

H. TIDEMAN.  
TELEPHONE HOOK SWITCH.  
APPLICATION FILED JULY 6, 1907.

901,214.

Patented Oct. 13, 1908.

Fig. 1.

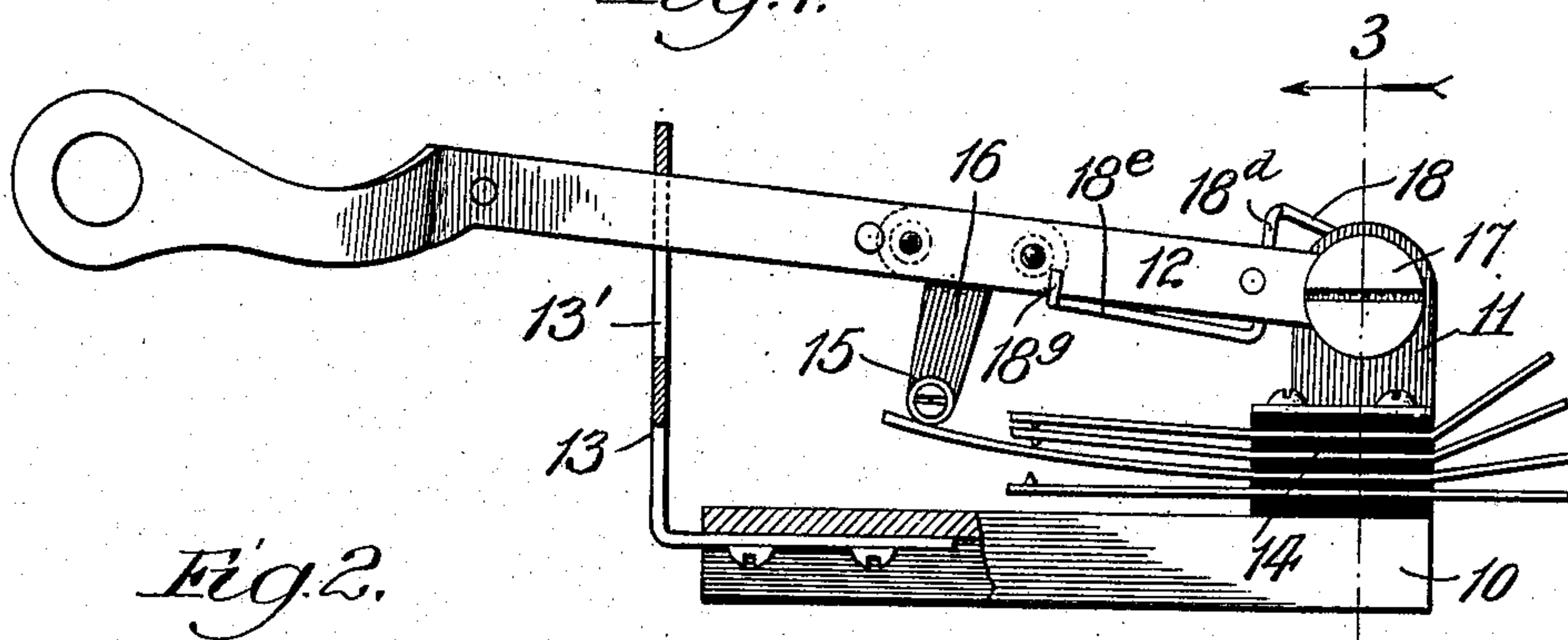


Fig. 2.

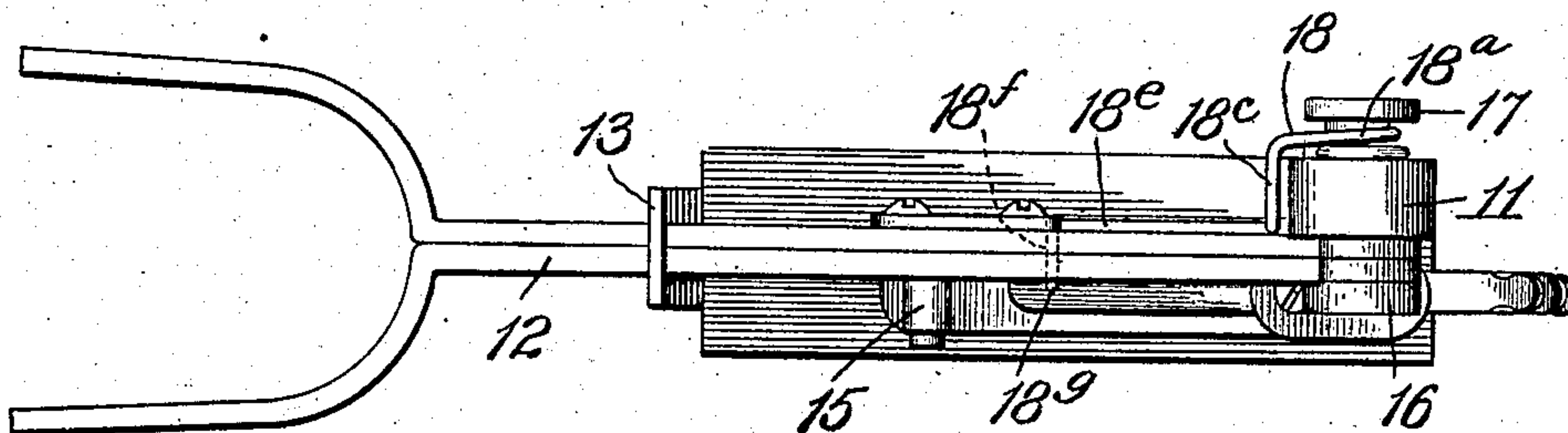


Fig. 3.

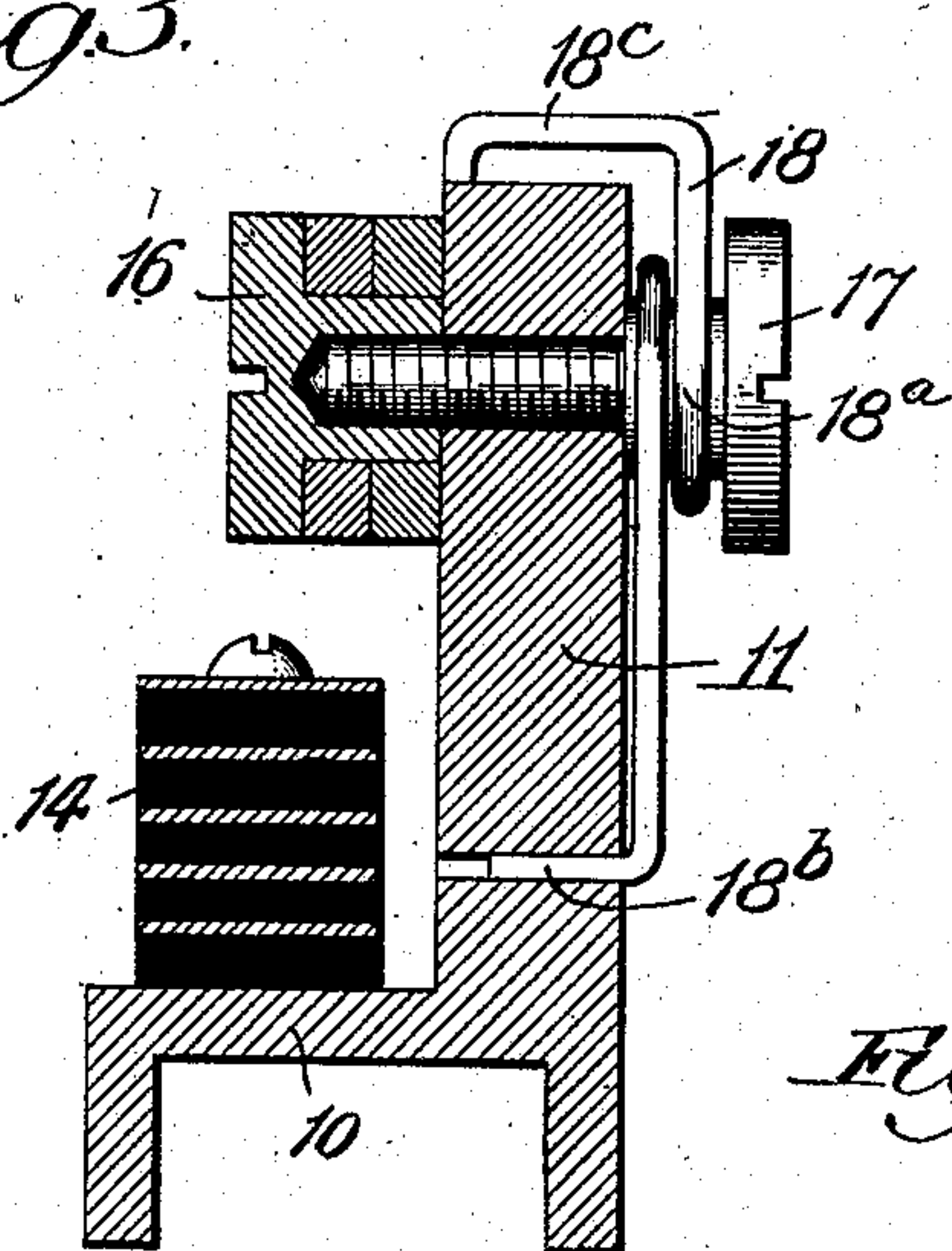


Fig. 4.

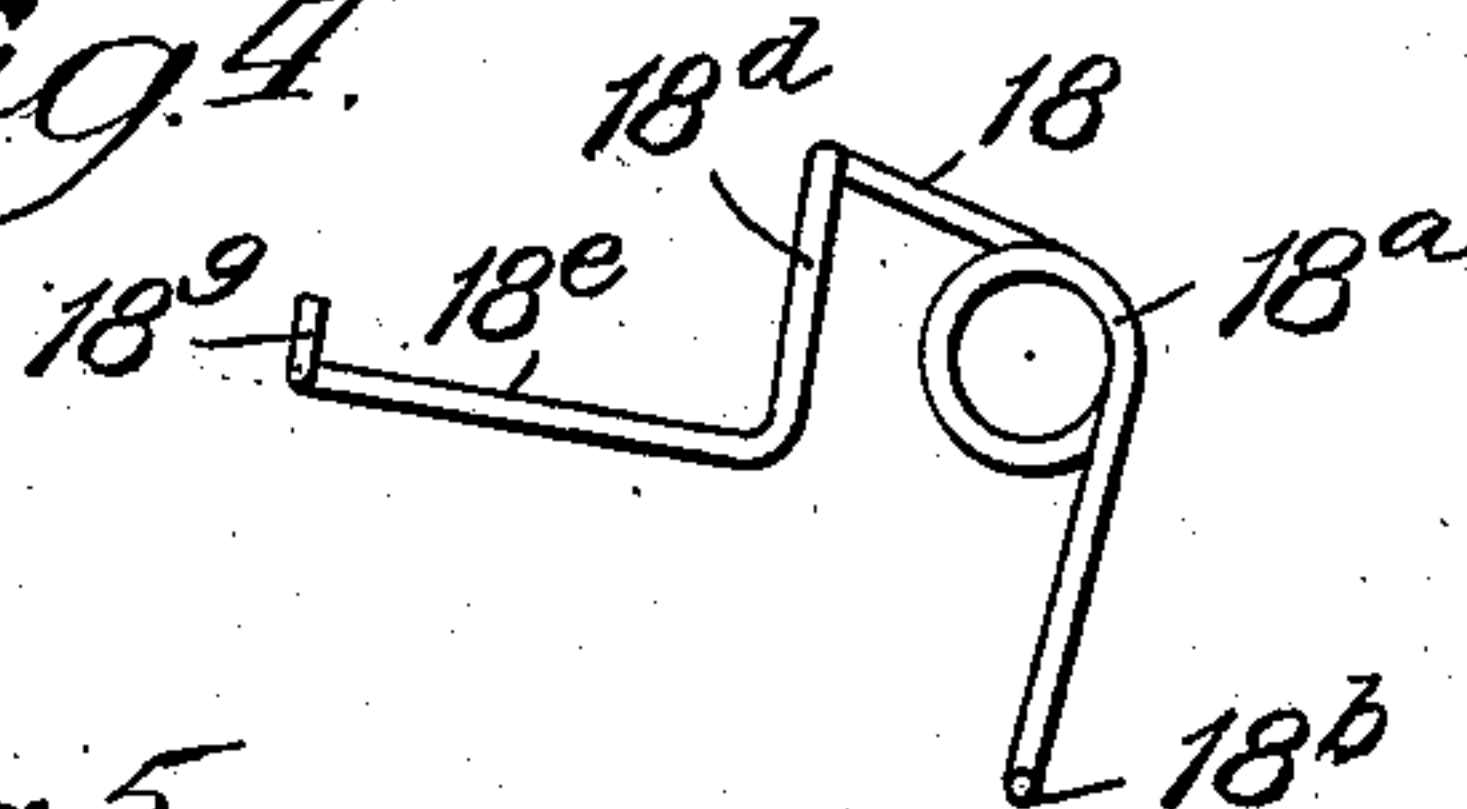


Fig. 5.

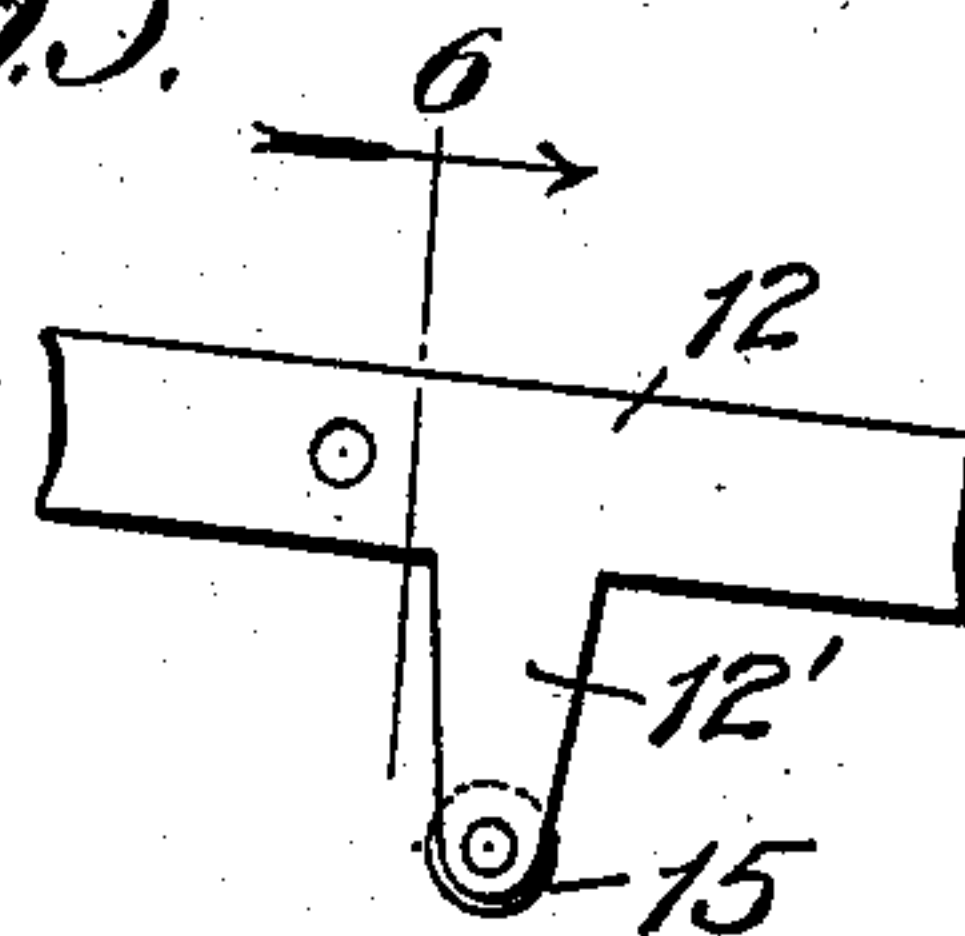
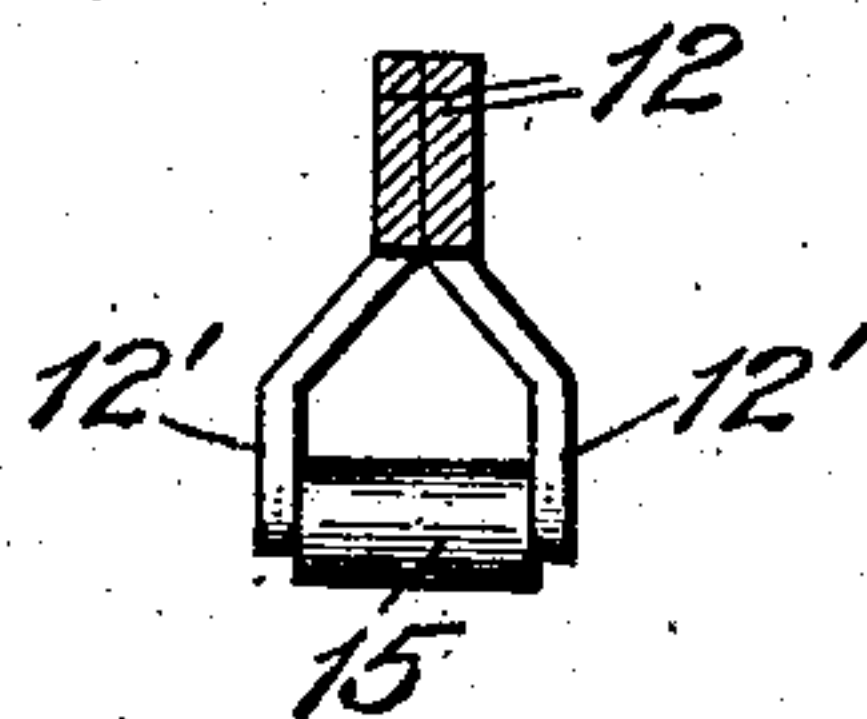


Fig. 6.



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# UNITED STATES PATENT OFFICE.

HENRY TIDEMAN, OF MENOMINEE, MICHIGAN.

## TELEPHONE HOOK-SWITCH.

No. 901,214.

Specification of Letters Patent.

Patented Oct. 13, 1908.

Application filed July 6, 1907. Serial No. 382,428.

*To all whom it may concern:*

Be it known that I, HENRY TIDEMAN, a citizen of the United States of America, and a resident of Menominee, county of Menominee, and State of Michigan, have invented a new and useful Improvement in Telephone Hook-Switches, of which the following is a specification.

My invention pertains to the manufacture of parts for use in the assembly of complete telephone subscriber's equipments, and provides an improved type of gravity switch or hook switch to be operated when the subscriber hangs up his receiver in a manner well known.

I provide a self-contained hook switch unit comprising a base, a group of switching contacts mounted thereon, an actuating lever mounted thereon, and a stop for limiting the angular motion of the hook lever, the stop also being mounted upon the base, the entire unit thus being integral and self contained.

This specification is accompanied by a sheet of drawings containing six figures, in which

Figure 1 shows elevation of my device with some parts in section to show the construction more clearly; Fig. 2 shows top plan; Fig. 3 shows a section on line 3 of Fig. 1; Fig. 4 shows detail of the tension spring; Fig. 5 shows a modification; Fig. 6 shows view of the modification of Fig. 5 taken with the hook lever in section on the line 6 of Fig. 5.

Base part 10 is of channel cross section and has the upwardly extending lug 11, upon which is secured pivotally the hook lever 12. Upon the base 10 is affixed the stop 13, which projects upwardly from that end of the base remote from the pivot of the hook lever, and which is perforated or notched at 13', permitting the hook lever to be passed through it before pivoted attachment to the lug 11, after which stop 13 limits the angular movement of the hook lever 12.

A group of switch springs 14 is mounted upon the base 10 and is actuated by the roller 15 mounted upon an ear piece 16 attached to the hook lever 12.

As an alternative form, I show in Figs. 5 and 6 the roller 15 carried by projecting ears 12' integral with the hook lever 12. The hook lever 12 as will be seen from Fig. 2 comprises two sheet metal parts formed and riveted together. In the modification shown in Figs. 5 and 6, each of these parts

of the hook switch 12 has the ear 12', the two ears being separated and holding the roller 15 between them.

The hook lever is pivoted upon the base 10 by being held by the shouldered lock screw 16, which at the same time serves as a lock for the shouldered screw 17 threaded into the lug 11 of the base 10 and holding the spring. The spring 18 is spiral at 18<sup>a</sup>, is bent sharply at 18<sup>b</sup> and is anchored by having the end 18<sup>b</sup> held within a hole in the lug 11. The free end of the spring 18 is bent to engage the hook lever and to press it upwardly against the weight of the receiver. It will be noted that the spring 18 is held securely by the screw 17, that when so held its end 18<sup>b</sup> is not removable from the hole in which it is placed, and that the spring 18 thus is held in place and in readiness to act upon the switch lever 12 even though that lever may be removed temporarily by removal of its support 16 constituting a lock nut upon the screw 17. The spring 18 in its free end is so shaped as to engage the hook lever 12 and press that lever upward without requiring any special conformation of the hook lever to retain the spring in place. The spring as a whole is held by spiral portion 18<sup>a</sup> and the anchor terminal 18<sup>b</sup>. From the central portion 18 the spring bends horizontally through the horizontal portion 18<sup>c</sup>, approaches the vertical plane of the near side of the hook lever, thence it passes downward at 18<sup>d</sup> practically in contact with the side of the hook lever, thence passing out along the hook lever in the reach 18<sup>e</sup> until the proper distance from the pivot is reached for the application of the spring to the under side of the hook lever. At this point a horizontal turn is made and the spring at 18<sup>f</sup> passes under the hook lever, being turned up at 18<sup>g</sup> to engage the more distant side of the hook lever. It is seen thus that the spring as formed engages both sides as well as the under surface of the hook lever, and cannot slip out of position.

Having thus described my invention, what I claim as new and desire to secure by United States Letters Patent is:

In a telephone hook switch, a base part, a switch group mounted upon said base part, a tension spring mounted upon said base part by a shouldered screw, said shouldered screw being threaded into a lug upon said base part and projecting through said lug,



a shouldered threaded lock nut for said screw, and a hook lever adapted to be held by said lock nut and adapted to operate said switch group, said tension spring being  
5 adapted to engage and actuate said hook lever, substantially as described.

Signed by me at Menominee, county of

Menominee and State of Michigan, in the presence of two witnesses.

HENRY TIDEMAN.

Witnesses:

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