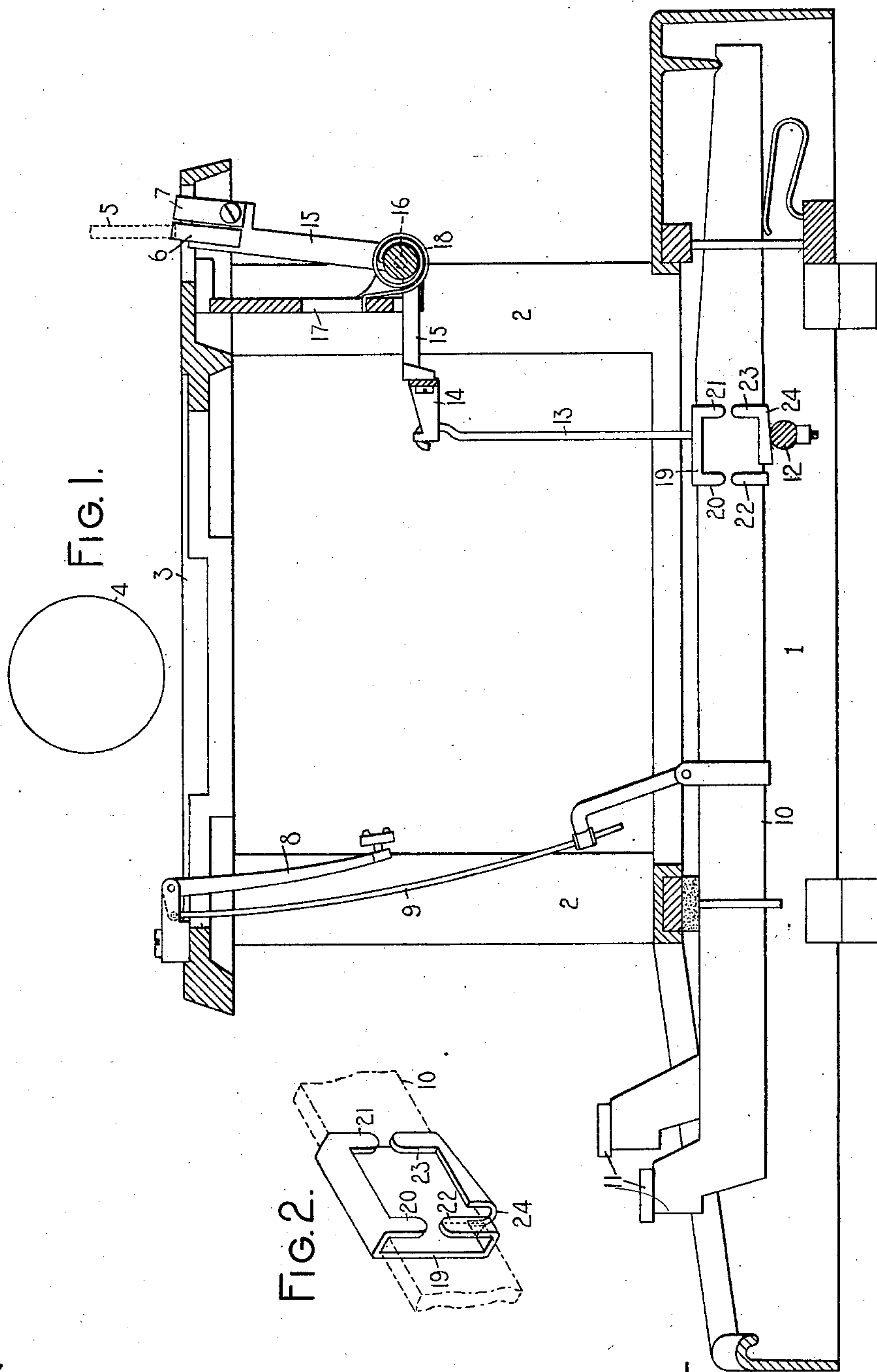


No. 763,699.

PATENTED JUNE 28, 1904.

B. C. STICKNEY.  
TYPE WRITING MACHINE.  
APPLICATION FILED MAR. 25, 1903.

NO MODEL.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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UNION TYPEWRITER COMPANY, OF JERSEY CITY, NEW JERSEY, A  
CORPORATION OF NEW JERSEY.

## TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 763,699, dated June 28, 1904.

Application filed March 25, 1903. Serial No. 149,511. (No model.)

*To all whom it may concern:*

Be it known that I, BURNHAM C. STICKNEY, a citizen of the United States, and a resident of Elizabeth, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

This invention relates to means for actuating the universal bar which controls the carriage-feeding mechanism of writing-machines; and its object is to enable the universal bar to be given uniform strokes for all of the type-operating keys, so that the feeding-dogs may be given thereby a uniform and certain action.

In the operation of some type-writing machines the stroke of the feed-dog rocker or holder varies considerably, some of the type-keys imparting to the same nearly twice the extent of movement that it receives from other keys, and because of this variation it is found impossible to adjust the let-off action of the dogs as closely as is necessary in order to enable the machine to be operated satisfactorily at high speed. I provide means for varying or adjusting the stroke given by each of the keys to the universal bar, so as to compensate for the usual differences in the depth of stroke of the key-levers, and by this means I enable the dog-rocker to be vibrated uniformly at all times, so that the carriage let-off may be set to occur early in the return stroke of the key, which is a desideratum.

My invention consists in certain features of construction and combinations of devices, which are fully hereinafter set forth, and particularly pointed out in the concluding claims.

In the drawings forming part of this specification, Figure 1 is a longitudinal vertical section of a Remington type-writing machine, showing my improvements applied thereto. Fig. 2 is a perspective view of an adjustable universal-bar-actuating clip fixed upon a key-lever, the latter being shown in dotted lines.

The frame of the machine consists, as usual, of a base 1, corner-posts 2, and top plate 3. Over the latter runs a carriage, (not shown,) the platen 4 thereof being diagrammatically

illustrated and the movements of the carriage being controlled in the usual manner by a letter-feeding mechanism, whereof the usual escapement-wheel is seen at 5 and the feeding and detent dogs at 6 and 7, respectively. The type-actions include type-bars 8, adjustable links 9, and levers 10, provided with keys 11. Extending transversely beneath the key-levers is a universal bar 12, which may be of any suitable cross-section and is illustrated as cylindrical. This universal bar is adjustably carried at its ends upon hangers 13, which depend from the ends of a cross-bar 14, fixed upon a dog-rocker 15, the latter being pivoted at 16 upon a fixed bracket 17 and carrying the feed-dogs 6 and 7 and being also provided with a returning-spring 18.

Upon each key-lever I fix a universal-bar actuator 19, consisting, preferably, of a sheet-metal plate or frame having claws 20 and 21 for catching over the top of the lever and claws 22 and 23 for catching under the bottom of the lever. These claws may pinch the lever sufficiently to cause the clasp or socket to bind firmly thereon, so that it will not be liable to accidental displacement when once adjusted. Between the lower claws 22 and 23 I form the clip with a working face 24, which is inclined longitudinally of the lever, so that different working portions thereof project different distances from the lever. By sliding or adjusting this clip along the lever forwardly or rearwardly parts of the working face which project less or more from the key-lever are brought into position for contacting with the universal bar, so that the latter may be given a less or greater stroke by the type-actuating movement of the key-lever. Thus if the type-stroke of any lever is greater than the average stroke said clip or socket may be adjusted forwardly, so as to reduce the stroke given by that lever to the universal bar, or if the extent of the lever-stroke is less than the average its clip may be adjusted rearwardly until the correct movement is given to the universal bar. By suitably adjusting all of the clips or other forms of universal-bar actuators in this way a uniform stroke of the



universal bar for all of the key-levers may be secured, thus favoring the accurate and prompt action of the carriage-feeding mechanism.

5 Variations may be resorted to within the scope of my improvements.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a type-writing machine, the combination of a carriage-feeding mechanism, including a universal bar; a series of type-actions including a series of members which actuate said universal bar; and means adjustably mounted upon said actuating members and  
10 bodily movable longitudinally thereof for regulating the strokes which they severally impart to said universal bar.

2. In a type-writing machine, the combination with a carriage-feeding mechanism, including a universal bar, of a series of type-actions including a series of levers; and a device mounted upon each lever for actuating said universal bar; said device having working portions which project varying distances  
20 from the lever, and being adjustable upon the lever so as to bring different working portions into position for actuating said universal bar.

3. In a type-writing machine, the combination with a carriage-feeding mechanism, including a universal bar, of a series of type-actions, including a series of levers; and a device mounted upon each lever for actuating said universal bar; said device having an inclined working portion, and being adjustable  
30 along its lever so as to bring different parts of said inclined portion into position for actuating said universal bar, thereby to vary the stroke given by the lever to the universal  
40 bar.

4. In a type-writing machine, the combination with a carriage-feeding mechanism, including a universal bar, of a series of type-actions including a series of levers; and a clip  
45 mounted upon each lever and fitting tightly thereto, for actuating said universal bar; said clip having an inclined working portion, and being adjustable along its lever so as to bring different points of said inclined portion into  
50 position for actuating said universal bar, thereby to vary the stroke given by the lever to the universal bar.

5. In a type-writing machine, the combination with a carriage-feeding mechanism, including a universal bar, of a series of type-actions, including a series of levers; a sheet-metal universal-bar-actuating socket mounted upon each lever, so as to be adjustable longitudinally thereof; each socket having claws  
60 catching over the top and bottom edges of the

lever, and also having beneath the lever a portion which is longitudinally inclined to the lever, for enabling the stroke imparted by the lever to the universal bar to be varied by adjusting the socket along the lever.

6. In a type-writing machine, the combination with a carriage-feeding mechanism, including a universal bar, of a series of type-actions, including a series of levers; and a series of universal-bar actuators provided with  
70 means for catching over the opposite edges of the levers, each actuator being adjustable along its lever and having a longitudinally-inclined working portion.

7. An attachment for a key-lever of a type-writing machine, consisting of a sheet-metal plate or frame having means for catching over the opposite edges of the lever, and also having a working portion longitudinally inclined, so that when mounted upon the lever it may  
80 be adjusted therealong to vary the stroke of the universal bar.

8. In a type-writing machine, the combination with a carriage-feeding mechanism, including a universal bar, of a series of type-actions, including a series of levers; and means bodily adjustable longitudinally on each lever for varying at will the stroke given thereby to the universal bar, so that when all of said varying means are properly adjusted,  
90 a uniform stroke is given by all of the levers to the universal bar.

9. In a type-writing machine, the combination of a carriage-feed mechanism including a universal bar, a series of type-actions including a series of members which actuate said universal bar, and adjustable devices having inclined working portions mounted upon said actuating members for regulating the strokes which they severally impart to said  
100 universal bar.

10. A sheet-metal clip for type-writing machines that is adapted to be detachably connected to a key-lever and to be adjusted longitudinally of said key-lever and to be held  
105 in its adjusted position along the key-lever by frictional contact, said clip having a working face that extends to different distances from the key-lever and contacts with the universal bar to regulate the extent of movement transmitted from the key-lever to the universal bar.

Signed in the borough of Manhattan, city of New York, in the county of New York and State of New York, this 24th day of March, A. D. 1903.

BURNHAM C. STICKNEY.

Witnesses:

K. V. DONOVAN,

M. F. HAUMREBER.