIGNAL.

No. 604,304.

Patented May 17, 1898.

FIG. 1.

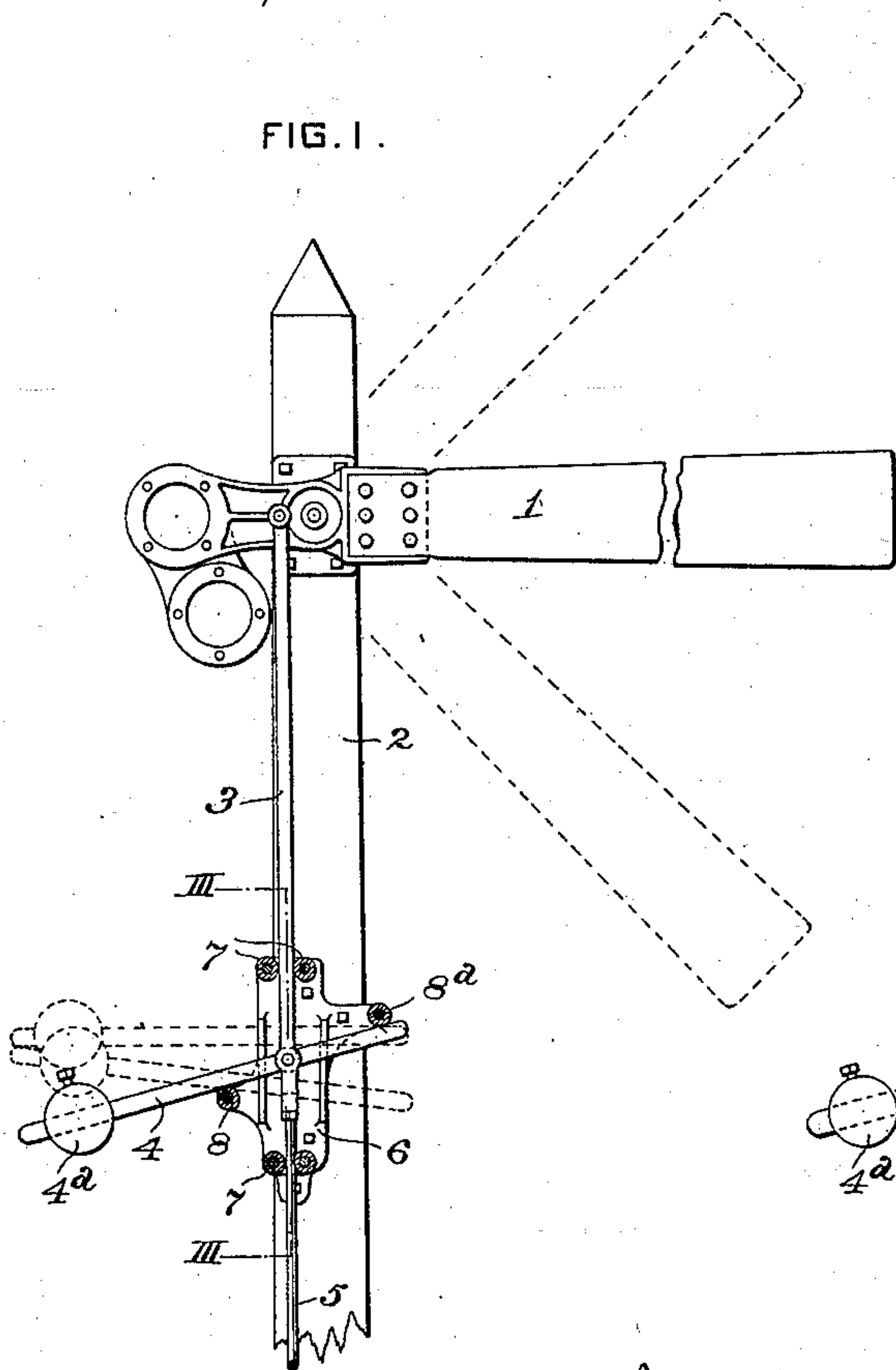


FIG. 2.

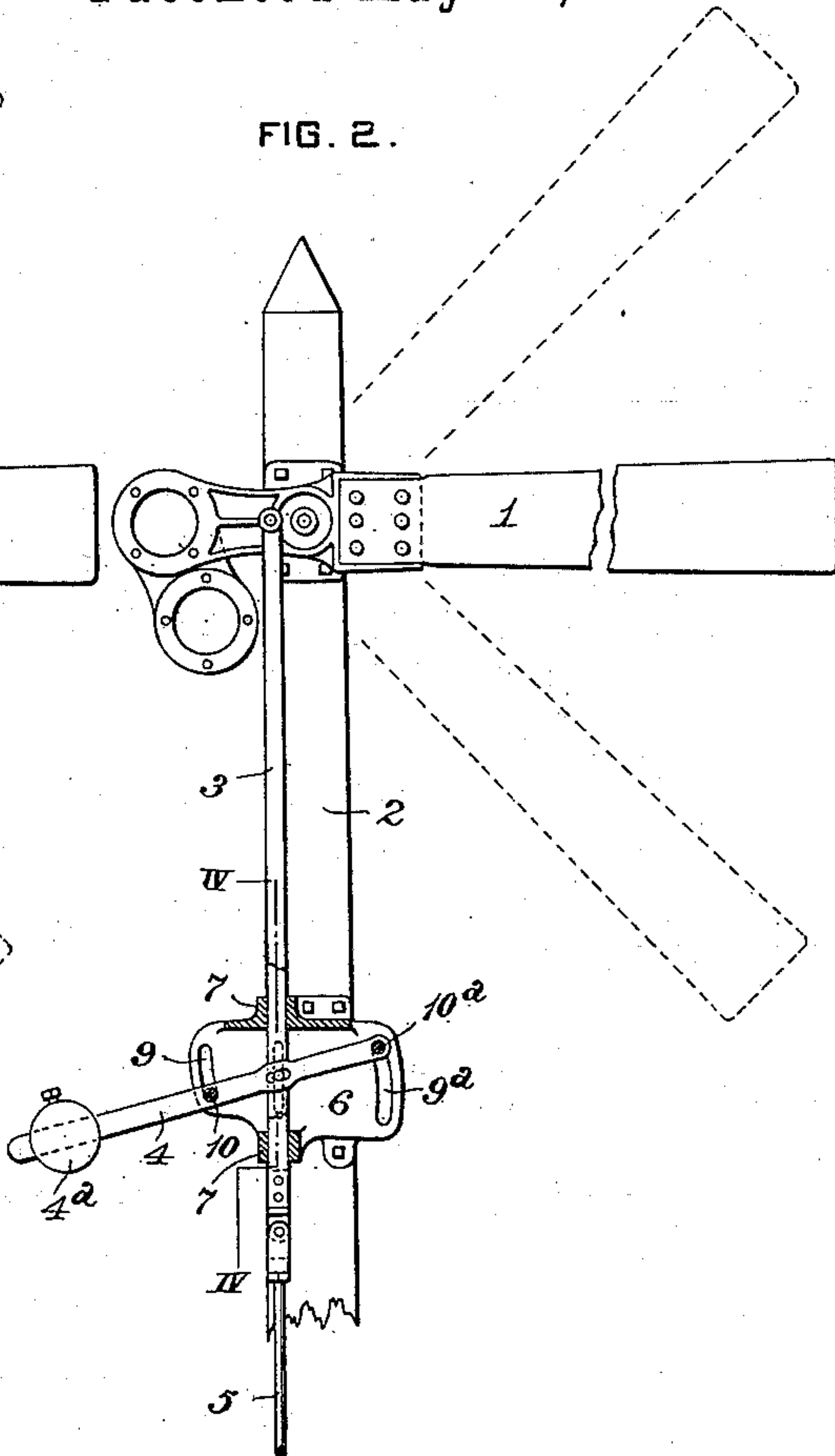


FIG. 3.

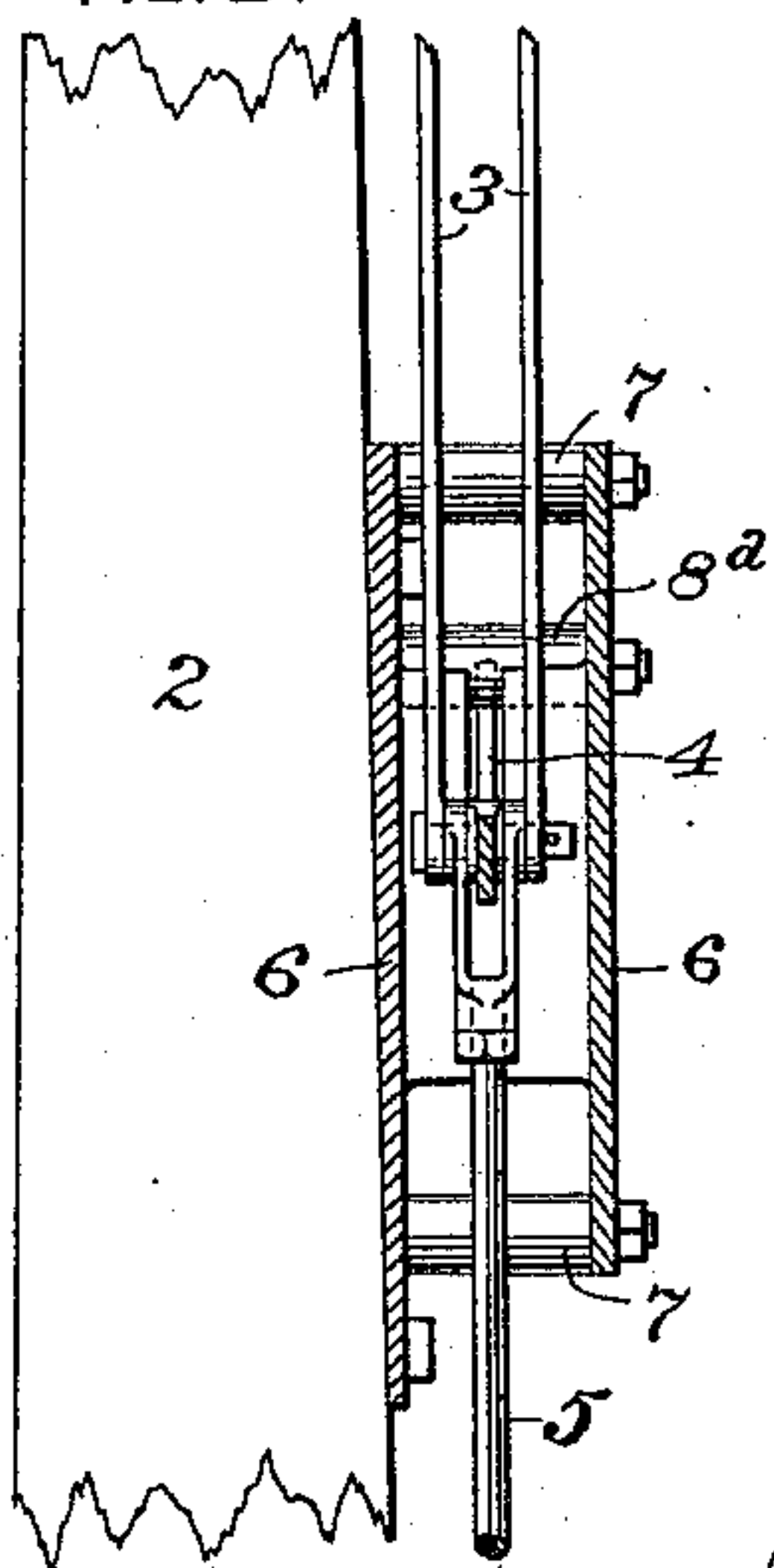


FIG. 5.

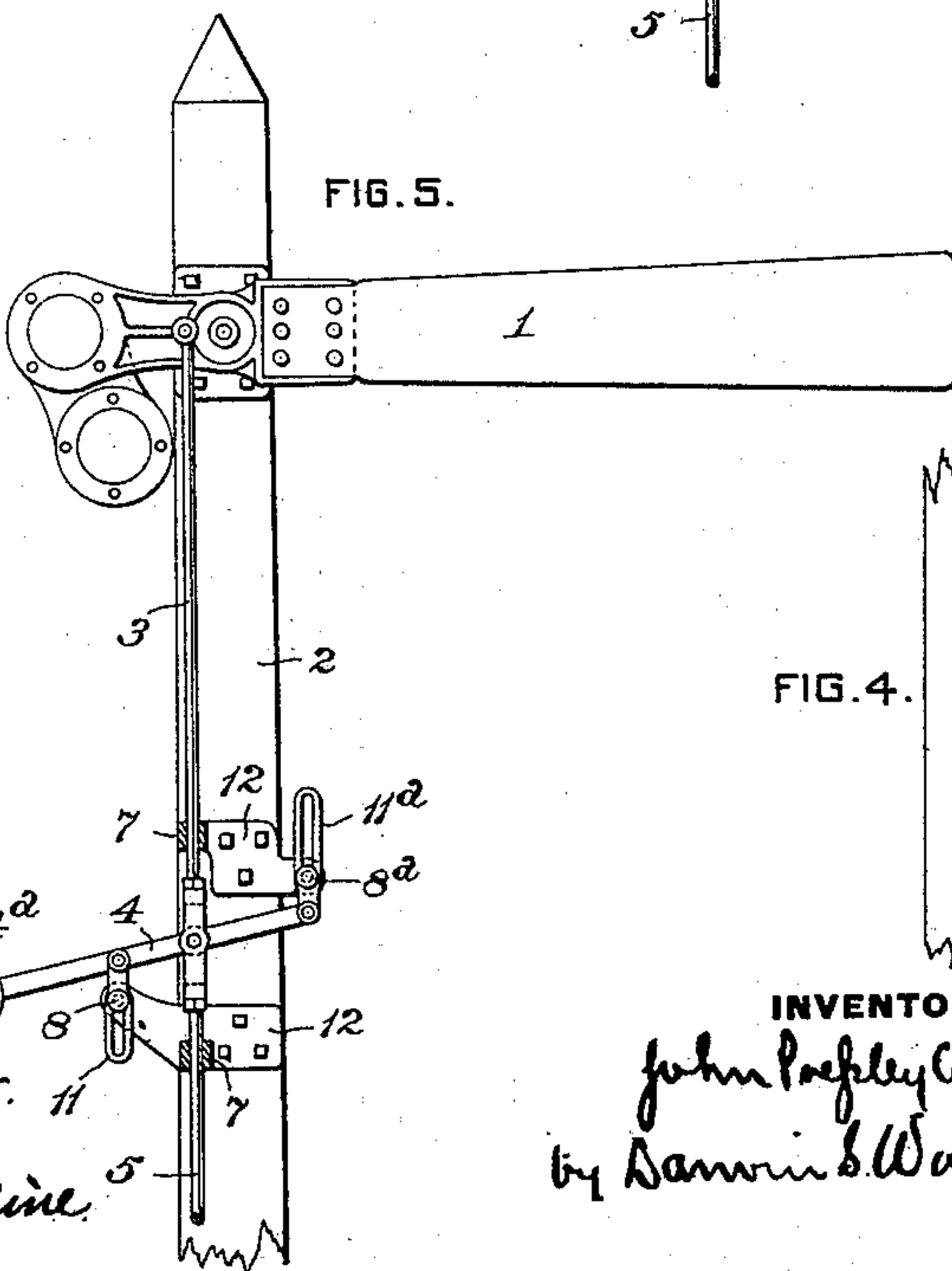
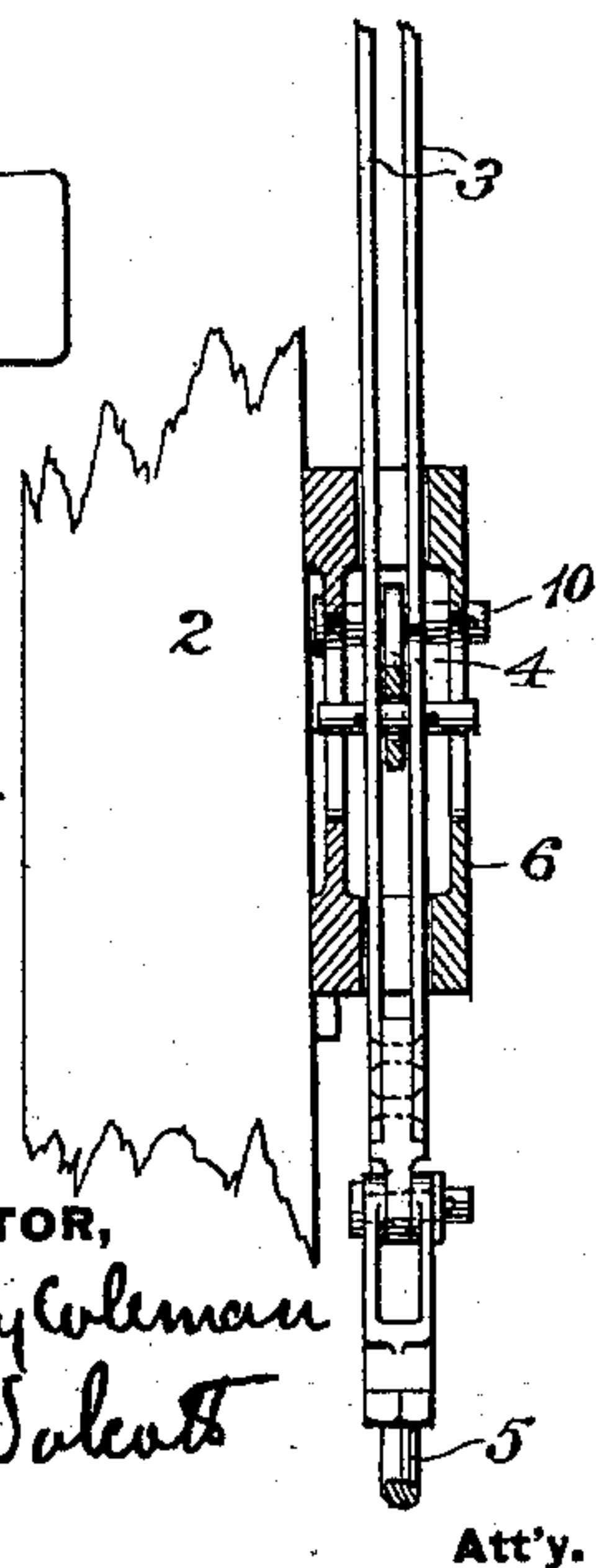


FIG. 4.



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FIG. 6.

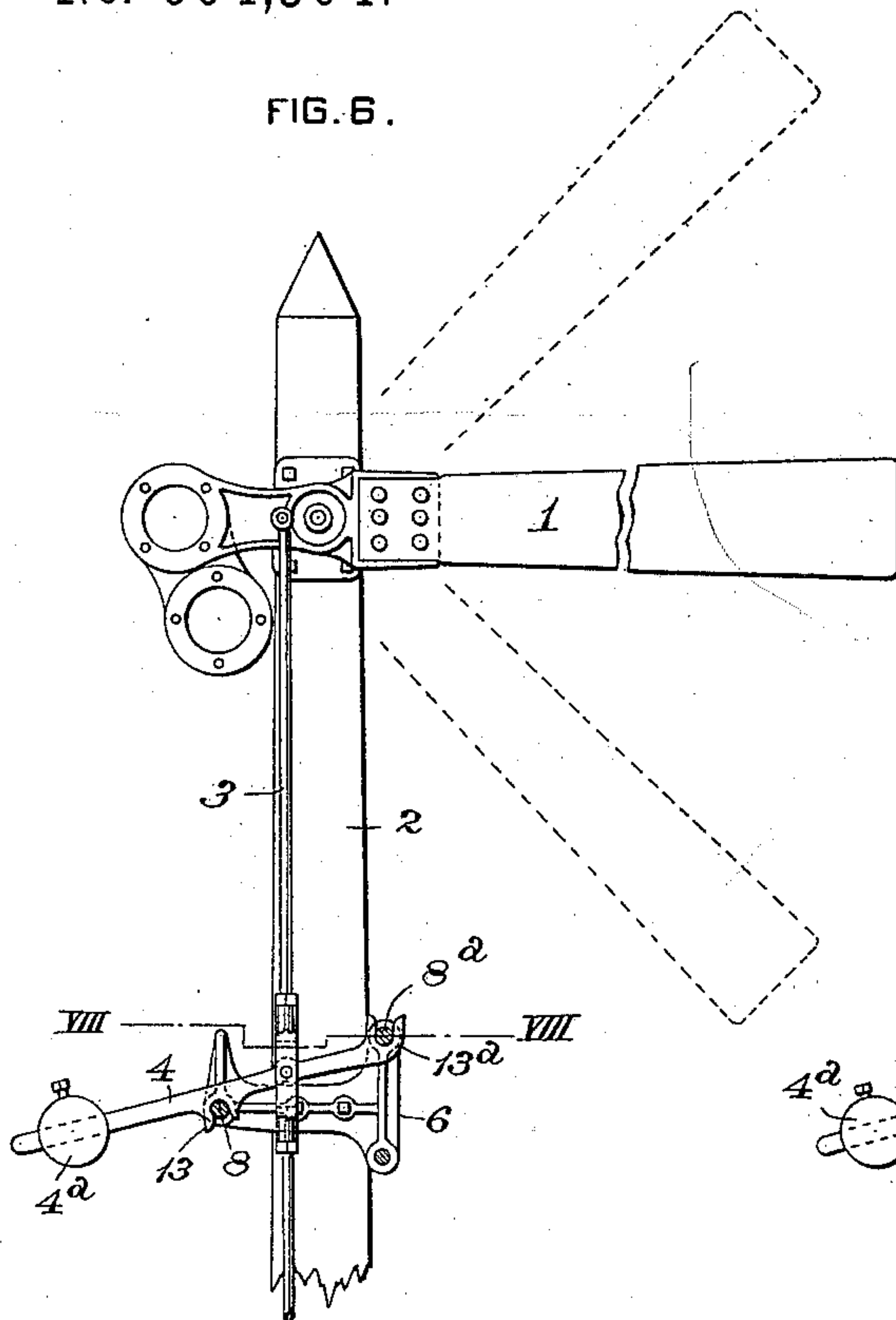


FIG. 7.

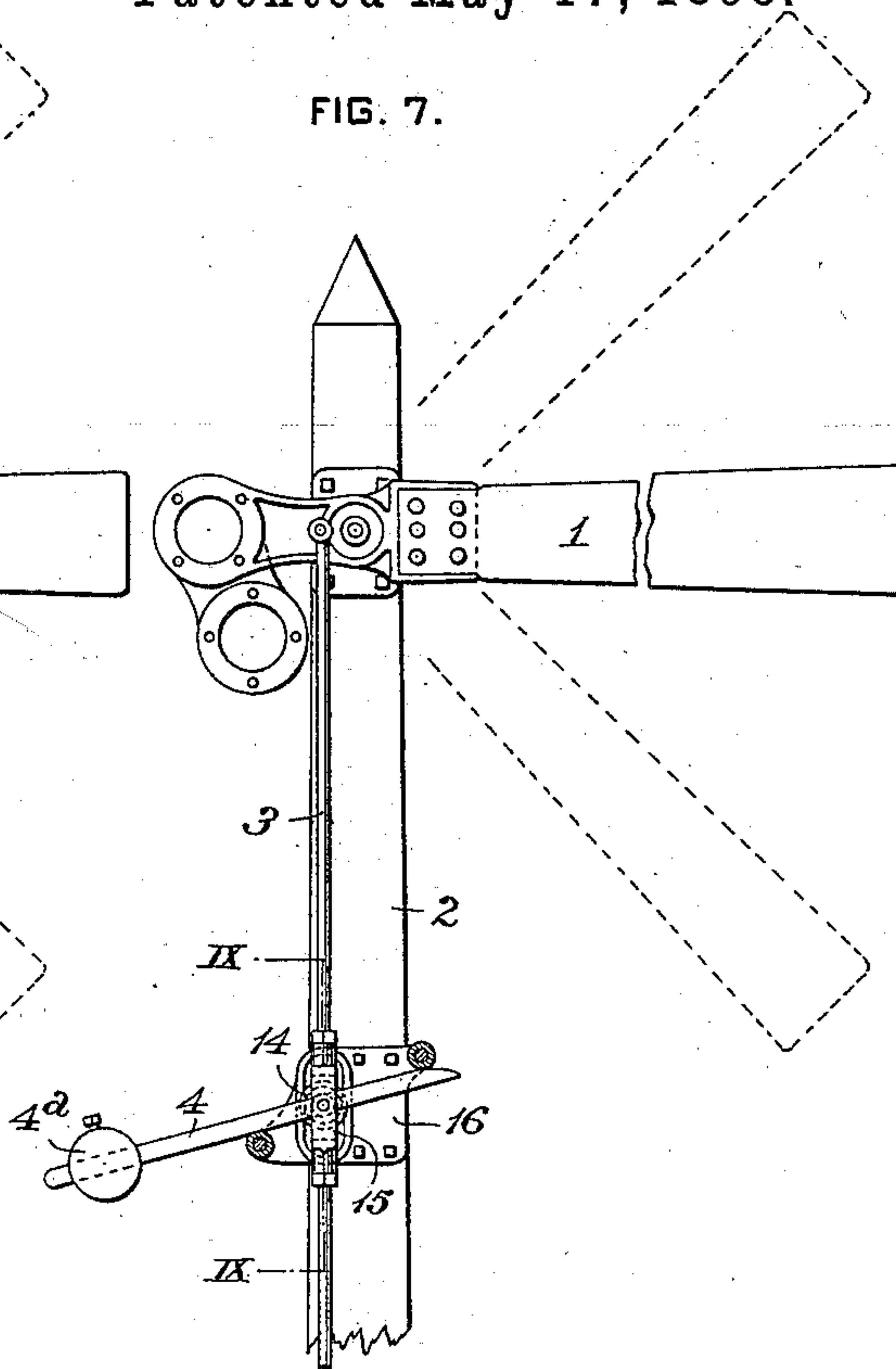


FIG. 8.

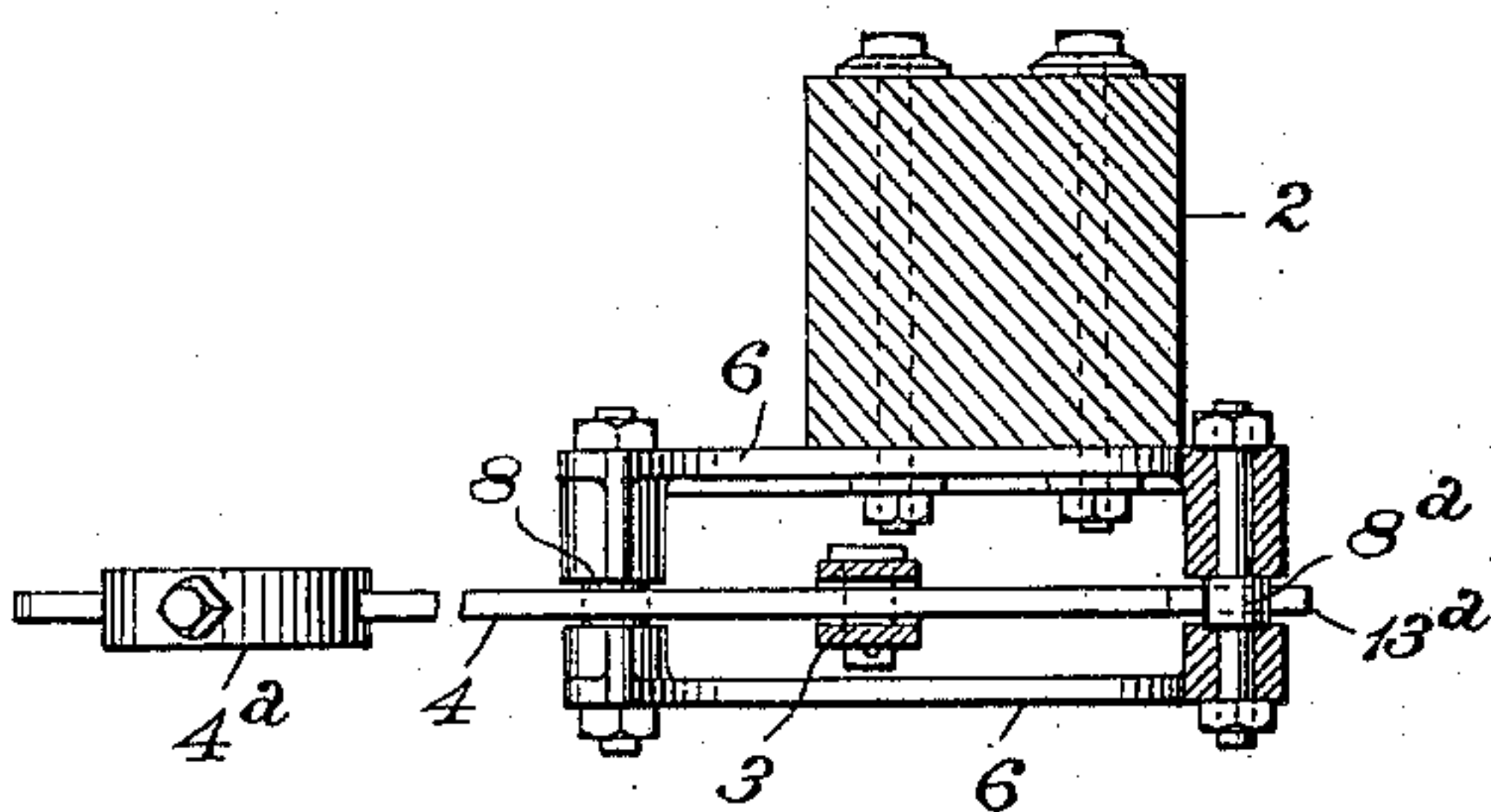
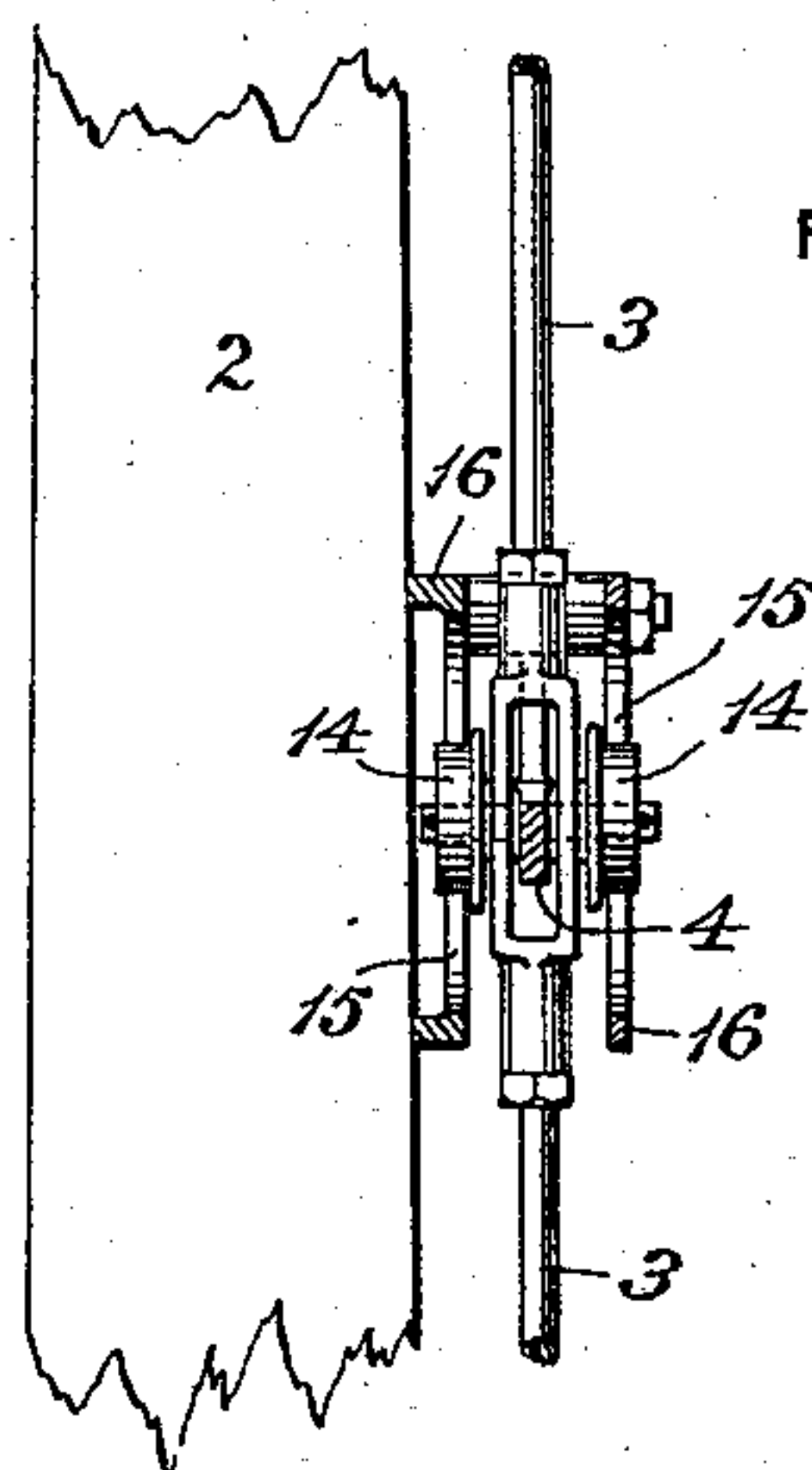


FIG. 9.



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UNITED STATES PATENT OFFICE.

JOHN PRESSLEY COLEMAN, OF EDGEWOOD PARK, PENNSYLVANIA, ASSIGNOR TO THE UNION SWITCH AND SIGNAL COMPANY, OF SWISSVALE, PENNSYLVANIA.

SIGNAL.

SPECIFICATION forming part of Letters Patent No. 604,304, dated May 17, 1898.

Application filed March 1, 1898. Serial No. 672,185. (No model.)

To all whom it may concern:

Be it known that I, JOHN PRESSLEY COLEMAN, a citizen of the United States, residing at Edgewood Park, in the county of Allegheny and State of Pennsylvania, have invented or discovered certain new and useful Improvements in Signals, of which improvements the following is a specification.

The invention described herein relates to certain improvements in semaphore-signals of that class or kind generally known as "three-position" signals, which are adapted to be shifted from normal or danger position to caution and safety positions.

It is necessary in all railway-signals that the indicator-blade should be so mounted that in case of the breakage of any of the connections between the signal and its operating mechanism the blade will certainly and automatically return to normal or danger position. To this end the invention consists, generally stated, in the employment of a weight which is connected to the signal-blade and is adapted to be raised when the signal is shifted to clear or caution position and to operate when free to act to return the signal to normal or danger position.

In the accompanying drawings, forming a part of this specification, Figures 1 and 2 are sectional elevations of signals, illustrating, respectively, two different forms or modifications of my improvement. Fig. 3 is a sectional view, the plane of section being indicated by the line III III, Fig. 1. Fig. 4 is a similar view on a plane indicated by the line IV IV, Fig. 2. Figs. 5, 6, and 7 are views similar to Fig. 1, illustrating further modifications of my improvement; and Figs. 8 and 9 are sectional detail views of the construction shown in Figs. 6 and 7, respectively.

In the practice of my invention the signal-blade is pivotally supported on the post 2 in the usual or any suitable manner. In lieu of counterweighting the short or spectacle end, so that it will be heavier than the blade portion, the portions on opposite sides are made of approximate equal weight. The upper end of the rod 3 is connected to the signal at one side of its pivotal point, while the lower end of the rod is connected to a floating lever 4.

An operating-rod 5 is connected at one end either to the lever 4 or to an extension of the signal-rod. In the construction shown in Figs. 1 to 4 the lever 4, which has a weight 4^a secured on or near one end, is arranged transversely of a casing or frame 6, secured to the signal-post, and the casing is provided with guides 7, which will prevent lateral movements of the signal and operating rods 3 and 5. Suitable abutments or fulcrums 8 and 8^a are arranged on opposite sides of the lever and on opposite sides of the point of connection of the signal-rod to the lever. These abutments or fulcrums may be formed by rollers mounted on suitable pins, as shown in Figs. 1 and 3, or by the ends of slots 9 9^a, formed in the sides of the casing or frame 6 for the reception of pins 10 10^a, passing through the lever.

In the construction shown in Fig. 5 slotted links 11 11^a are connected to the floating lever, and the fulcrums 8 8^a are formed by bolts or studs secured to brackets 12, bolted to the signal-post, said brackets being provided with sleeves 7^a, which will guide the signal and operating rods.

In the construction shown in Figs. 6 and 8 the lateral movement of the rods, and consequently the longitudinal movement of the floating lever, is prevented by forks 13, formed on the lever and adapted to engage the fulcrums 8 and 8^a. The signal-rod 3 may have an antifriction-roller 14, mounted thereon and adapted to move up and down in a slot 15, formed in a plate 16, secured to the signal-post, as shown in Figs. 7 and 9, and having the fulcrums 8 8^a secured thereto.

If the signal-rod be forced upwardly to clear the signal, the weighted end of the lever 4 is raised, the lever turning on the fulcrum 8^a. If, however, the operating-rod be pulled down to shift the signal to "caution," the lever 4 will turn on the fulcrum 8, the weighted end of the lever being again raised.

It will be readily understood from the foregoing that in case of the breakage of the connections to the operating-lever when the signal is either at clear or caution position the weight in the lever will cause the signal to move to danger or normal position, where it

will be held by the lever bearing upon the abutments or fulera 8 and 8^a.

I claim herein as my invention—

1. The combination of a signal, means for
5 shifting the signal to clear or caution positions, a weighted lever, fulera for said lever and a connection from the signal to the lever, whereby the weighted end of the lever is raised when the signal is shifted to either caution
10 or clear positions, substantially as set forth.

2. The combination of a balanced signal, a floating lever having a weight at or near one

end, a rod connecting the signal to the lever, fulera arranged on opposite sides of the point of connection of the rod to the lever, and 15 means for causing the lever to turn on either fulcrum, substantially as set forth.

In testimony whereof I have hereunto set my hand.

JOHN PRESSLEY COLEMAN.

Witnesses:

DARWIN S. WOLCOTT,
F. E. GAITHER.