

J. B. SECOR.
TYPE WRITING MACHINE.
APPLICATION FILED JAN. 21, 1902.

FIG. 1.

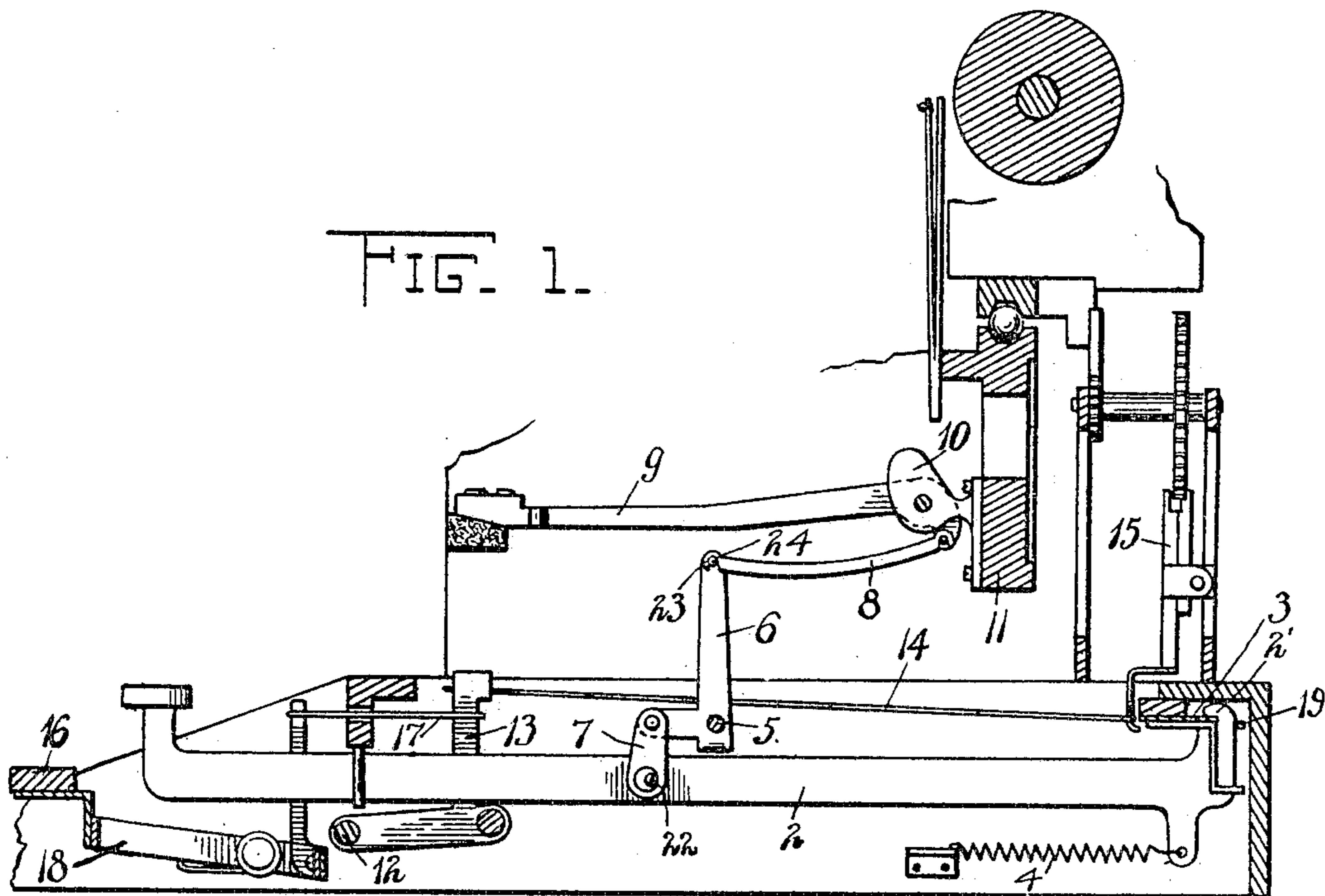


FIG. 4.

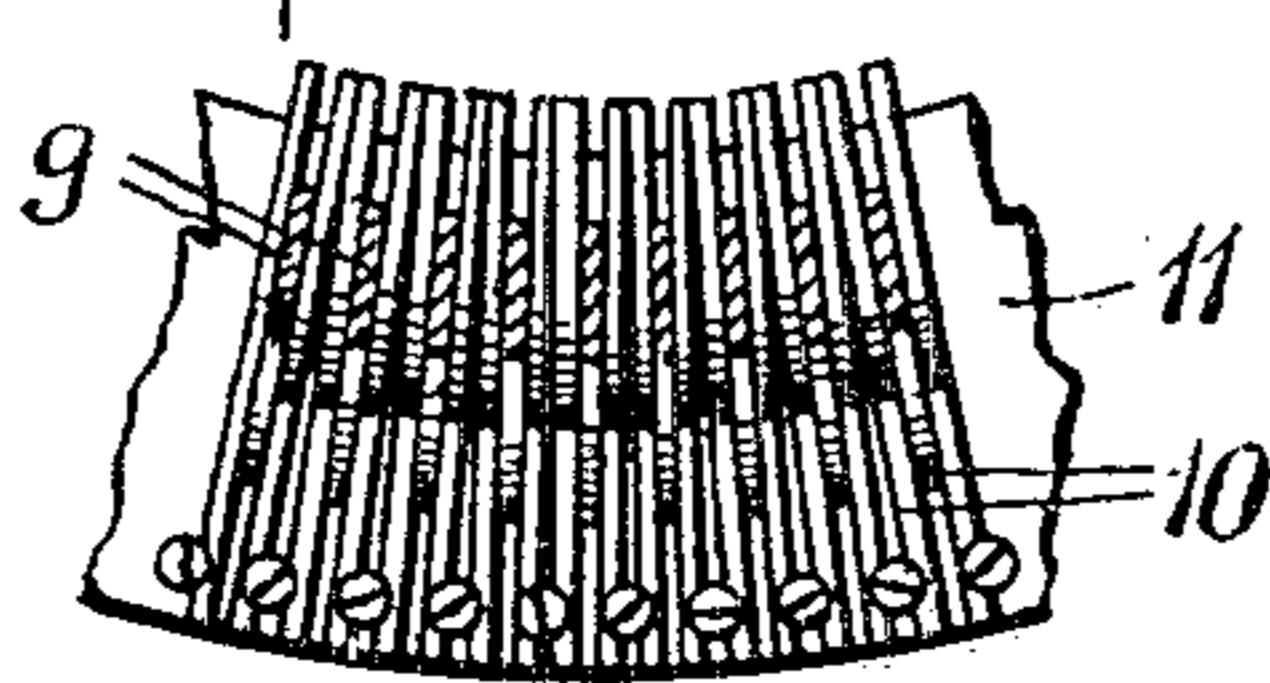


FIG. 6.

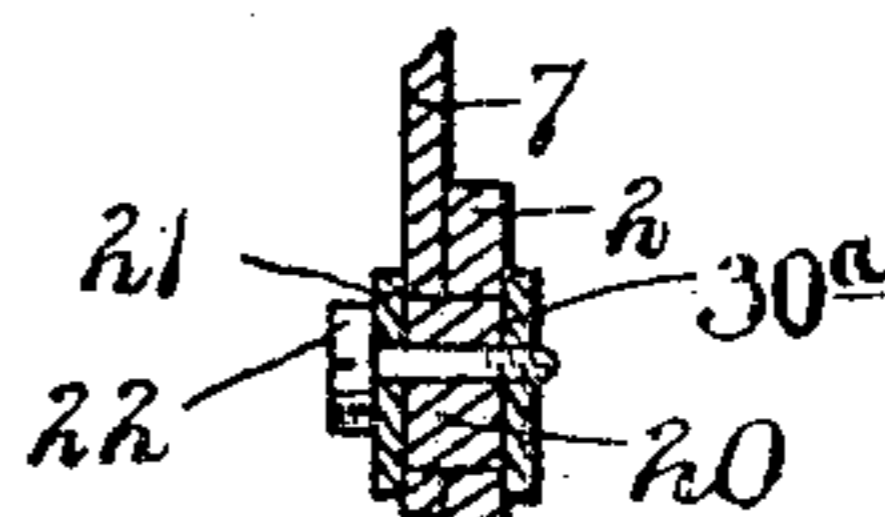


FIG. 3.

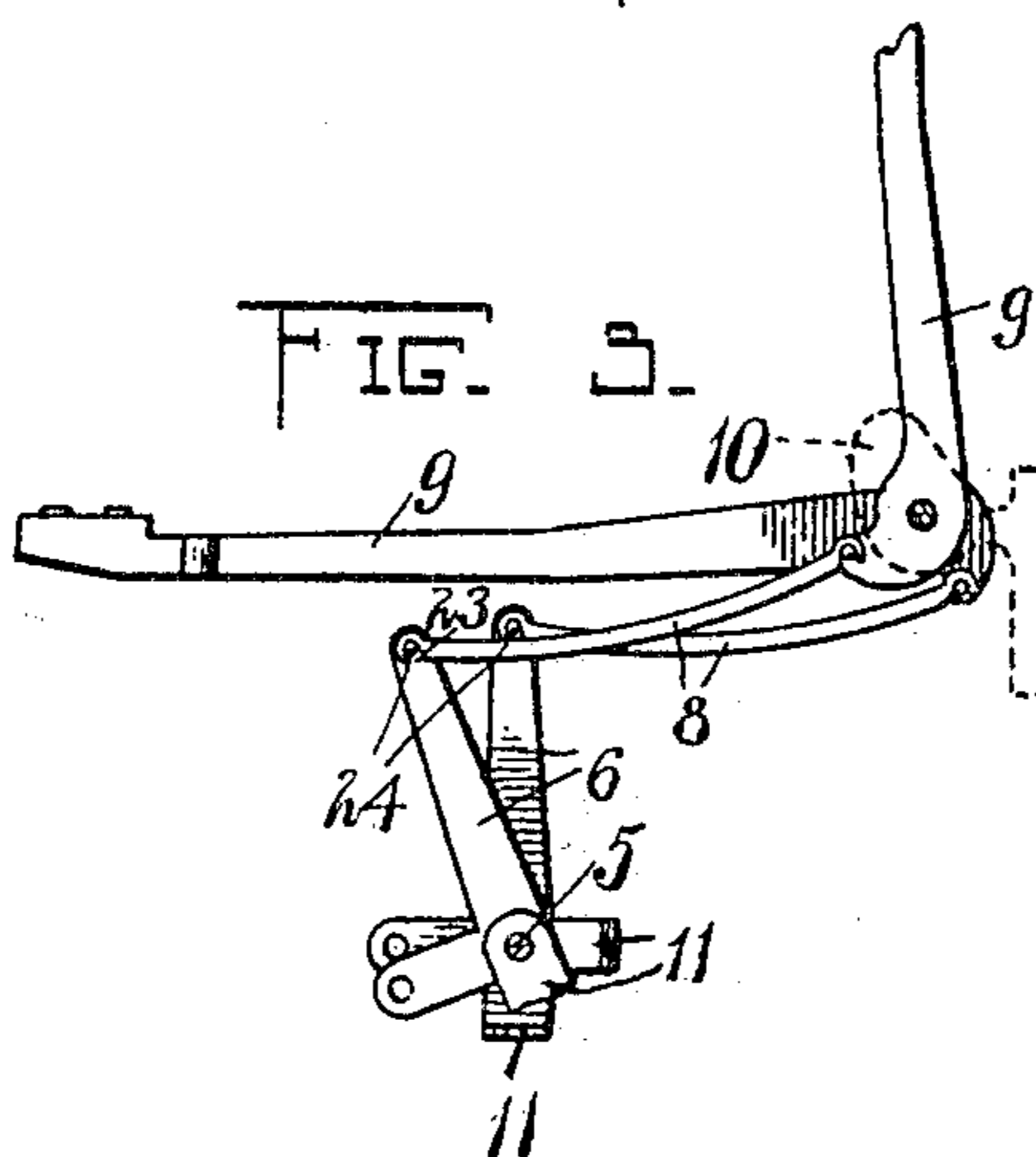
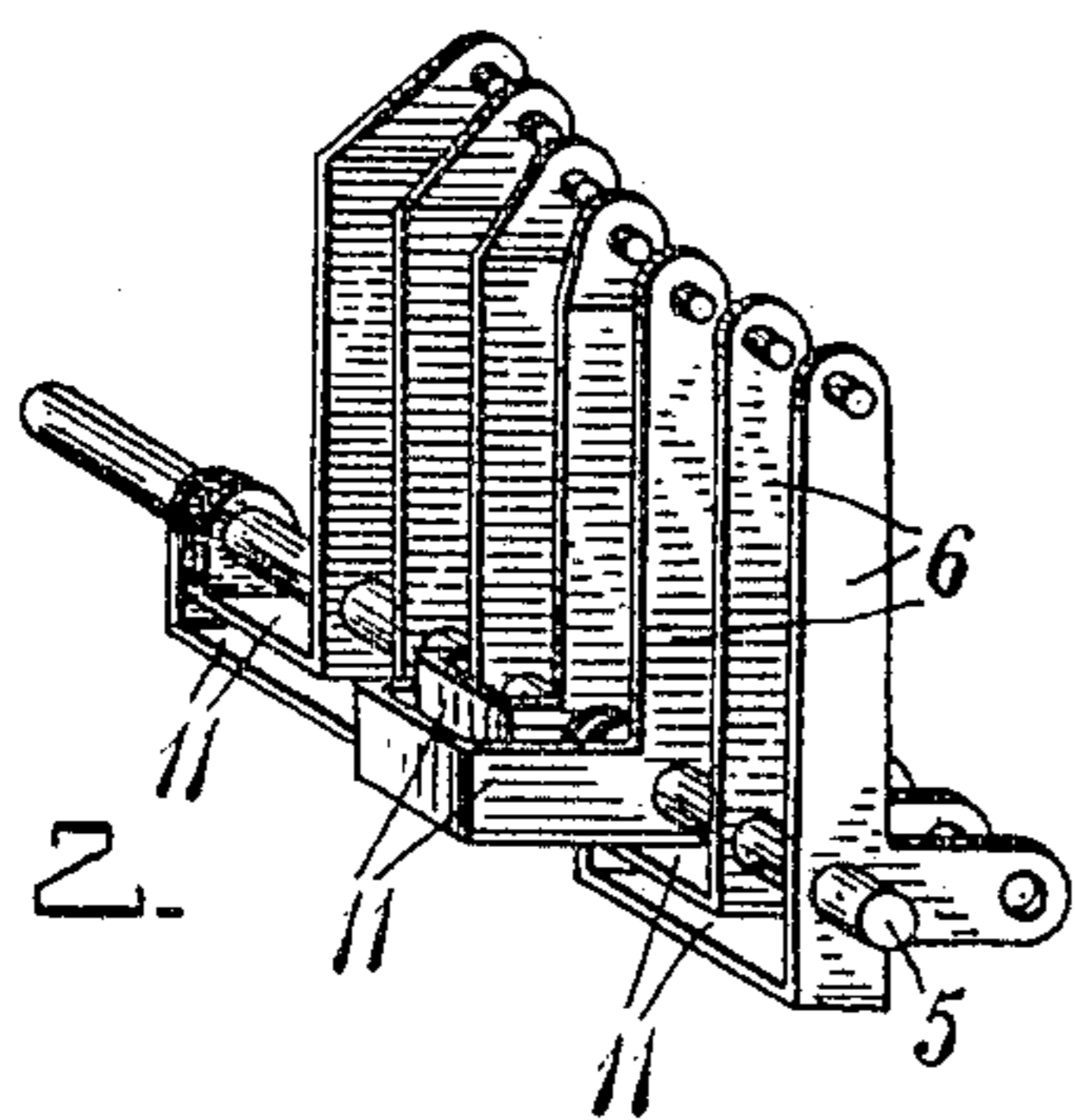


FIG. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

JEROME B. SECOR, OF DERBY, CONNECTICUT, ASSIGNOR TO THE
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TYPE-WRITING MACHINE.

No. 798,929.

Specification of Letters Patent.

Patented Sept. 5, 1905.

Application filed January 21, 1902. Serial No. 90,613.

To all whom it may concern:

Be it known that I, JEROME B. SECOR, a citizen of the United States, residing at Derby, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

My present improvements relate to the type-bar supporting and actuating mechanism and the key-lever arrangement.

In the accompanying drawings, Figure 1 is a transverse section of a type-writing machine embodying my invention. Fig. 2 is a detail perspective view of a group of type-bar-actuating sublevers. Fig. 3 is a side elevation of a pair of adjacent type-bars and their actuating-sublevers, showing one of the levers and its type-bar in actuated position. Fig. 4 is a detail elevation of the type-bar brackets, showing in section type-bars mounted therein. Fig. 5 is a detail side elevation, with one of the plates removed, of a type-bar bearing, showing a part of a type-bar mounted therein. Fig. 6 is a detail sectional view of an eccentric bushing between each of the key-levers and link connecting its sublever or bell-crank.

Only so much of the structure of a type-writing machine is shown as is necessary to illustrate my invention.

Referring now in detail to the drawings, frame 1 has mounted thereon the key-levers 2, which are pivoted at a common plate or bar 3 at the back of the machine-frame and which are actuated by springs 4. On another bar or rod 5, extending transverse the machine, are pivoted a series of sublevers or bell-cranks 6, the arms of which are connected, respectively, by links 7 with key-levers 2 and by links 8 with the heels or short arms of the type-levers 9. These type-bars 9 are in the form of bent sheet-metal strips and are mounted side by side on separate bearings. (Shown in Figs. 1 and 4.) Each of said bearings consists of three metal plates 10 10^a, attached together, the outer plates 10 being longer than the inner plates 10^a, so as to receive therebetween the securing-screws 10^b, seated in the bridge 11 of the machine to fasten the bearing in place. Plates 10 are also extended in front to form cheeks or fins, between which the heel of the type-bar fits, so that the said bar is supported and guided against lateral

movement during its motion. The plates 10^a form separator-plates to space the plates 10 55 apart, Fig. 5. The type-bars 9 are arranged so as to lie normally in substantially horizontal position in the surface of a cylinder, Fig. 4, and the pivot-bearings are so disposed in the arc of a circle that on operation of the 60 type-bars the type thereon are brought to one and the same point, the central operated type-bar being then vertical.

On account of the fact that the upper ends of the bell-cranks 6 on each side having to be 65 bent toward the center of the machine to be in line with the type-bar links 8 it is desirable to make the bearings of these bell-cranks forked or with extension arms or tines 11, as shown in Fig. 2, said forks or tines 11 over- 70 lapping, so as to give a sufficiently-wide bearing-space for the cranks 6.

In the ordinary feeding movement of the carriage operation of any of the key-levers 2 through the universal bar 12, positioned be- 75 neath said key-lever 2 through the lever 13, and rod 14 acts to pull the lower end of a vibrating escapement-plate 15 or any other suitable escapement device, Fig. 1. The space- 80 key 16 operates the step-by-step feed in obvious manner through the link 17, connecting the lever 13 and the vibrating frame 18, upon which the space-key 16 is mounted.

The key-lever 2 I prefer to make removable, as shown in Fig. 1, by mounting the key- 85 levers 2 by their rounded notches 2' in the front face of the vertical extensions on the pivot-bar 3. The springs 4 serve to hold the key-levers against said plate. Back of the key-levers is a rod or bar 10, which retains 90 the key-levers against accidental displacement, this bar being removable from the machine by slipping the same out endwise. I also prefer to make the connection between key-levers 2 and the type-bars 9 adjustable, 95 as shown in Figs. 1 and 6, in which an eccentric bushing 20, having an annular flange 21, is secured to or seated in each key-lever 2 and link 7 by a screw 22 and nut 30^a, and so that by loosening the screw 22 and adjusting 100 the eccentric 20 and then tightening the screw 22 the relative positions of the type-bars may be adjusted, as shown in Fig. 1. The links 8, connecting the heel of the type-bars 9 and the bell-cranks 6, are removable. These are 105 made with hooked ends 23 engaging pins 24

on the bell-crank 6 and type-bars 9, respectively. As long as the parts are in adjusted positions the hooks 23 hold their place, but upon changing the bell-crank connection with
5 the levers 2, such as by adjusting the bushing 20, the links 8 may readily be removed from engagement with the pins 24.

Having thus described my invention, the following is what I claim as new therein and
10 desire to secure by Letters Patent:

1. In a writing-machine, the combination with the key-levers and the type-bars, of a pivot-bar, a plurality of sublevers mounted on said pivot-bar having forked bearing por-
15 tions overlapping one another to give extended bearing, and suitable connection between said sublevers, the type-bars and the key-levers.

2. The combination in a writing-machine
20 with the type-bars and key-levers, of a pivot-bar, bell-crank levers mounted on said bar having extension-arms overlapping adjacent bell-cranks to form a wide bearing-surface, means connecting the levers with the type-
25 bars and means connecting the levers with the key-levers.

3. In a type-writing machine, the combination with the type-bars and key-levers, of a pivot-bar, bell-crank levers mounted on said bar, one of the tines of said bell-cranks
3 overlapping the adjacent bell-cranks to form a wide bearing-base, means connecting the type-bars to said bell-cranks and means connecting the key-levers and bell-cranks.

4. In a type-writing machine, the combination of the pivot-bar, the key-lever having a vertical extension and a rounded notch in the front face of said extension engaging said
4 bar, and a rod adjacent said bar and engaging said lever to prevent accidental displacement of same.

5. The combination of the pivot-bar, the key-lever having a vertical extension with a rounded notch in the forward face thereof in engagement with said bar, and the means adjacent said bar to prevent accidental displacement of said lever.

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