

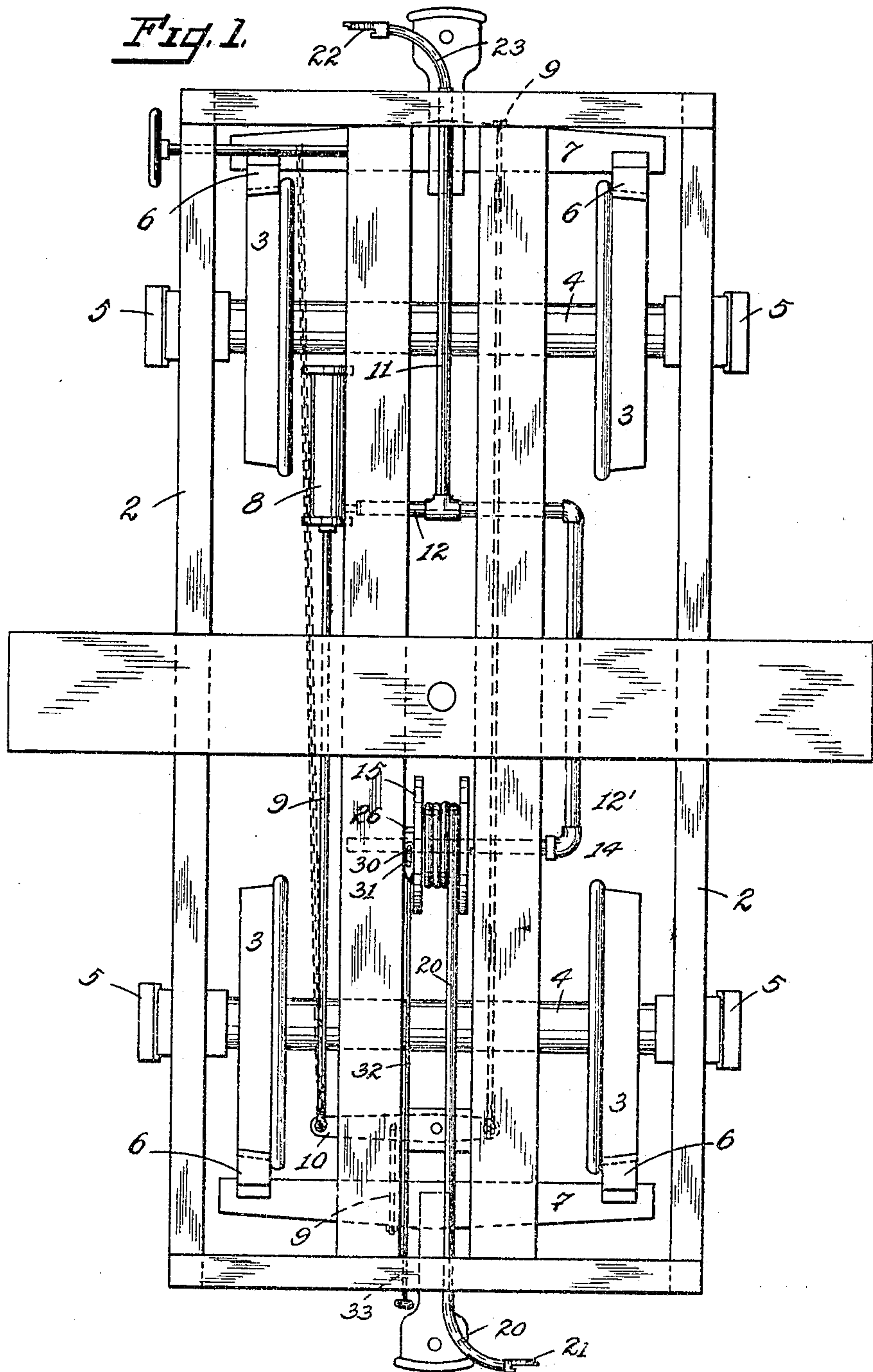
No. 787,932.

PATENTED APR. 25, 1905.

A. D. MILLER.  
AIR BRAKE ATTACHMENT FOR LOGGING TRAINS.

APPLICATION FILED MAY 28, 1904.

2 SHEETS—SHEET 1.



WITNESSES:

*Ross W. Tullock*  
*A. B. Cooper*

INVENTOR.

*A. D. Miller*  
BY *Pierre Barnes*  
ATTORNEY.

No. 787,932.

PATENTED APR. 25, 1905.

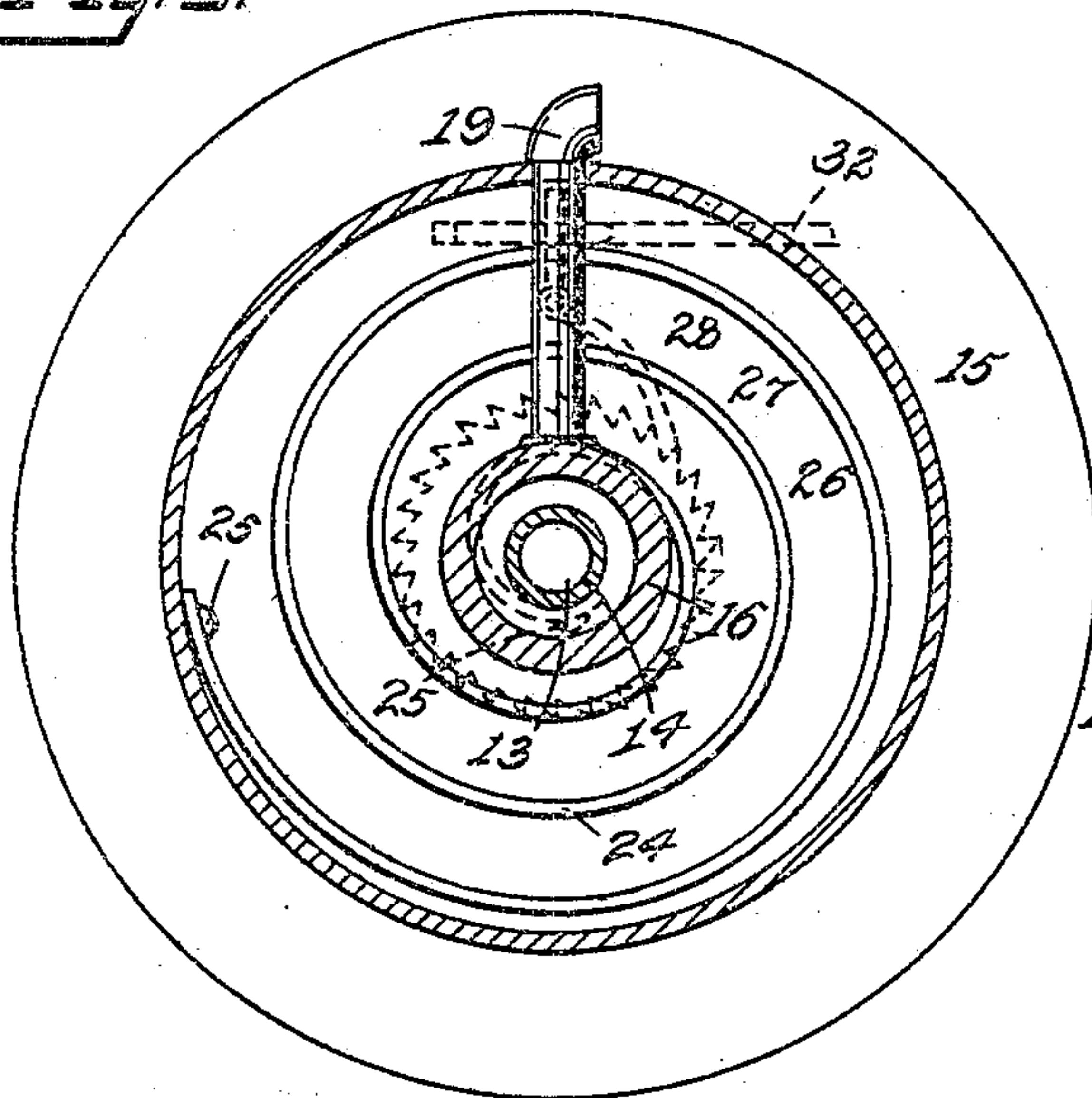
A. D. MILLER.

AIR BRAKE ATTACHMENT FOR LOGGING TRAINS.

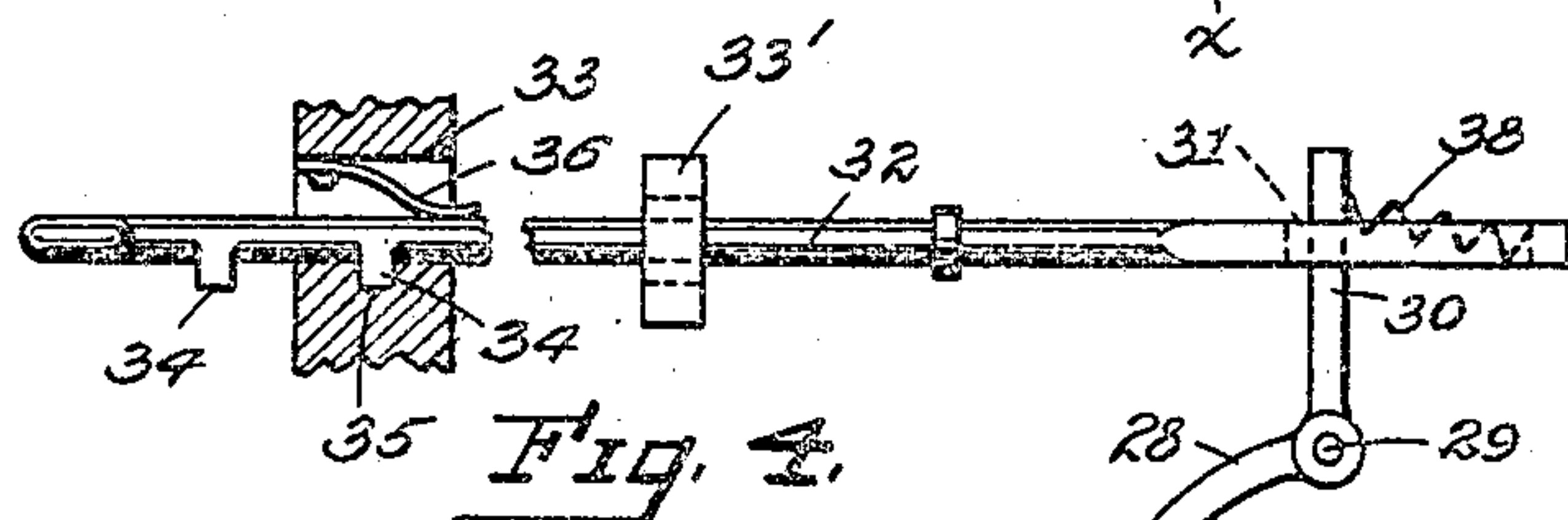
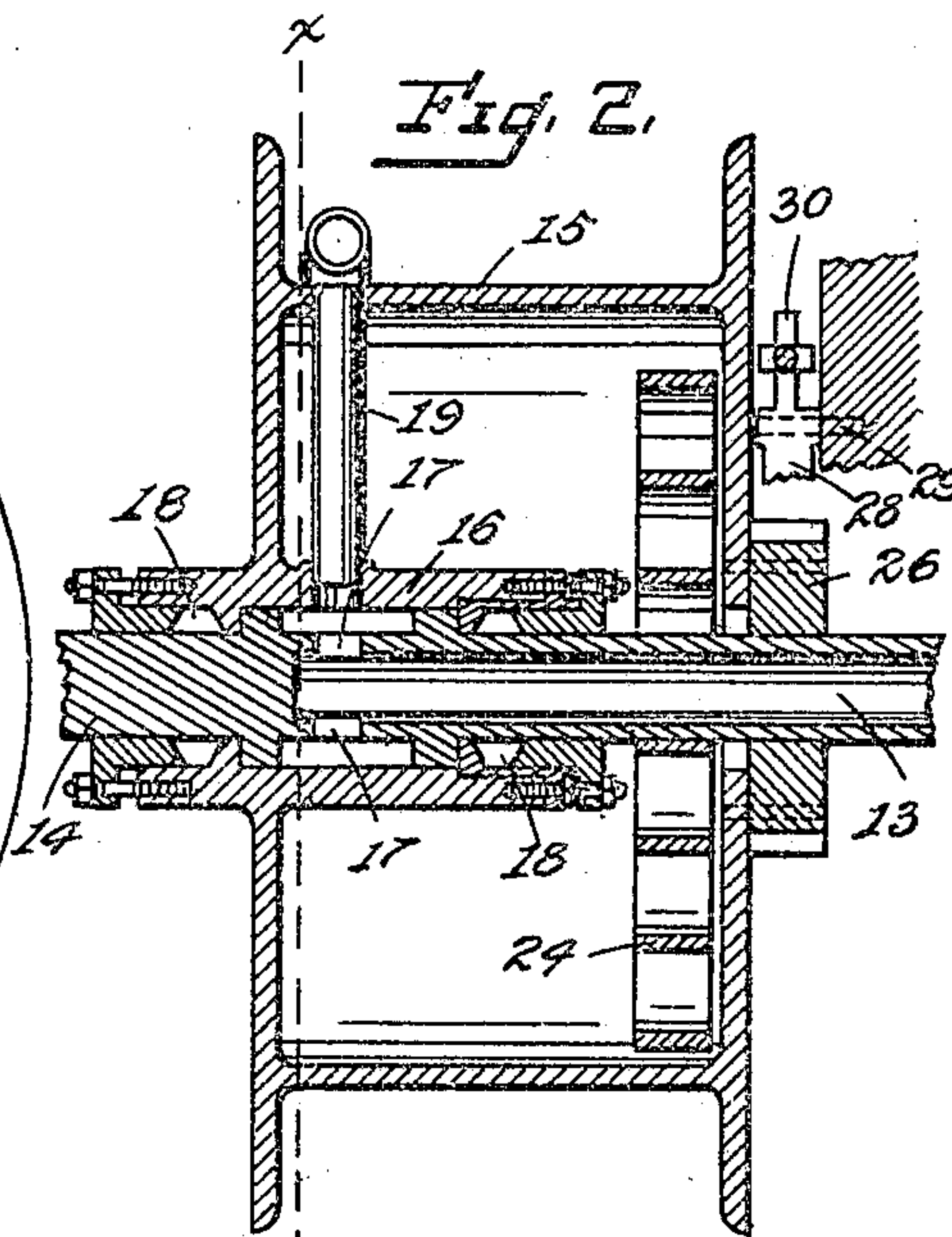
APPLICATION FILED MAY 28, 1904.

2 SHEETS—SHEET 2.

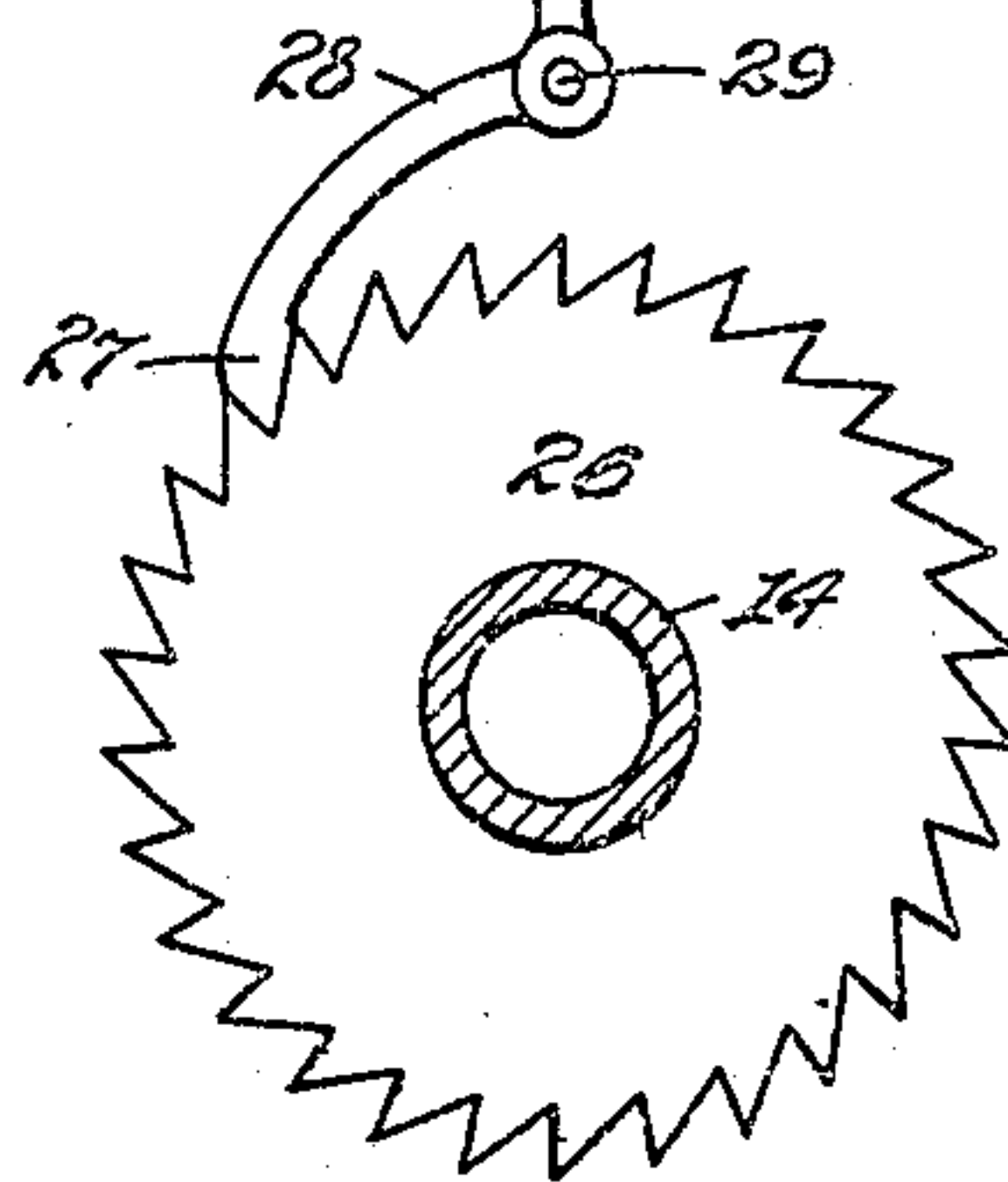
*Fig. 3.*



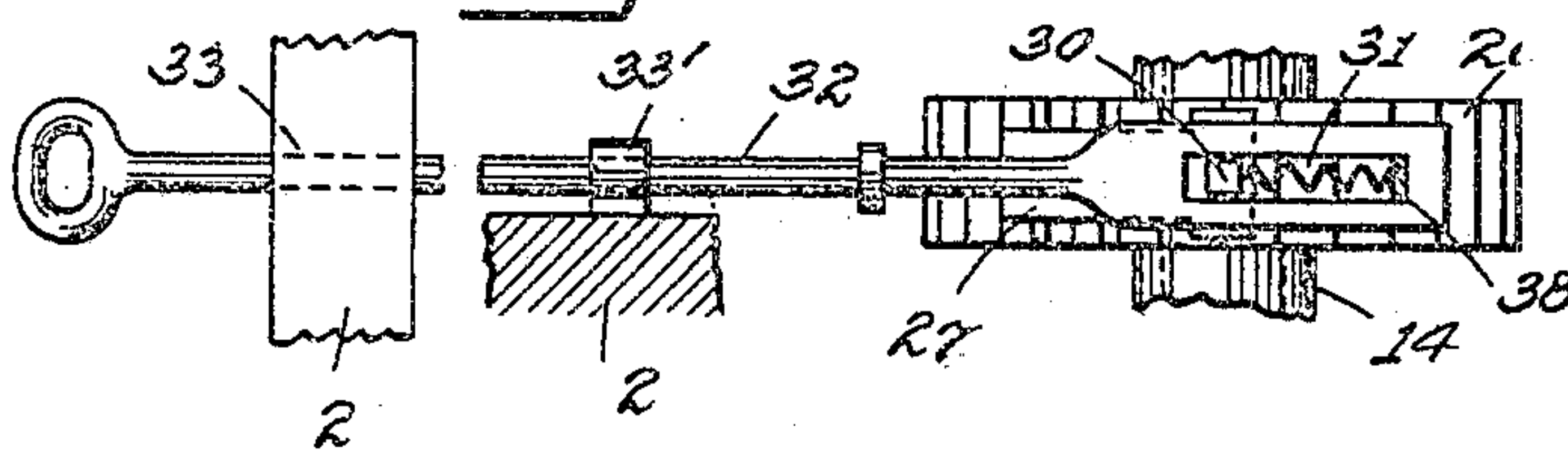
*Fig. 2.*



*Fig. 4.*



*Fig. 5.*



WITNESSES:

*Ross W. Tullock*  
*J. B. Cooper*

INVENTOR.

*A. D. Miller*  
BY *Pierre Barnes*  
ATTORNEY.



# UNITED STATES PATENT OFFICE.

ATWILL D. MILLER, OF SEATTLE, WASHINGTON.

## AIR-BRAKE ATTACHMENT FOR LOGGING-TRAINS.

SPECIFICATION forming part of Letters Patent No 787,932, dated April 25, 1905.

Application filed May 28, 1904. Serial No. 210,151.

*To all whom it may concern:*

Be it known that I, ATWILL D. MILLER, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Air-Brake Attachments for Logging-Trains, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to air-actuated car-brakes, and more particularly to the train-pipe therefor and the manner of connecting the pipe of one car or truck to that of another.

When making up logging-trains it is oftentimes necessary to space the several component trucks at varying distances apart to accommodate the logs to be carried and which may differ in lengths from, say, eighteen to one hundred and fifty feet. Because of such uncertainty in the positioning of the trucks and the expense and inconvenience of having an assortment of different lengths of detachable hose for the purpose of bridging the gaps between the train-pipes of the trucks the use of atmospheric brakes upon logging-trains has proved to be so extremely unsatisfactory that the hand-controlled brakes continue in use notwithstanding the waste of time consumed to individually operate them and their inability to check the speed of the train traveling down steep grades, frequently resulting in considerable damage and the loss of life.

The object of the present invention is to provide a manner or means for overcoming the above-noted and other objection heretofore mentioned in the use of air-brake appliances upon logging-cars.

The invention consists in the construction, combination, and arrangement of extensible train-pipe connections for logging-cars, together with operating and regulating devices therefor, as will hereinafter be disclosed in the specification, of which the drawings form a part, and in which—

Figure 1 is a plan view of a logging-truck provided with devices embodying my invention. Fig. 2 is a detail vertical section taken through the pipe-reel. Fig. 3 is a cross-section on line *xx* of Fig. 2. Figs. 4 and 5, re-

spectively, are side and plan views of the reel-locking devices shown in the other views.

Reference being first had to Fig. 1, 2 represents the frame or body of a logging-truck provided with wheels 3 and axles 4, which are journaled in boxes 5, as usual. Attached to the truck are braking appliances, such as shoes 6, brake-beams 7, and an air-cylinder 8, operatively connected to the said beams through the medium of rods 9 and lever 10. A train-pipe 11, through which the actuating fluid is conveyed, extends longitudinally of the truck-body and is connected to the cylinder 8 by a branch pipe 12. This pipe connects by branch 12 with an axially-arranged chamber 13 of a transversely-arranged and non-rotatable shaft 14. (See Figs. 2 and 3.) Rotatably mounted upon said shaft is a reel 15, provided with a chambered hub 16, which is in constant communication with the chamber 13 through circumferentially-disposed apertures 17 of the shaft. To prevent any leakage from the hub, suitable stuffing-boxes, such as 18, are provided in its ends. Screwed into said hub and projecting radially through the reel-drum is a pipe 19, to the end of which is coupled a flexible pipe or hose 20, adapted to be wound about the reel-drum, and upon its outer end is provided a half-coupling 21, whereby the pipe is communicatively connected to a registering half-coupling upon another truck and corresponding with 22 on the truck shown and, similarly thereto, is attached by a flexible tube 23 to its pipe 11. A retractile coil-spring 24 is positioned interiorly of the reel-drum and it fastened thereto and to the shaft by screws 25 or other suitable means.

26 is a ratchet-wheel integrally secured or formed on the reel and is normally engaged for restraining the action of said spring by the detent-pawl end 27 of bell-crank 28, which is fulcrumed by pin 29 to the truck-frame. The other arm, 30, of this bell-crank projects upwardly through an elongated aperture 31 of a reach-rod 32, extending through suitable socket-supports, as 33 and 33', to beyond the end of the truck and within easy reach of the attendant.

Provided upon the reach-rod are projecting



studs 34 and 34', adapted to engage with a corresponding recess or pocket 35 in the support 33 for the purpose of securing the reach-rod in its outer or inner set positions and is retained in engagement in either of such positions by a spring 36, located within the socket of support 33, opposite to the recess thereof. The pawl is normally kept in engagement with the ratchet-wheel by a spring 38, provided in aperture 31 of the rod.

The operation of the invention is as follows: The trucks being secured together by the usual draw bars or chains for haulage, the hose is by pulling upon its end unwound from the reel against the action of the retractile spring within the latter and is then connected to the pipe end of the adjacent truck by the aforesaid half-couplings. The reach-rod is then slid in to tilt up and disengage the pawl from the ratchet-teeth and allow the drum-spring to assert itself to wind the hose upon the drum until the slack is removed from the hose and prevent its hanging, so as to drag upon the track - ties. This being accomplished, the reach-rod is again pulled out to the position shown in Fig. 4 and permitted to lock thereat by the engagement of the inner stud of the rod with the pocket provided, thereby retaining the rod in such position as to cause the pawl to be again operative, while allowing the pipe being drawn out against the action of the drum-spring to compensate for any differences in length due to curves in the track.

I am aware that reels on which a hose is wound and provided with hollow axles through which a fluid is supplied to the wound hose have been used for other purposes and are very old devices. I do not claim this; but

What I claim as new, and desire to secure by Letters Patent, is—

1. In a logging car or truck, the combination with the brake appliances including an air-cylinder, and a train-pipe terminating in a flexible end provided with a half-coupling; of a hose communicating with the train-pipe and provided with a half-coupling, a reel for the hose, and a retractile spring for causing the reel to rotate and wind up the hose.

2. In combination with a railway truck or car provided with brake appliances including an air-cylinder and a train-pipe; of a hollow shaft, a reel rotatably mounted upon the shaft, a retractile spring connected to the reel and to the shaft, a hose wound about the reel and communicating with the train-pipe through the hollow shaft, a ratchet-wheel integrally connected with the reel, a pawl normally engaging the ratchet-wheel, and means extending to the end of the truck or car for disengaging the pawl.

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

ATWILL D. MILLER.

Witnesses:

PIERRE BARNES,  
M. E. BREWER.