

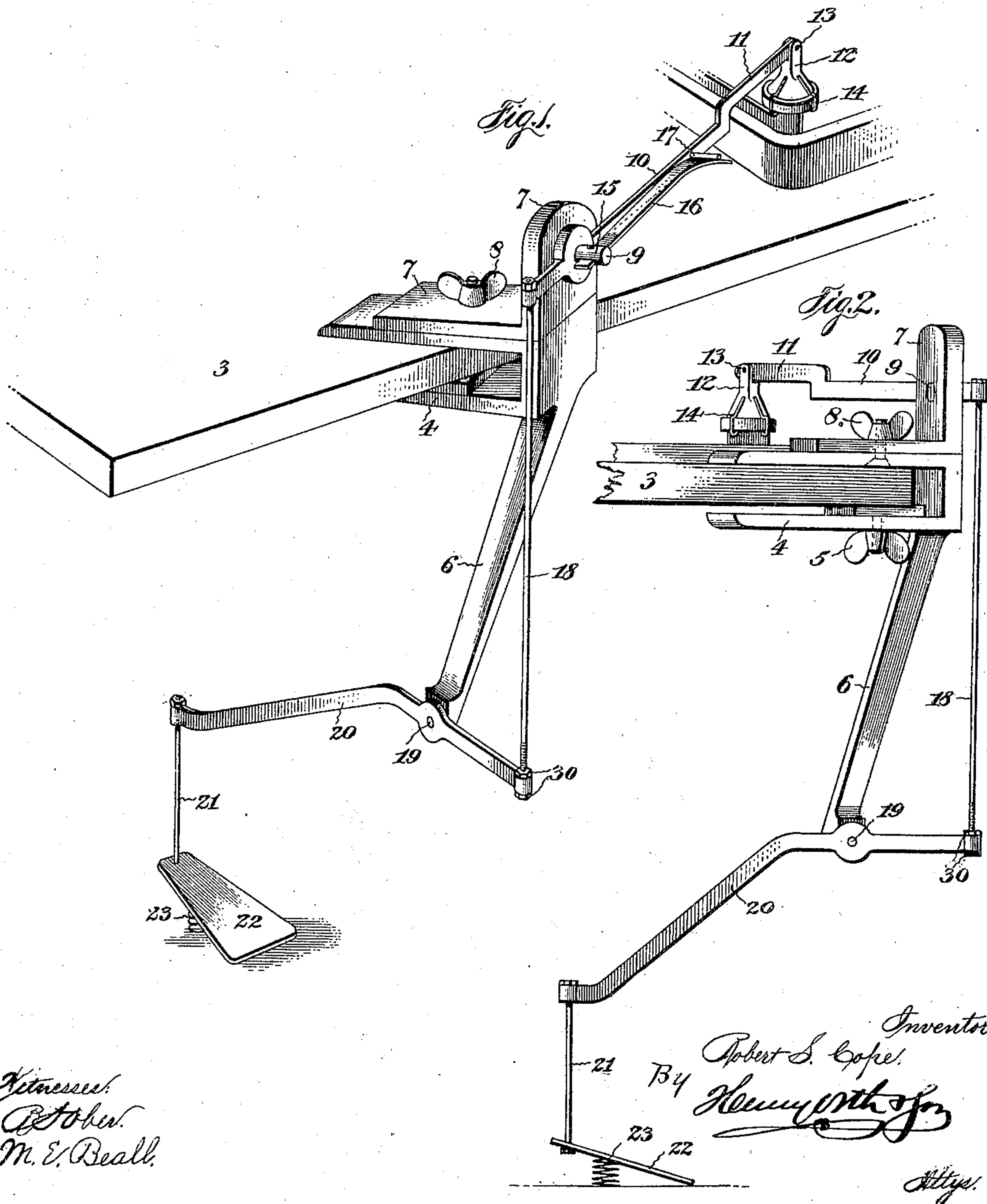
No. 709,748.

Patented Sept. 23, 1902.

R. S. COPE.  
SHIFT KEY ACTUATING DEVICE.

(Application filed June 24, 1902.)

(No Model.)





# UNITED STATES PATENT OFFICE.

ROBERT S. COPE, OF NEW YORK, N. Y.

## SHIFT-KEY-ACTUATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 709,748, dated September 23, 1902.

Application filed June 24, 1902. Serial No. 113,040. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT S. COPE, a citizen of the United States of America, residing in the city of New York, State of New York, have invented certain new and useful Improvements in Shift-Key-Actuating Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

My invention relates to devices for actuating the shift-key of type-writers and similar machines, and has for its object an economical attachment adapted to be secured to the stand or table in operative relation to the shift-key and actuated by suitable treadle mechanism.

Referring to the drawings, in which like parts are similarly designated, Figure 1 is a perspective view of my device shown in operative relation to the shift-key of a type-writer, and Fig. 2 is a side elevation of the same.

To the type-writer stand or table 3 is secured a clamp member 4 by means of a suitable screw and thumb-nut 5 on the under side of the clamp member, and depending from this clamp member is an arm 6 not in central alinement with it and preferably, though not necessarily, inclined under the table 3. On the upper side of the clamp is an angle-piece 7, held to the clamp by means of a screw and thumb-nut 8, and although this angle-piece may be made in one piece with the clamp member 4 I have shown it separate therefrom and rotatable about the screw 8, so as to allow of a certain amount of adjustment with relation to the clamp member 4 and to the shift-key. The clamp member with its depending arm and the angle 7 form the support for the device.

On the upright arm of the angle-piece 7 is secured a pivot-pin 9, and journaled on this pivot-pin is an arm 10, one end of which has preferably, though not necessarily, a bent portion 11, to which is secured an engaging finger 12, preferably, though not necessarily, pivoted thereto at 13. This engaging finger 12 is preferably, though not necessarily, pro-

vided with clamping-claws 14, of wire, whose bent ends take under the shift-key and prevent the finger 12 from bouncing off during operation or prevent the shift-key being held down for any reason.

Secured in a slot in the pin 9 by means of a screw 15 or other retaining device is a leaf-spring 16, with whose free end engages a pin 17 on the arm 10 and tending to hold this arm normally in retracted or raised position. To the opposite end of the arm 10 is secured a connecting-rod 18, the object of which is to connect the lever 10 with a lever 20, pivoted at 19 on the end of the depending arm 6. This lever 20 may be straight, but preferably, as shown in the drawings, downwardly inclined at the rear for the purpose of clearing the supporting-bracket (not shown) of the type-writer stand. The rear end of this lever is connected by rod 21, or it may be a flexible connection, to a treadle 22, said treadle being held on an incline by a coil or similar spring 23. The rod 18 is shown threaded on its lower end, that passes through the lever 20, and is provided with nuts 30, one above and one below the end of the lever, that serve to lengthen and shorten the distance between the ends of the levers 20 and 10. The upper end of the rod can be similarly connected to the end of lever 10.

The operation of the device is as follows: The clamp member 4 is secured to the table 3 by means of the thumb-screw 5, and the angle 7 secured in such relation thereto by the nut and thumb-screw 8 that the finger 12 is over the shift-key. If the finger is provided with wire claws 14, they are distended to allow the shift-key to pass under them, their hook ends taking under the key, and thereby locking the key against the finger 12. When the treadle 22 is moved down against the stress of its spring 23, causing rod 21 to draw down the lever 20 to move the rod 18 upward and operates the lever 10 against the stress of spring 16 to depress the finger 12 and the shift-key, to move the platen.

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

1. The combination with a clamp member, an angle-piece thereon, shift-key-operating lever, a leaf-spring to normally hold the le-



ver retracted, and treadle mechanism to actuate the said lever, substantially as described.

2. The combination with a clamp member 5 having a depending arm, an adjustable angle-piece thereon, a spring-retracted shift-key-operating lever carried by said angle and treadle mechanism to operate the said lever, substantially as described.

10 3. The combination with a clamp member having a depending arm, of an angle-piece adjustably secured thereto, a spring-retracted shift-key-operating lever, a treadle-actuated lever pivoted on the depending arm and a 15 connection between the two levers, substantially as described.

4. The combination with a clamp member having a depending arm, of an angle-piece adjustably secured thereto, a spring-retracted 20 shift-key-operating lever having an end adapted to engage and hold the shift-key, a treadle-actuated lever pivoted on the depending arm and a connection between the two levers.

5. The combination with a clamp member

having a depending arm, of an angle-piece 25 adjustably secured thereto, a slotted pivot-pin in the angle, a shift-key-operating lever pivoted on the pin, a leaf-spring held in said slot and holding said lever normally retracted, a treadle-operated lever pivoted on the de- 30 pending arm and an adjustable connection between said lever and the shift-key-operating lever, substantially as described.

6. The combination with a suitable support to be clamped to a table or stand, of a 35 shift-key-operating lever pivoted on the support, a finger pivoted on the end of the lever and provided with claws to engage and hold the shift-key, and treadle mechanism to operate the said lever, substantially as de- 40 scribed.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

ROBERT S. COPE.

Witnesses:

FRANCIS HOW,  
WM. BONNER.