

(No Model.)

H. McDOUGALL.
TYPE BAR FOR TYPE WRITING MACHINES.

No. 578,894.

Patented Mar. 16, 1897.

Fig. 1.

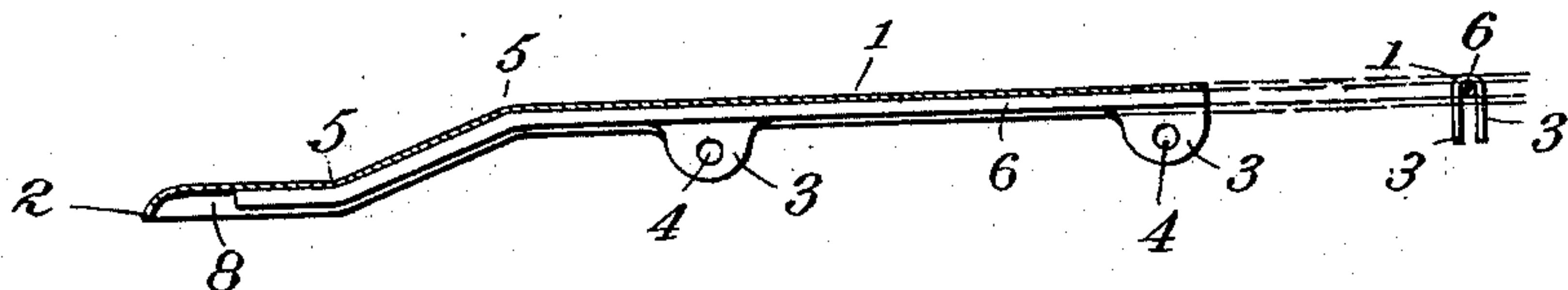


Fig. 2.

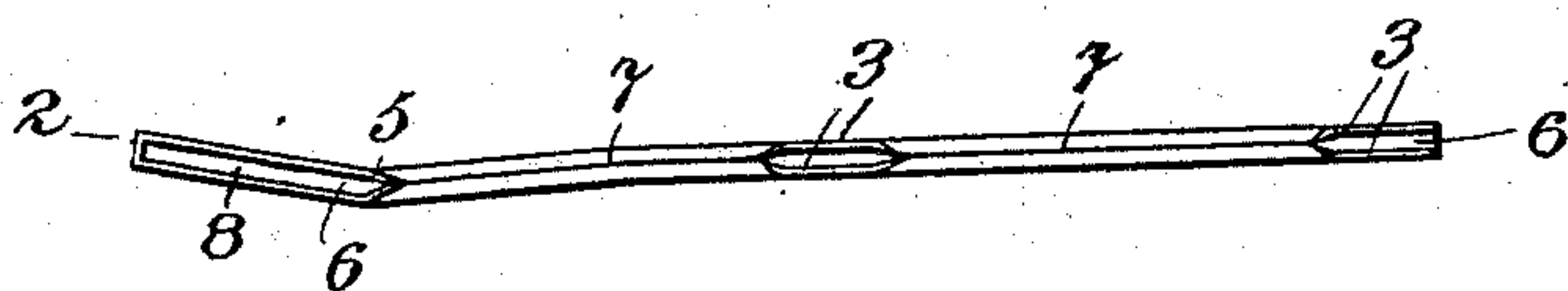


Fig. 3.

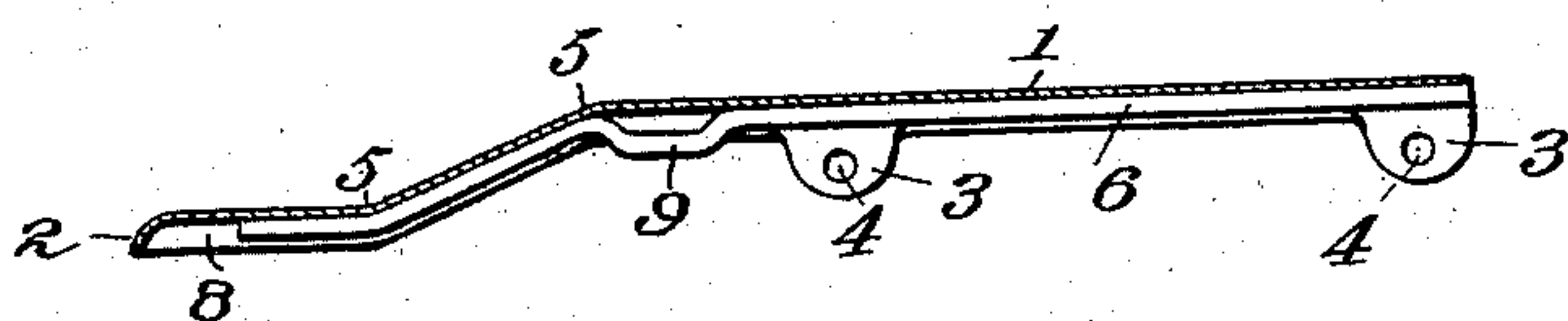
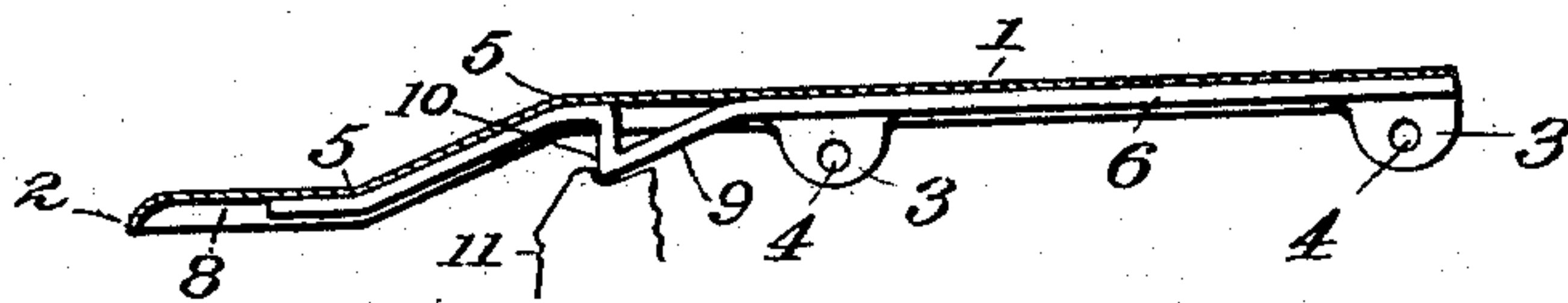


Fig. 4.



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TYPE-BAR FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 578,894, dated March 16, 1897.

Application filed April 15, 1896. Serial No. 587,598. (No model.)

To all whom it may concern:

Be it known that I, HUGH McDOUGALL, a citizen of the United States, residing at Brooklyn, county of Kings, State of New York, have invented certain new and useful Improvements in Type-Bars for Type-Writing Machines, of which the following is a specification.

My invention relates to improvements in the type-bars of type-writing machines having in view the simplifying and cheapening of the manufacture and strengthening and otherwise improving the bar.

In the endeavor to make a type-bar light and at the same time sufficiently stiff a great many different forms have been tried, so far, I believe, without making a bar which has these characteristics to the same extent possessed by the bar herein described. My improved bar is made by striking up a bar of the required length and shape out of flat metal so that it will be U-shaped in cross-section, having a socket portion at one end to receive the type and suitable ears for bearings. To stiffen this, I insert a stiff wire or rod of spring metal, preferably steel, and hold it in, preferably by turning over the edges of the U-shaped bar. Preferably, also, the stiffening rod or wire may have portions serving to take the shock of the blow of the bar on the frame or stop of the machine in that form of machine in which to prevent endwise movement of the type on the paper the bar is so arrested just before the type strikes the paper. It may also have a notch, shoulder, or tooth to arrest the longitudinal movement of the bar to prevent the sliding of the type on the paper and consequent blurring of the impression.

Referring to the accompanying drawings, which form a part of this specification, Figure 1 shows in longitudinal and transverse section my improved type-bar. Fig. 2 is an under side view thereof. Fig. 3 is a longitudinal sectional view of the same, illustrating another form of the stiffening-wire. Fig. 4 is a similar view illustrating still another and the preferred form.

The form of type-bar herein shown is especially intended for use on a Williams typewriter, in which the bar is carried by two links or levers pivoted, respectively, at one

end and at a point intermediate of the ends of the bar; but the invention is not confined to this use, but, on the contrary, may be generally applied to type-bar writing-machines.

In making my improved type-bar I first strike up from flat metal the bar 1, U-shaped in cross-section and having the downturned end 2 and the lugs or ears 3, the latter serving, when punched, as shown at 4, as means of connecting the bar to its journals or supports.

The bar may be made with suitable lateral bends 5 to fit it for its special function on the machine. As the hollow or U-shaped bar 1 is best struck out of somewhat soft or malleable metal, I find it best to stiffen it somewhat. To this end I place within it a suitable stiffening wire or bar 6, of hard spring metal, and hold it in place by turning in the lower edges of the bar 1, as shown at 7 in Fig. 2. A socket portion 8 is left at the end remote from end-supporting ears 3, to act as a seat for the type.

In certain machines—such as the Williams, for instance—a quick retracting spring-blow of the type on the paper is obtained by causing the bar at some point in rear of the type to strike against a fixed stop or abutment on the machine. The type will thus be carried quickly to and away from the paper by the spring action of the end of the type-bar. This eliminates or lessens the blurring of the impression caused by the striking of the type on the paper and then sliding thereon slightly before it leaves the paper. To bring this blow on the hard metal of wire or bar 6, I preferably bend the latter down at 9 to expose a portion of its length through the under side of bar 1. The bending or injuring of bar 1 is thus prevented and the spring action of the bar at the same time improved. The preferred shape of this bend is shown in Fig. 4. Here the bend 9 has a rectangular face or shoulder 10, adapted to engage a shoulder or stop on a portion 11 of the fixed frame of the machine and thus positively prevent longitudinal motion of the type-bar while the type is in contact with the paper. Hereby another function is added to the spring stiffening-bar.

The word “downwardly,” used herein to describe the direction in which bar 6 is bent at 9, is to be understood as meaning simply

“in the direction of the motion of the type-bar in striking the paper;” and if, as in some machines, the type strikes upwardly instead of downwardly the same form of type-bar as here shown would obviously be available.

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

1. The combination of the hollow or U-shaped bar 1 in one piece having type-socket portion 8 and means of pivotal support and the stiffening spring-bar 6 inserted and held therein and extending substantially from end to end thereof, substantially as set forth.

2. The combination of the hollow or U-shaped bar 1 in one piece having type-socket portion 8 and means of pivotal support, and the stiffening spring-bar within said bar 1 extending substantially from end to end thereof

and held therein by inturned edges 7 thereof, substantially as set forth.

3. In a type-writer type-bar the combination of the hollow or U-shaped bar 1 of relatively soft metal and the spring stiffening-bar 6 of hard metal inserted therein and having the downwardly-bent portion 9 projecting below bar 1, substantially as set forth.

4. In a type-writer type-bar the combination of the hollow or U-shaped bar 1 and the stiffening wire or bar 6 within said bar 1 having bent portion at 9 projecting through said bar 1 said bent portion having shoulder 10, substantially as set forth.

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Witnesses:

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