

No. 845,115.

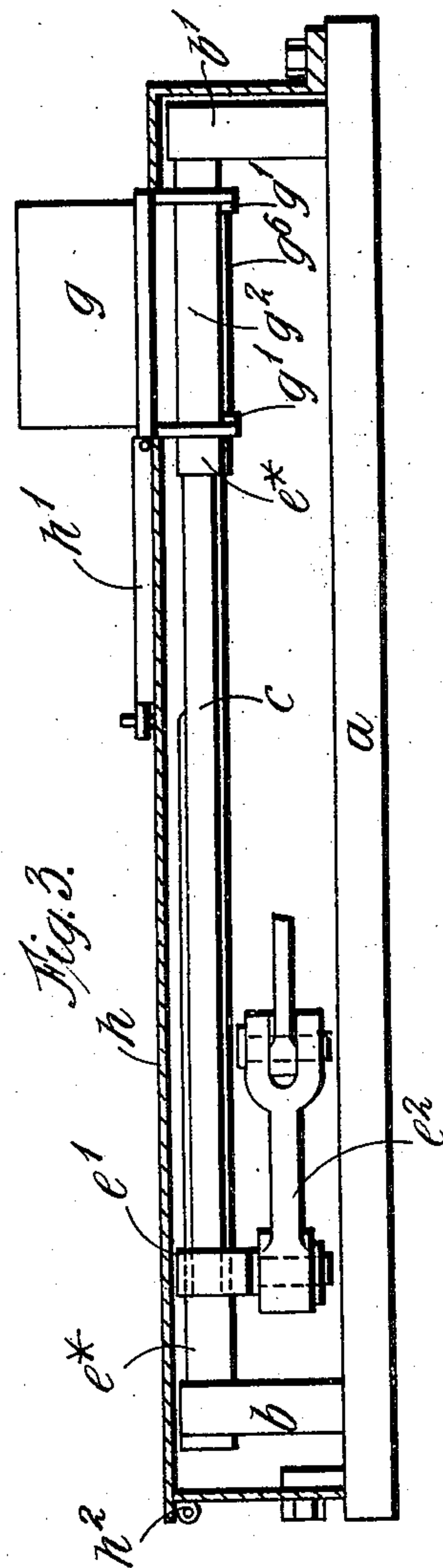
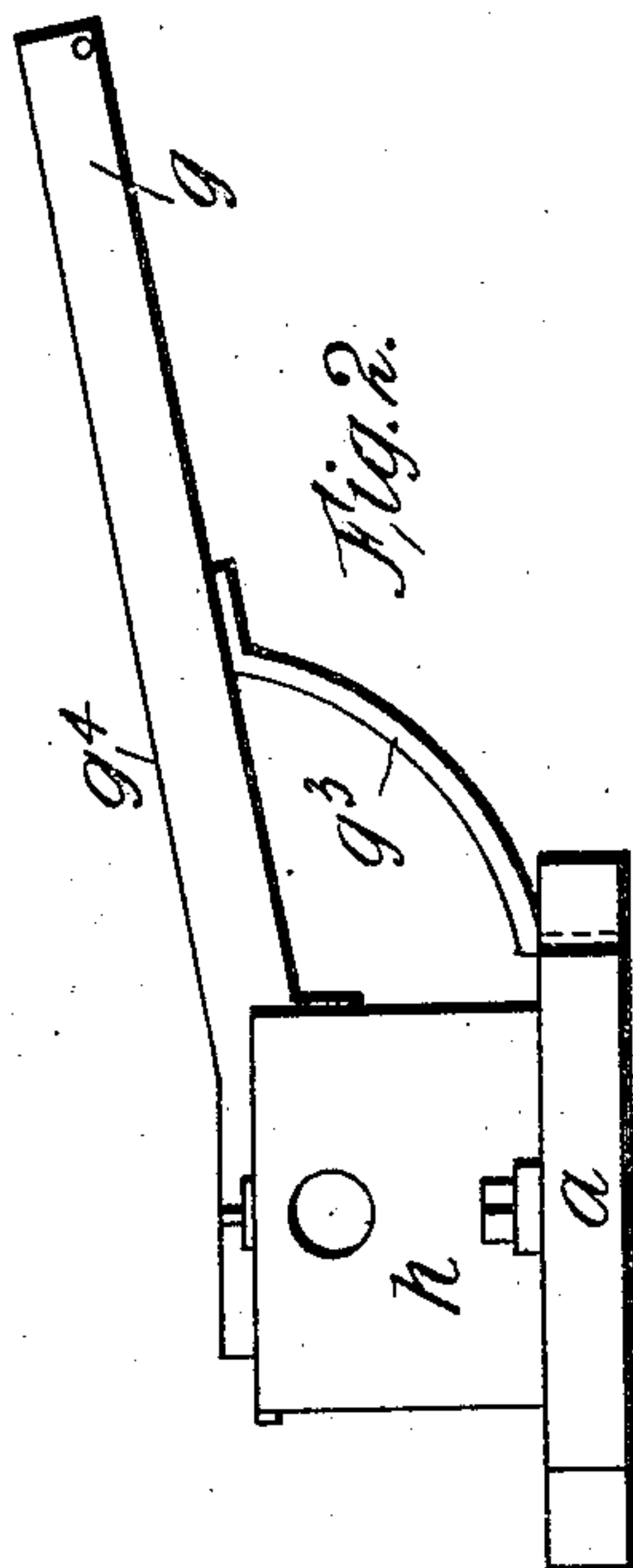
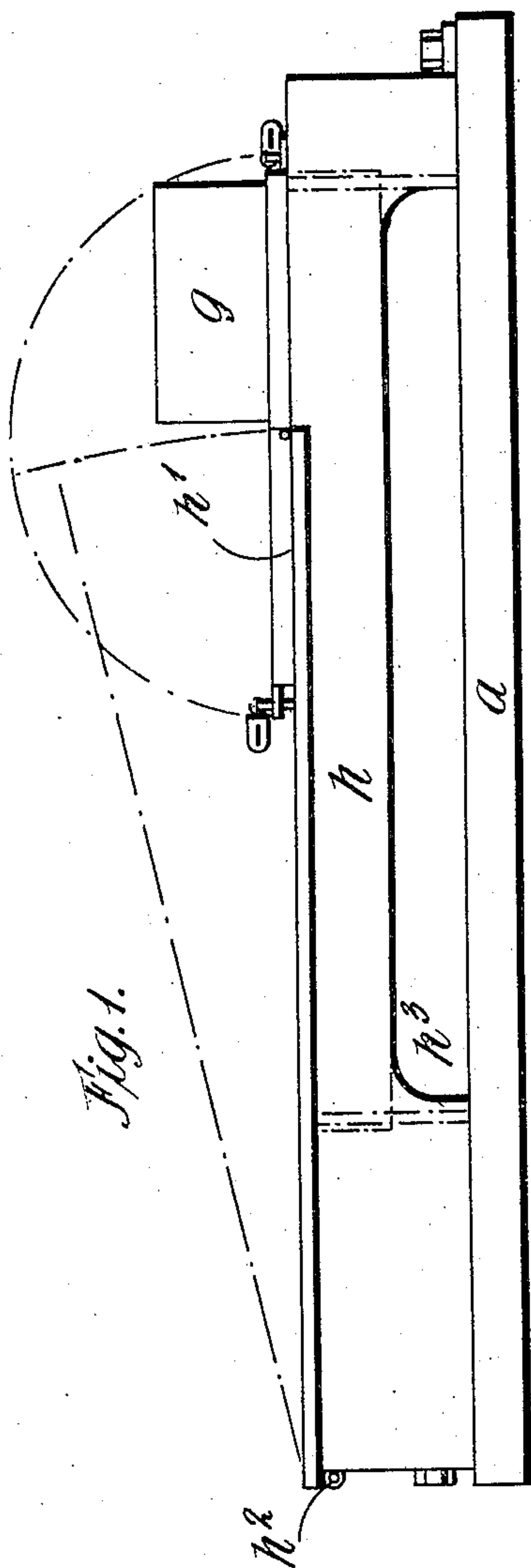
PATENTED FEB. 26, 1907.

J. PARKER.

RAILWAY SIGNALING APPARATUS FOR USE IN FOGGY OR OTHER WEATHER

APPLICATION FILED SEPT. 10, 1906.

3 SHEETS—SHEET 1.



Witnesses.
Percy M. Goodwin.
P. Woodward

Inventor John Parker.
By His Attorney,
Blair & Lundy

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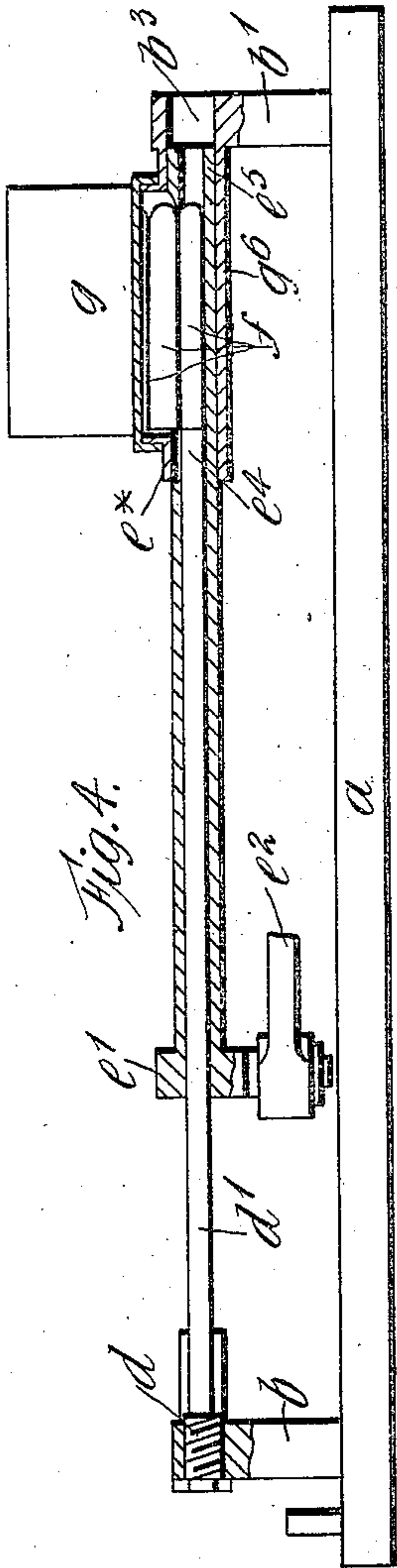


Fig. 4.

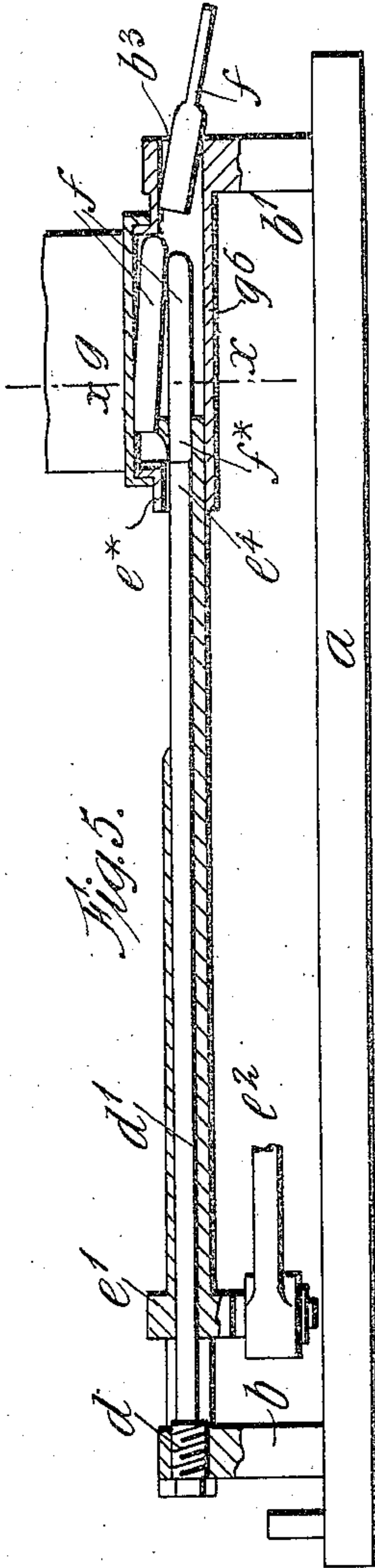


Fig. 5.

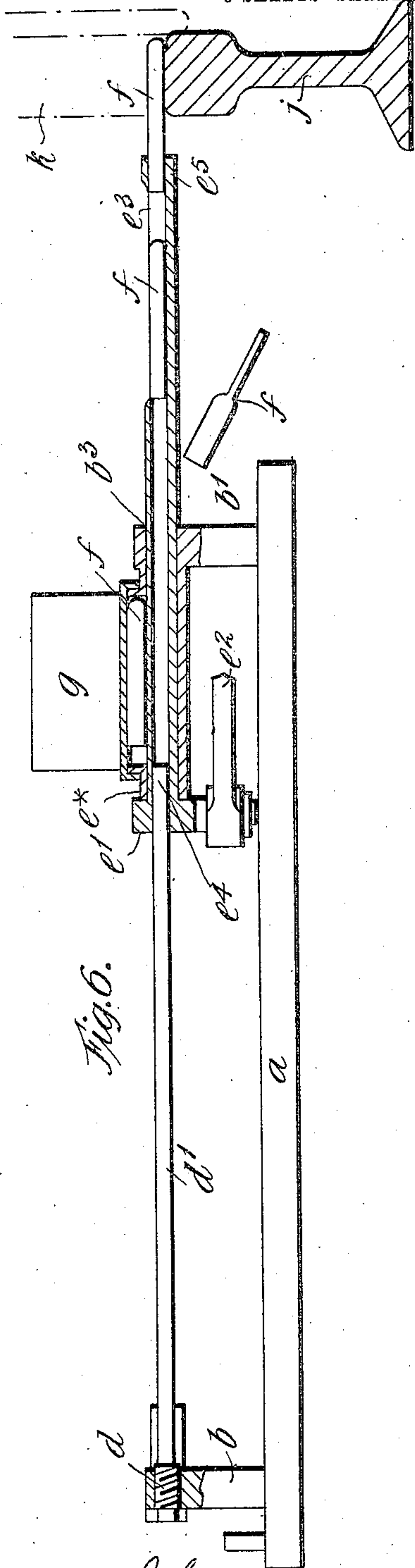


Fig. 6.

Witnesses.
Fercy M. Goodwin.
P. Woodward

Inventor John Parker.
by His Attorney. *Blair & King*

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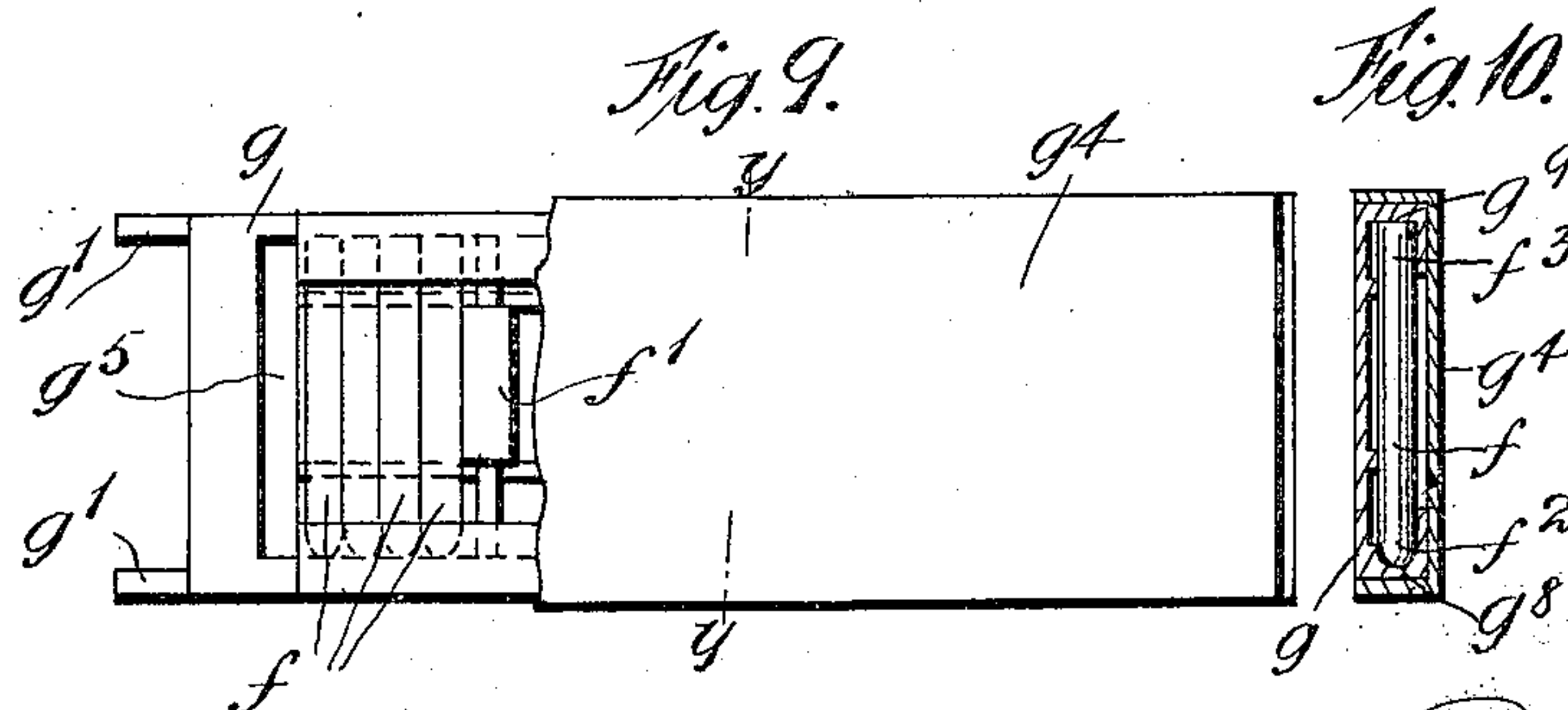
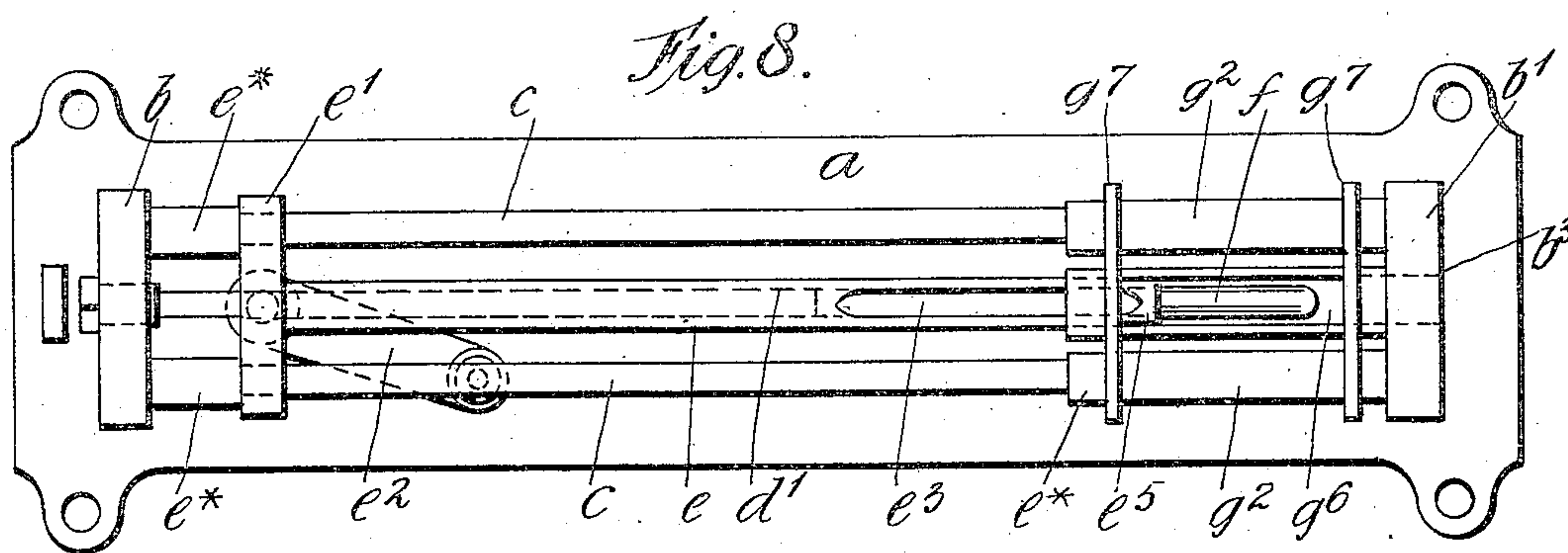
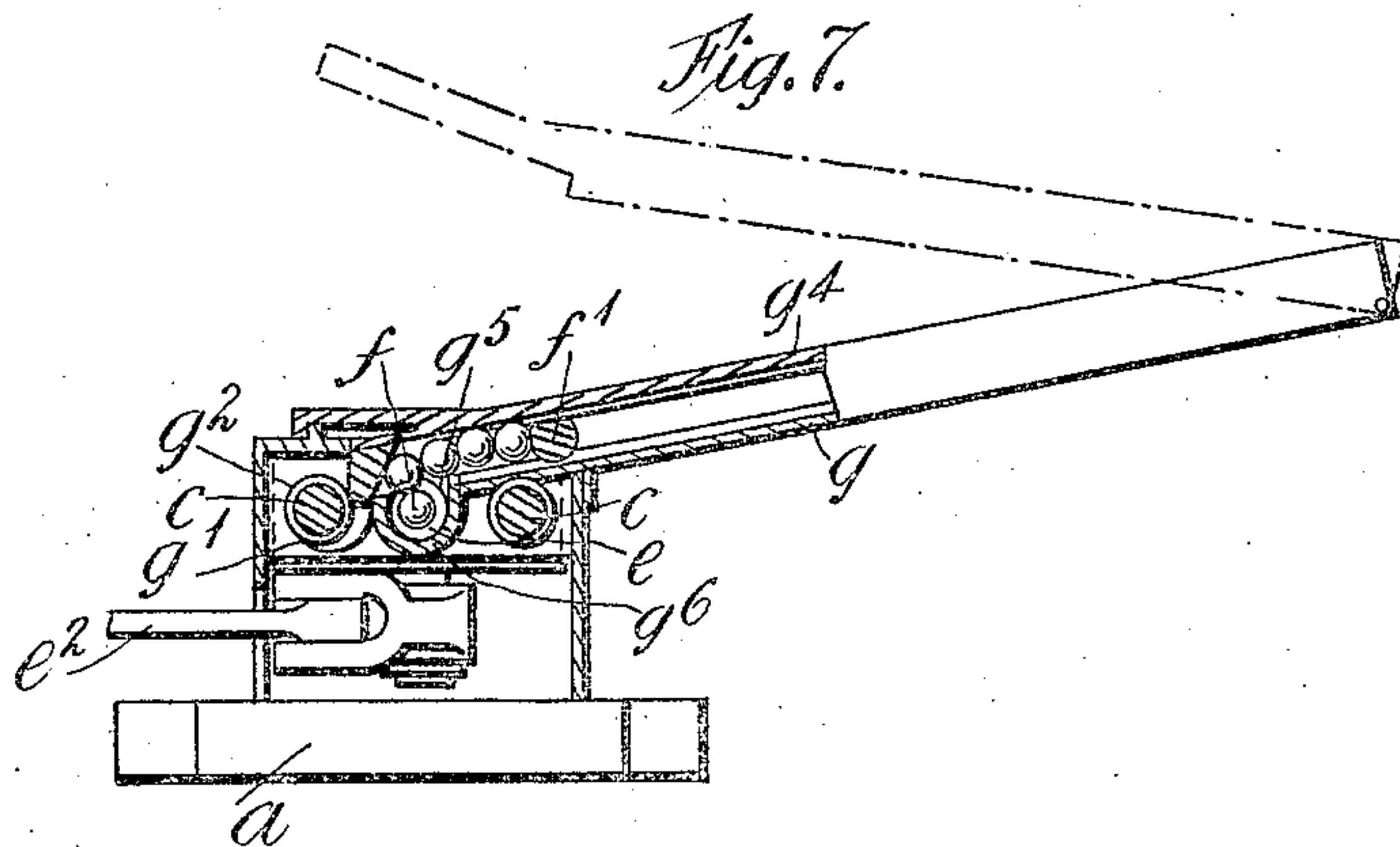
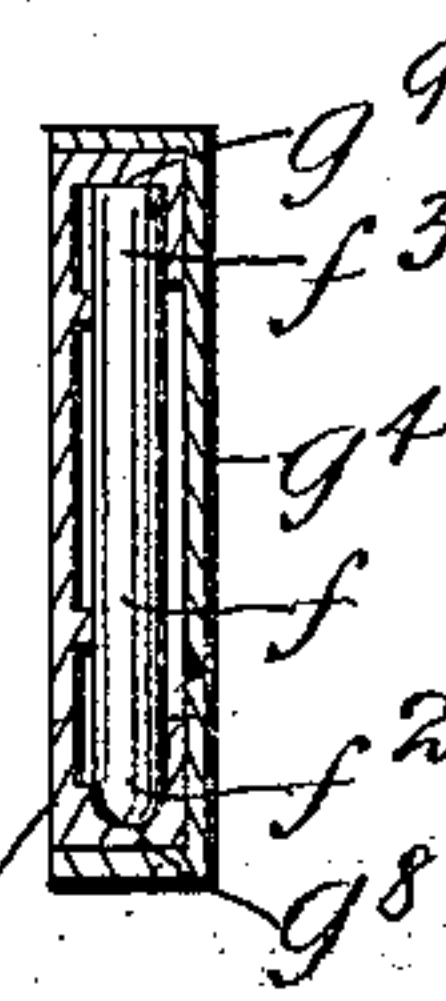


Fig. 10.



Witnesses.

Forcy M. Goodwin.

P. Woodward

Inventor John Parker.

By His Attorney.

Benj. I. Long

UNITED STATES PATENT OFFICE.

JOHN PARKER, OF HONOR OAK PARK, LONDON, ENGLAND.

RAILWAY SIGNALING APPARATUS FOR USE IN FOGGY OR OTHER WEATHER.

No. 845,115.

Specification of Letters Patent.

Patented Feb. 26, 1907.

Application filed September 10, 1906. Serial No. 334,031.

To all whom it may concern:

Be it known that I, JOHN PARKER, a subject of the King of Great Britain and Ireland, and a resident of 27 Agnew road, Honor Oak Park, in the county of London, England, have invented certain new and useful Improvements in Railway Signaling Apparatus for Use in Foggy or other Weather, of which the following is a specification.

10 This invention of improvements in railway signaling apparatus for use in foggy or other weather, has for its object to produce a simple efficient apparatus such that the signalman or fogman can place a detonator upon the rail, so as to be exploded by the wheels of a passing train when the signal is at "danger" or to remove the detonator from the line when clear or after the detonator has exploded.

20 The said invention consists, essentially, of a suitable magazine or holder for the cartridges or detonators and in connection therewith a projector or carrier for taking the detonators therefrom and placing and retaining the same on the line ready for use. The projector or carrier preferably takes the form of a hollow tube carried by a rod and suitably guided, so as to slide and carry the detonators one at a time from the magazine.

30 This sliding tube, with the detonators or cartridges carried thereby, is operated by the signalman or fogman through a suitable arrangement of levers, rods, cranks, or equivalent means, so that when the signal is at "danger" a detonator can be placed and retained on the line ready for exploding, or when the line is clear it can be removed therefrom and kept in position ready for use, or, again, it can be withdrawn from the rail when exploded and the empty case ejected from it and a fresh one taken from the magazine, the sliding tube, projector, or carrier being cut away for a portion of its length to permit of this charging and recharging of the detonators, while the gripping of the detonators is effected by the end of said sliding tube or carrier in such a way that the detonator is rigidly held in said tube, so that it cannot be shaken out of position either when in the tube or placed upon the rail.

50 In order that the said invention may be readily understood, reference is to be had to the further following description and accompanying sheets of drawings, in which—

55 Figure 1 is a side elevation of the apparatus inclosed and ready for use. Fig. 2 is an

end view thereof. Fig. 3 is a side elevation with inclosing casing partly in section; Fig. 4, a sectional elevation, casing removed, showing projector or carrier receiving a cartridge or detonator; Fig. 5, a similar view showing projector drawn back to fix cartridge therein; Fig. 6, a similar view showing projector fully extended, cartridge on rail; Fig. 7, a vertical section on line $x x$ of Fig. 5; Fig. 8, a plan view of Fig. 5, magazine being removed; Fig. 9, a plan view of the magazine-cover, partly broken away; Fig. 10, a section on line $y y$, Fig. 9.

Like letters of reference indicate corresponding parts in the several views.

Referring to the drawings, a , Figs. 1 to 8, represents a base-plate provided with standards $b b'$, in which are housed the parallel guide-bars $c c$. Centrally located of said guide-bars $c c$ and screwed at d in the standard b (for adjustment purposes) is the bar d' , upon which is adapted to slide the hollow projector or carrier e , movement being imparted thereto through the head e' , carried on the guides $c c$ by means of the swinging link e^2 , connected up to any suitable arrangement of levers or equivalent devices operated from the signal-box or by the fogman.

85 The projector or carrier e is provided at its front end with an opening or slot e^3 , Figs. 4, 5, 6, and 8, for the purpose of receiving (see Fig. 4) a detonator or cartridge f from the magazine g , which is attached by hooks $g' g'$ at its forward end to the distance-piece g^2 on the front rod c , (see Fig. 7,) the underneath part of said magazine resting on the other rod c and, if necessary, supported, as shown in Fig. 2, by a stay g^3 , the detonators rolling down the magazine under their own weight and that of the rolling weight f' , Figs. 7 and 9. For the purpose of keeping the working parts and contents of magazine dry the same is incased, as shown in Figs. 1 to 3 and 7 to 10, the magazine being provided with a hinged lid g^4 , adapted when said magazine is in position to be locked to the casing h , surrounding the signaling apparatus, said casing h being provided with a cover h' , adapted to be locked out of the way when the magazine is in position or to be locked over the opening left on the removal of the magazine. Further, the top of the casing h is pivoted at h^2 , so that it may be swung upward for cleaning and other purposes.

In use the magazine g (charged before-

hand, if desired) is placed in position, as shown, communicating by its opening g^5 , Figs. 7 and 9, with a chamber g^6 , connected to the standard b' by the distance-pieces $g^2 g^*$, Fig. 8, and guides g^7 , between which fits the magazine. The projector or carrier e is now moved forward, so that its slot e^3 is beneath the opening g^5 of the magazine, permitting a detonator f to fall. (See Fig. 4.)

10 The projector or carrier is now moved back to the end of its stroke, Figs. 5 and 8, and in so doing forces the cartridge or detonator f along the carrier by its engaging the end e^4 of the bar d' , and so through the open end e^5 thereof, with the exception of a short length f^* of said cartridge, which is frictionally held. The carrier or projector e is now moved forward, Fig. 6, keeping the succeeding detonator out of the way until it is free to fall

20 into the slot e^3 , the continued movement of the carrier through opening b^3 of standard b' shutting off the remaining cartridges by reason of its full circumference coming opposite the opening g^5 of the magazine. On the completion of the stroke the detonator f is placed across the rail j , where it remains until exploded by the wheel k of the passing engine or train, (or till it is withdrawn.) On the next rearward movement of the carrier the unexploded detonator still carried therein strikes against the end e^4 of the rod d' and forcibly ejects by its engagement therewith the exploded detonator, Fig. 5, at same time said unexploded detonator in its turn becomes

30 held in the open end e^5 of the carrier e , the amount of movement of said carrier e being limited in either direction by the stops e^* , (see Figs. 5, 6, and 8,) these operations being continued as long as required. To insure the cartridges or detonators always fitting in the magazine in their proper position, the forward end f^2 (see Fig. 10) thereof is rounded, so as to fit in a correspondingly-shaped groove g^8 in the magazine, Fig. 10, the other

40 end f^3 of detonator being flat and fitting in a similar flattened groove g^9 .

When the apparatus is not in use, the magazine is removed and cover h' bolted down or secured in any other suitable manner in its place, and a slide h^* , Fig. 1, (shown in dotted line,) provided with an opening through which the operating-lever or the like projects, is drawn down and secured, covering up the opening h^3 in the casing h , effectually protecting against wet or being tampered with.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a railway signaling apparatus, a supporting-stand having a plurality of guide-bars, a magazine for cartridges supported upon the stand, and having a bottom delivery-opening, and a reciprocating tubular carrier supported by the said guide-bars and having a top receiving-opening and an end holding-opening for the cartridges.

2. In a railway signaling apparatus, the combination with the magazine having a bottom delivery-opening for cartridges, of a horizontally-arranged bar, and a carrier-tube sliding on said bar and having a top receiving-opening and an end holding-opening for the cartridges, the movement of the carrier upon the bar in one direction providing for the ejection of a spent cartridge.

3. In a railway signaling apparatus, a stand having oppositely-arranged guide-bars and a centrally-arranged ejector-bar, a magazine detachably mounted upon the guide-bar at one end of the stand, and a reciprocal carrier-tube having a sliding engagement with the guide-rods and working directly over the ejector-bar, said carrier-tube having a top receiving-opening for the cartridges and an end holding-opening.

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

JOHN PARKER.

Witnesses:

BENJ. THOS. KING,
ROBT. HUNTER.