(No Model.)

W. J. BARRON.

TYPE WRITING MACHINE.

No. 432,220. Patented July 15, 1890.

Fig. 1.

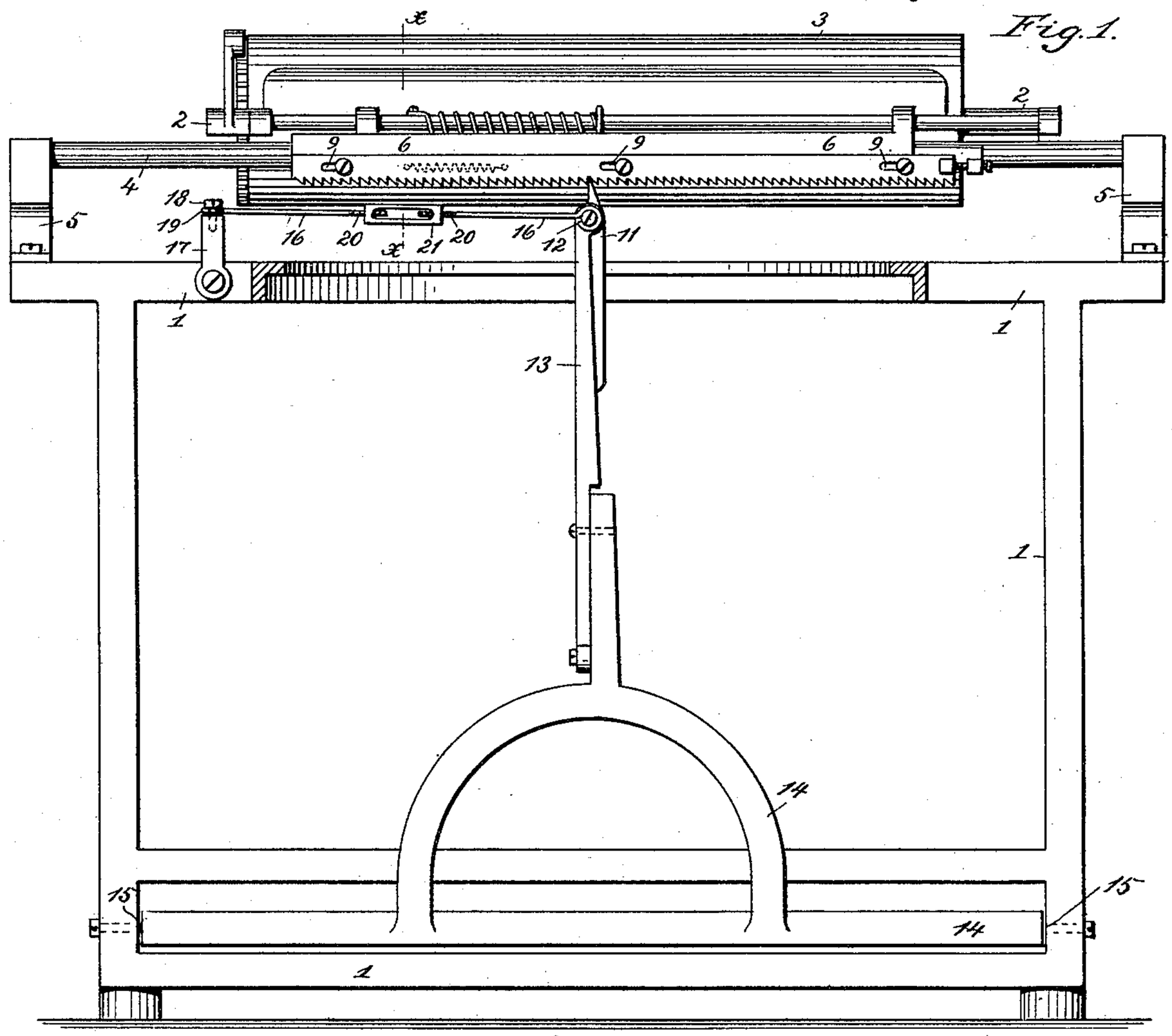


Fig. 2.

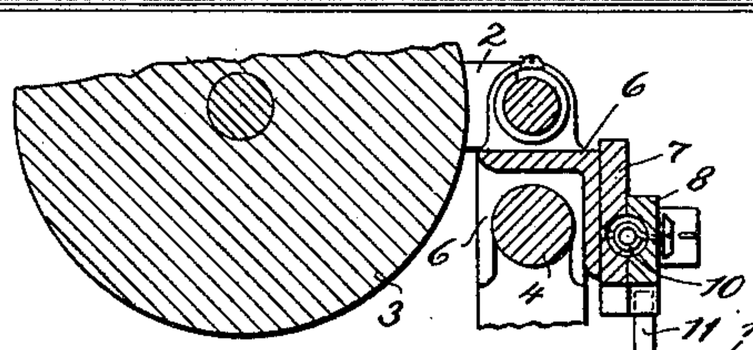


Fig. 3.

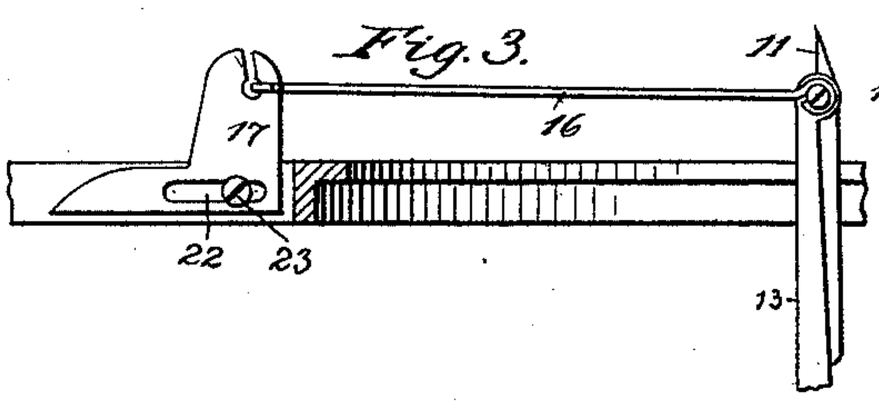


Fig. 4.

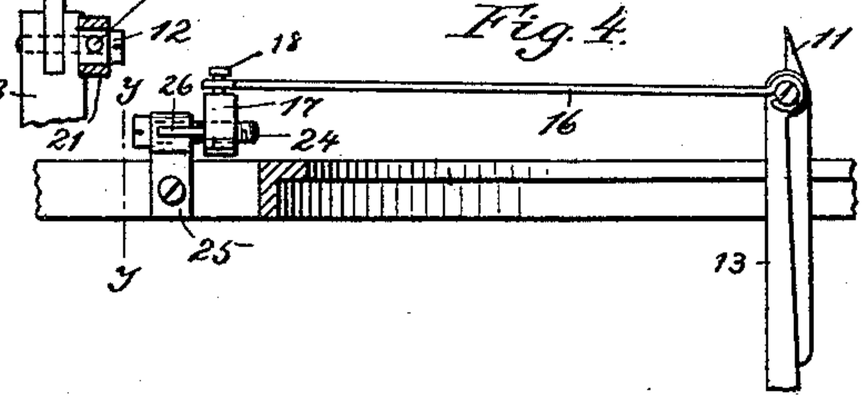
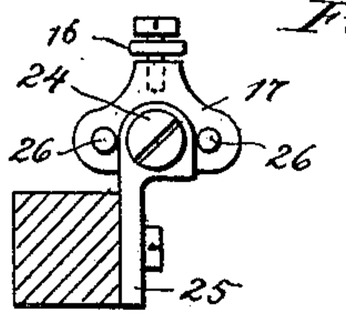


Fig. 5.



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WALTER J. BARRON, OF BROOKLYN, ASSIGNOR OF ONE-HALF TO AMOS DENSMORE, OF NEW YORK, N. Y.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 432,220, dated July 15, 1890.

Application filed March 28, 1890. Serial No. 345,646. (No model.)

To all whom it may concern:

Be it known that I, WALTER J. BARRON, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

My invention relates to the escapement or carriage-feeding portion of the machine, and has for its main object the provision of means for sustaining the shock upon the dog-holder, and thus preventing it from bending or springing laterally as the carriage feeds step by step to the left under the action of the driving mechanism.

To this main end my invention consists, primarily, in combining with the dog-holder a tie or brace adapted to permit the back and forth required vibrations of the dog-holder, but to prevent any sidewise or lateral flexure thereof, which, as is well known, operates to produce imperfect alignment in the writing; and my invention consists, further, in certain details of construction and arrangement of the connecting medium, all as will be hereinafter more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a back view of a type-writing machine embodying my invention. Fig. 2 is a vertical section thereof, taken at the line $x\,x$. Fig. 3 is a rear elevation of one modification of my invention. Fig. 4 is a similar view of another modification; and Fig. 5 is an enlarged vertical section, taken at the line $y\,y$ of Fig. 4.

In the several views the same part will be found designated by the same numeral of reference.

The machine illustrated generally herein is that commonly known as the "Caligraph," to which construction of type-writer my improvements are more especially adapted, though they may be employed effectually in machines of other design or detail construction.

1 represents the frame-work, 2 the paper-carriage, 3 the platen thereof, and 4 the paper-carriage-guide rail mounted at its ends in standards 5 on the frame-work.

6 designates a yoke attached to the back rod of the paper-carriage and arranged to slide upon the guide-rail 4. To said yoke is attached the well-known double racks 7 and 8, forming part of the escapement mechanism of the caligraph. The rack 7 is fixed or rigid relatively to the carriage, and the rack 8 is movable with respect to the rack 7, being slotted, as seen at 9, and having an actuating-spring 10, arranged to throw or shift it toward the left the distance of one notch or tooth as soon as the feed-dog 11 is vibrated forwardly out of said rack and into engagement with the rack 7. The feed-dog 11 is pivoted at 12 upon a vertical dog-holder 13, which is connected to a rocker-frame 14, journaled at 15 in the frame-work 1, all in a manner to permit of the dog-holder and dog being vibrated transversely of the paper carriage and racks during the operation of the machine.

16 represents a tie or brace connected at one end to the upper part of the dog-holder, preferably at the pivot 12, and at its other end to a fixed part of the machine on the right-hand side of the dog-holder, (viewed from the front of the machine,) and preferably to an arm or bracket 17, mounted on the frame-work.

Referring now particularly to Figs. 1 and 2, the tie or brace at its inner end is hooked over the horizontal pivot 12, and at its outer end is connected to the arm or bracket by a vertical pivot 18, passing through an eye 19 at the end of the tie or brace. Between the ends the tie or brace is divided and threaded, as seen at 20, and engaged by an intermediate threaded coupling or turn-buckle 21, by which the length and tension of said tie or brace may be nicely and accurately adjusted.

Examining now Fig. 3, it will be observed that the outer end of the tie or brace is pivotally connected to the upper end of a bracket or support, which is adjustable to vary the tension or pull of the tie or brace. The said bracket is provided with an elongated slot 22, through which a retaining-screw 23 passes, adapted to engage with the frame-work and hold the bracket in any position it may be adjusted to.

Referring to Figs. 4 and 5, it will be seen that the outer end of the tie or brace is pivoted to a bracket or support, which is perfo-

rated and threaded to receive a horizontal screw 24, mounted in an arm 25, screwed to the frame-work. By turning the screw 24 the bracket or support is adapted to be fed along upon the same, and thus regulate the pull or strain of the tie or brace. The bracket is prevented from turning on the screw by pins 26, which slide against the flat faces of the arm 25. In each case it will be observed that the tie or brace is connected at its outer end in a pivoted or yielding manner, which is essential, and that the tie vibrates in a horizontal plane, while the dog-holder vibrates in a vertical plane.

In the normal position of the machine the feed-dog rests in engagement with the outer movable rack 8. When the rocker-frame is actuated through the universal bar by the depression of a finger-key, the dog-holder moves toward the operator and carries the dog forward into engagement with the fixed rack 8. As soon as the movable rack is released, its spring shoots it toward the left one notch. When the pressure on the finger-key is relieved, the dog-holder vibrates rearwardly and the dog is carried back into the movable rack, which it holds, while the paper-carriage and the fixed rack are carried to the left by the action of the spring driving or propelling mechanism. It is at the end of the impulse or movement of the paper-carriage or at the time the paper-carriage is checked that the strain or shock comes upon the rocker-frame and the dog-holder and tends to bend or throw the latter to the left. By my construction, however, it will be observed that the dog-holder is held securely against any such lateral movement by the tie or brace, and that hence no matter how high the speed of the machine may be operated there will be no liability of imperfect side alignment or improper spacing between the letters of a word due to the flexure or lateral movement of the dog-holder.

Numerous changes in detail construction of the carriage, the escapement mechanism, and the tie or brace may be made without departing from the spirit of my invention, and hence I do not wish to be limited entirely to precisely what I have shown and described.

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

1. In a type-writing machine, the combination, with a paper-carriage, of a dog, a dog-holder, and a tie or brace connected at one end to the dog-holder and pivotally connected at the other end to a fixed or stationary part of the machine.

2. In a type-writing machine, the combination, with a paper-carriage, of a dog, a dog-holder, and an adjustable tie or brace connected at one end to the dog-holder and pivotally connected at the other end to a fixed or stationary part of the machine.

3. In a type-writing machine, the combination, with a paper-carriage, of a dog, a dog-holder, and a divided tie or brace connected at its innermost end to the dog-holder, pivoted at its outermost end, and provided with an intermediate adjustable coupling or turn-buckle.

Signed at New York, in the county of New York and State of New York, this 27th day of March, A. D. 1890.

WALTER J. BARRON.

Witnesses:
A. V. MANTLE,
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