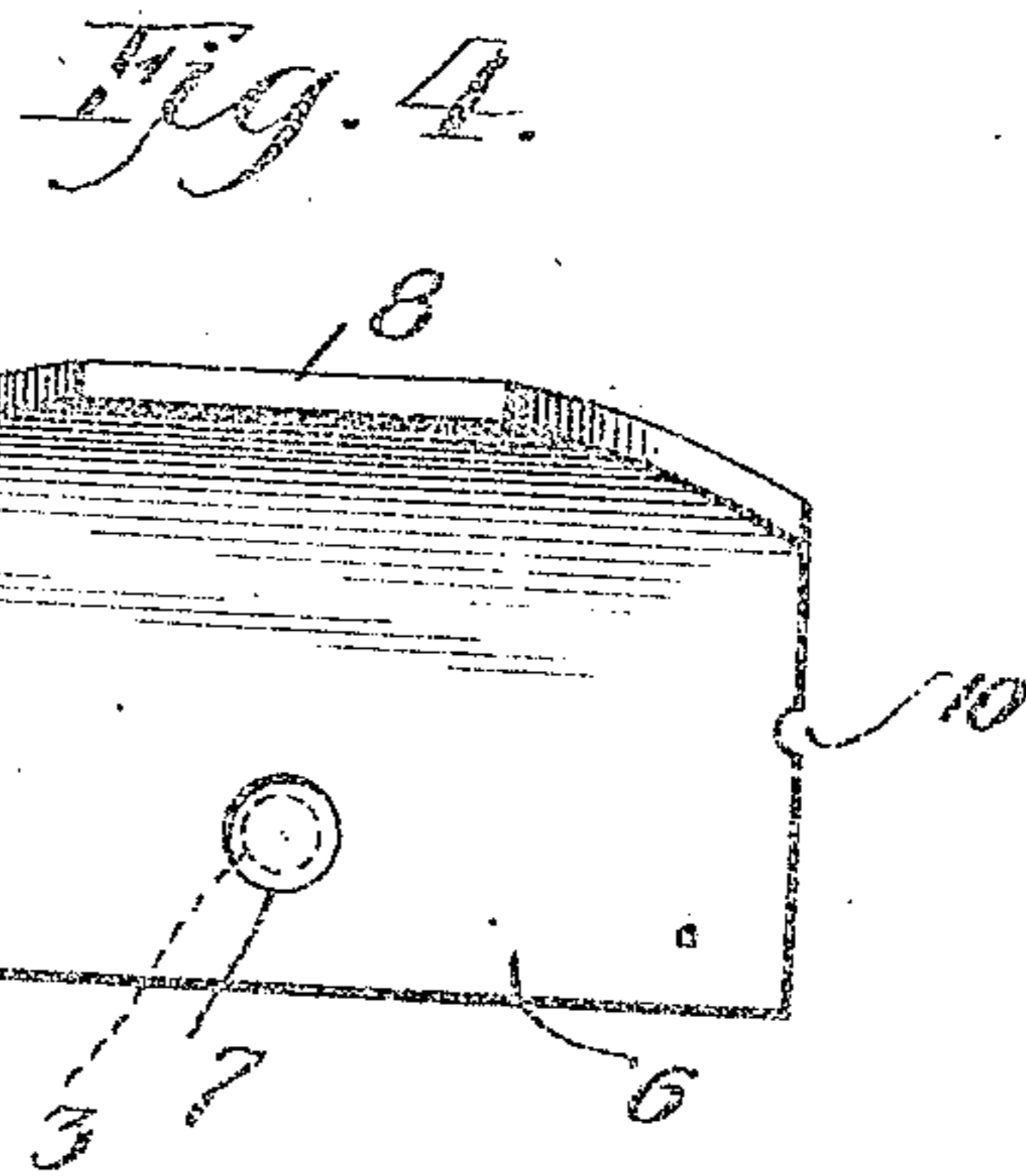
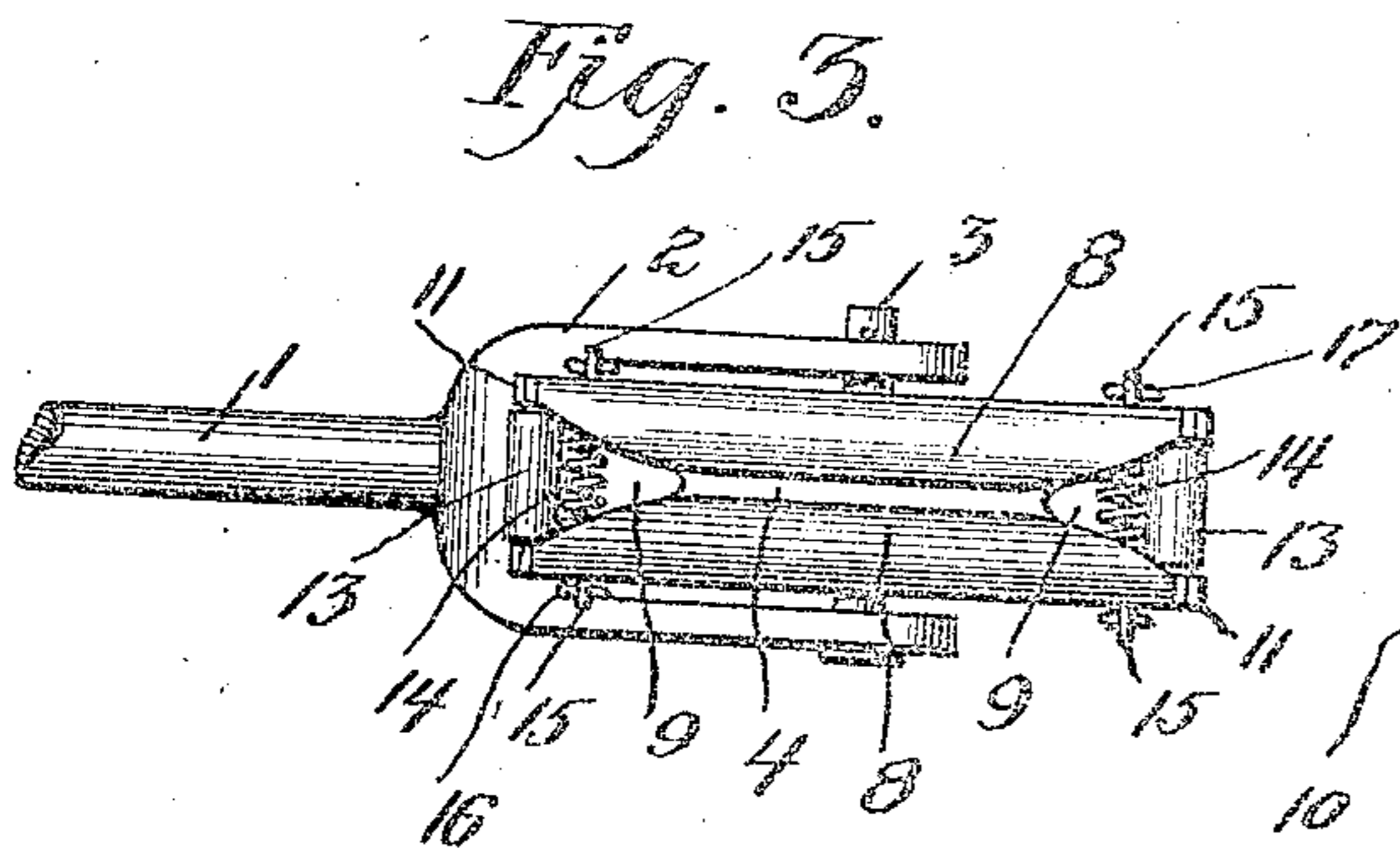
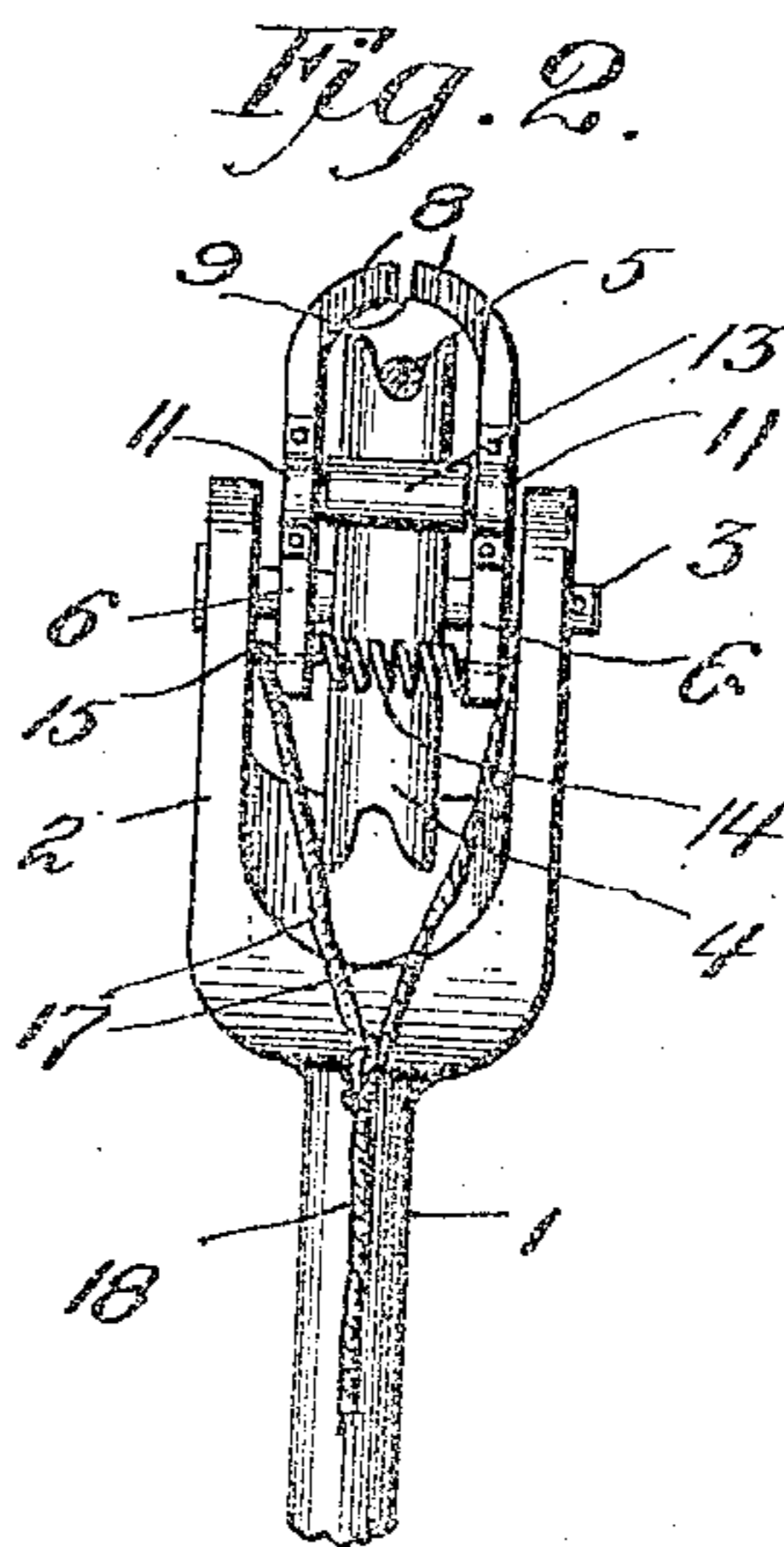
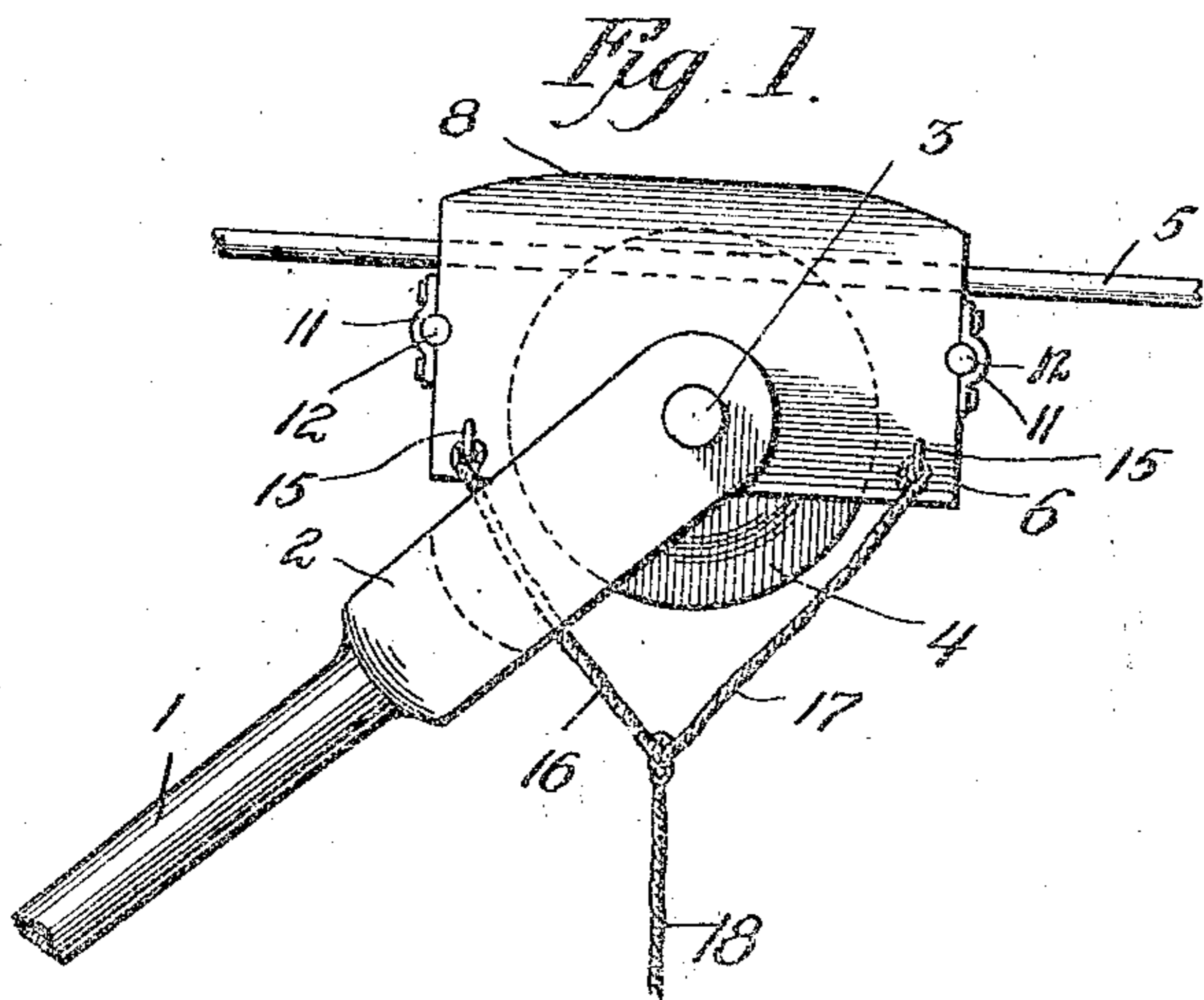


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TROLLEY ATTACHMENT.
APPLICATION FILED SEPT. 16, 1909.

984,286.

Patented Feb. 14, 1911.



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TROLLEY ATTACHMENT.

984,286.

Specification of Letters Patent. Patented Feb. 14, 1911.

Application filed September 16, 1909. Serial No. 518,026.

To all whom it may concern:

Be it known that we, FRED J. MOELLER and FREDERICK J. SEYERLE, citizens of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Trolley Attachments, of which the following is a specification.

This invention relates to trolleys, and the invention has for its object to provide a device of such class which shall be comparatively simple in its construction, strong, durable, efficient in its use, and having means for reducing the separation of the trolley wheels from the conductor to a minimum.

Other objects of the invention are to furnish means for quickly and conveniently positioning the trolley against and releasing it from the conductor, and comparatively inexpensive to manufacture.

Further objects of the invention are to provide a trolley that will permit all cars being operated at a high speed, and to provide a trolley that will not interfere with or injure the overhead construction of a trolley system.

With the foregoing and other objects in view, the invention consists of the novel construction, combination and arrangement of parts as hereinafter set forth and illustrated in the accompanying drawing wherein is shown a preferred embodiment of the invention; but it is to be understood that changes, variations, and modifications can be resorted to which fall within the scope of the claim hereunto appended.

In the drawings wherein like reference numerals denote corresponding parts throughout the several views:—Figure 1 is a side elevation of a trolley constructed in accordance with our invention. Fig. 2 is a front elevation of the same. Fig. 3 is a plan, and Fig. 4 is an elevation of the inner side of one of the guards forming part of the trolley.

Referring to the drawing in detail, 1 denotes a trolley pole having the upper end thereof provided with a harp 2, which is furnished with a transverse pin 3 for a revoluble trolley wheel 4 adapted to travel upon a conductor or wire 5. These parts

are common to the ordinary type of trolley at the present used in connection with trolley systems.

Our invention resides in two guards arranged in the harp 2, one on each side of the wheel 4. Each guard comprises a rectangular vertical body 6, having an opening 7 to receive the pin 3, said opening being of a sufficient size to allow said guard to shift, as will hereinafter appear. The upper edge of each guard is provided with an integral inwardly projecting flange 8 adapted to extend over the conductor 5, said flange being curved with an arc of forty-five degrees, and the ends thereof beveled to provide entrance ways 9 for the conductor 5, when the trolley is placed thereon.

The ends of the guards are provided with grooves 10 and bearings 11 for transverse revoluble pins 12 and mounted upon said pins are anti-frictional rollers 13. These rolls are adapted to engage the conductor 5 when the guards tilt, and assist in maintaining the trolley upon the wire.

The guards adjacent to the ends and lower edges are connected by retractile coiled springs 14, said springs having their ends extending through the bodies 6 and formed to provide loops or eyelets 15. Connected to the eyelets 15 are the ends of cables 16 and 17, the former extending through the window or bifurcation of the harp. The cables 16 and 17 are connected to a single cable 18, which is adapted to extend to the car or vehicle equipped with the trolley.

In operation it is only necessary to pull upon the cable 18 to open the guards to that extent as to free the conductor 5, the pole 1 being lowered at the same time.

Having now described our invention what we claim as new is:—

In a trolley, the combination of a pole, a harp carried by the pole, a pin mounted transversely of the harp, a wheel revolubly mounted upon the pin, guard plates loosely mounted upon said pin on opposite sides of the wheel, said guards comprising rectangular bodies having the upper edges thereof flanged inwardly to extend over said wheel and beveled at the ends thereof to provide entrance ways for a conductor, revoluble

anti-friction rollers carried by the ends of
said guards, a coil spring connecting said
guards and having the extremities thereof
extended through the guards and looped to
5 provide eyelets, and a cable connected to
said eyelets and adapted to facilitate the re-
moval of the trolley from the conductor.

In testimony whereof we affix our signa-
tures in presence of two witnesses.

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