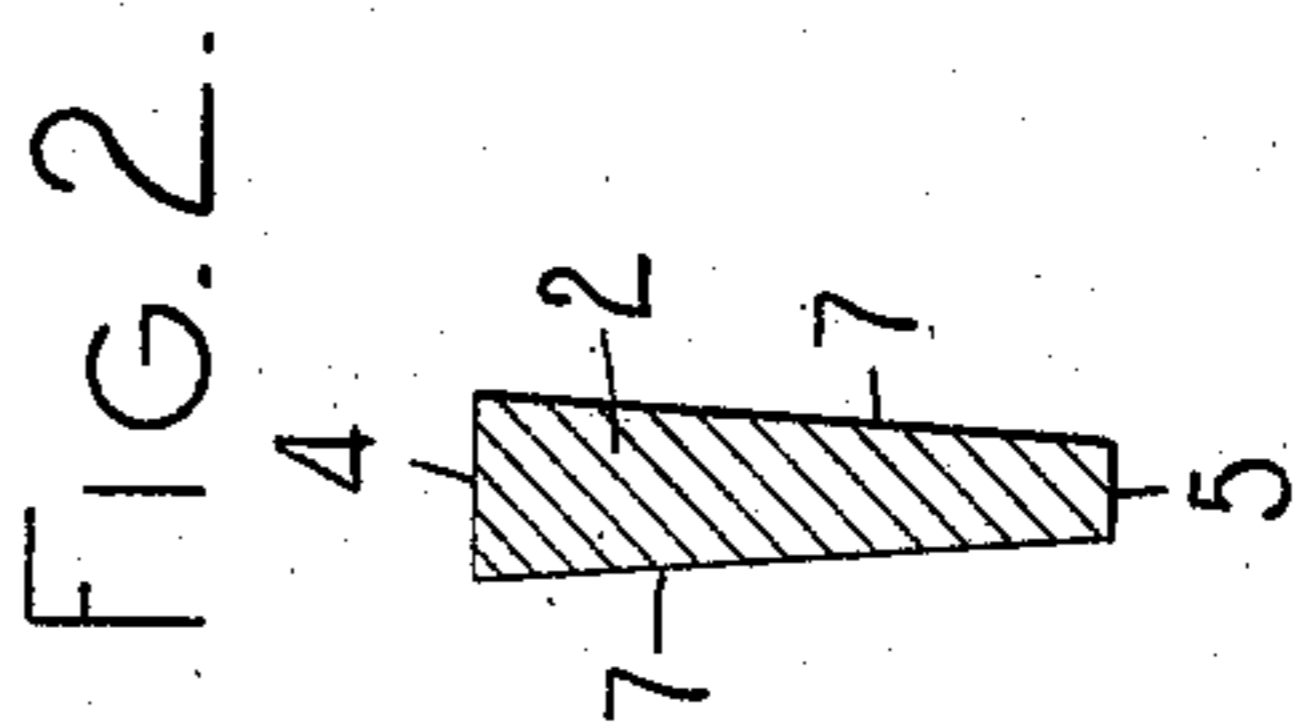
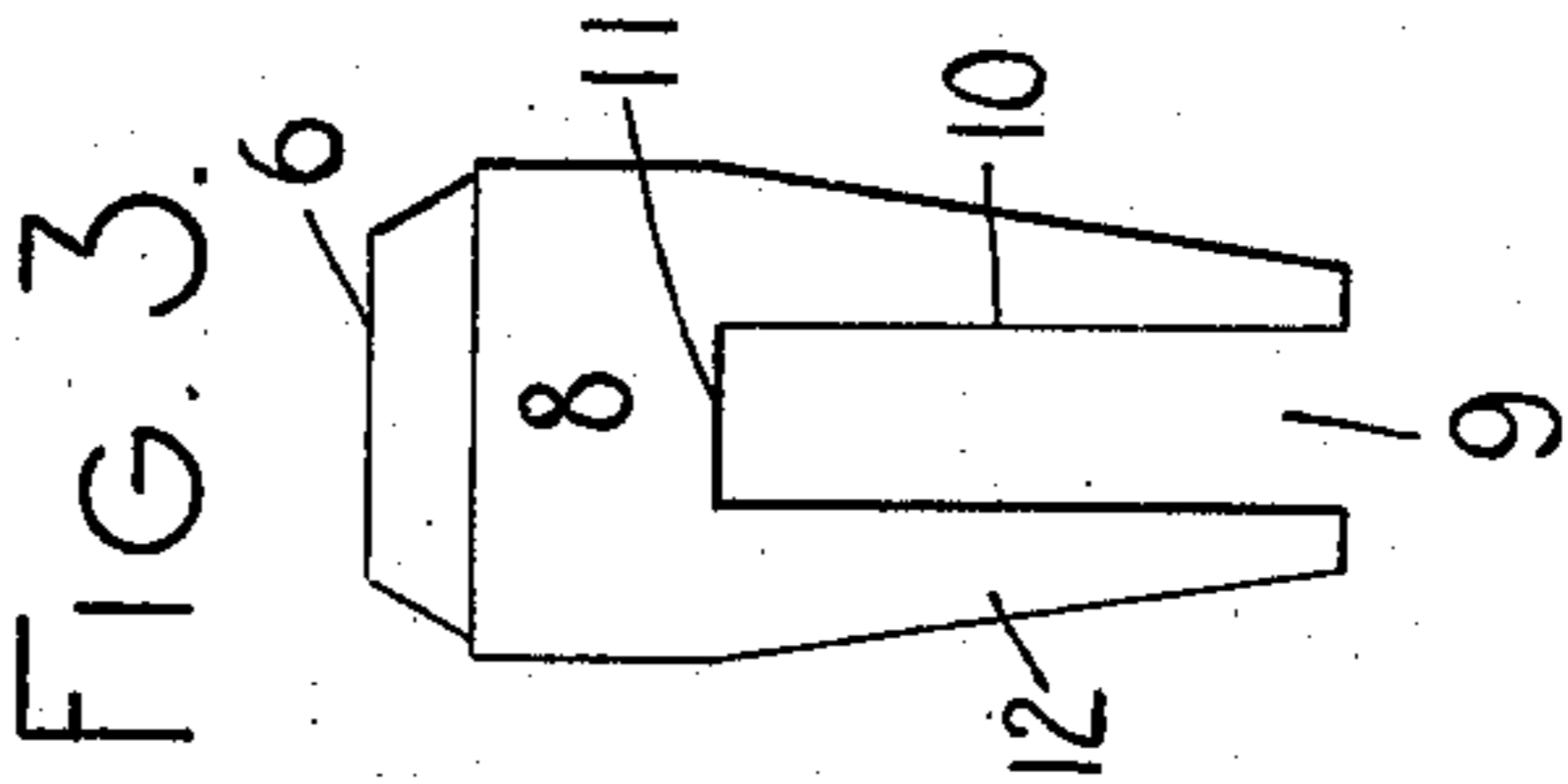
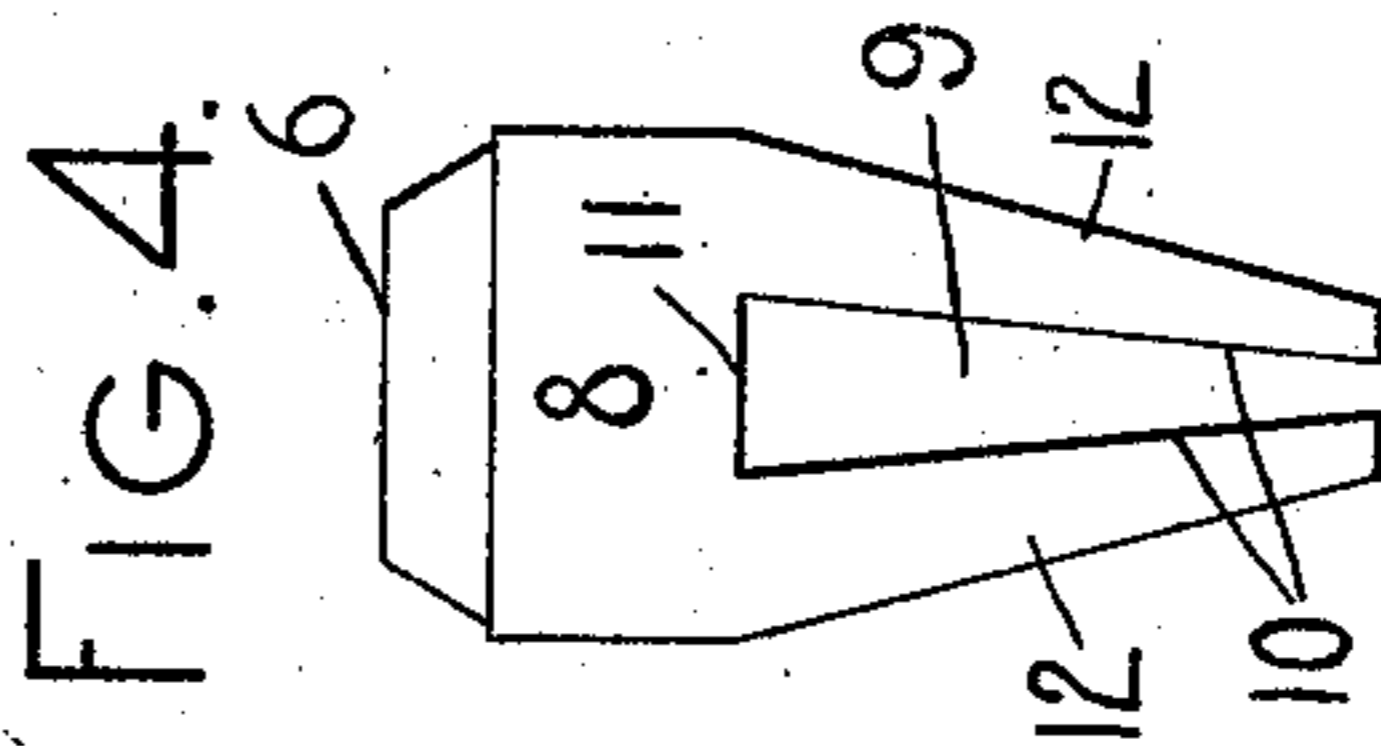
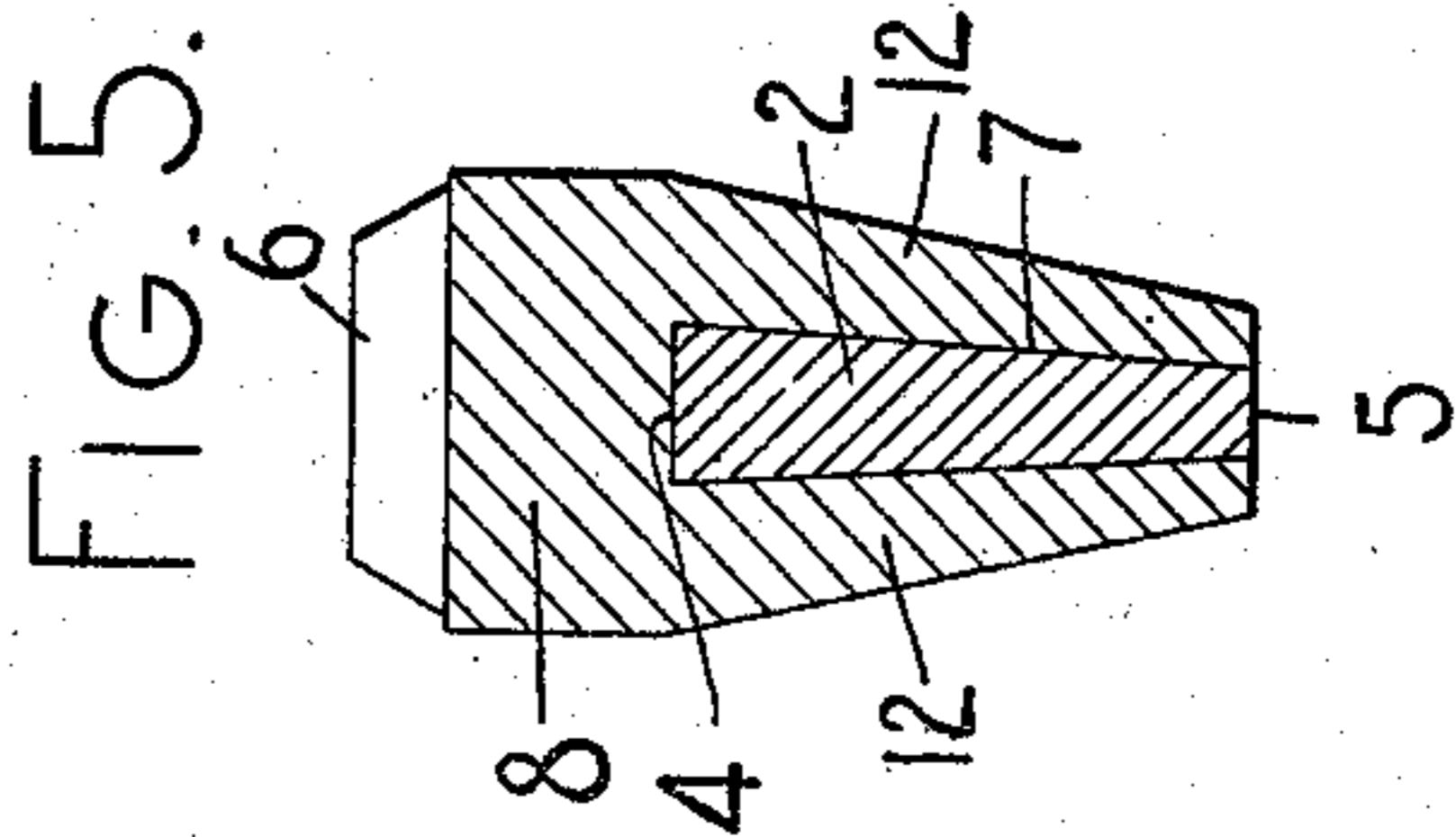
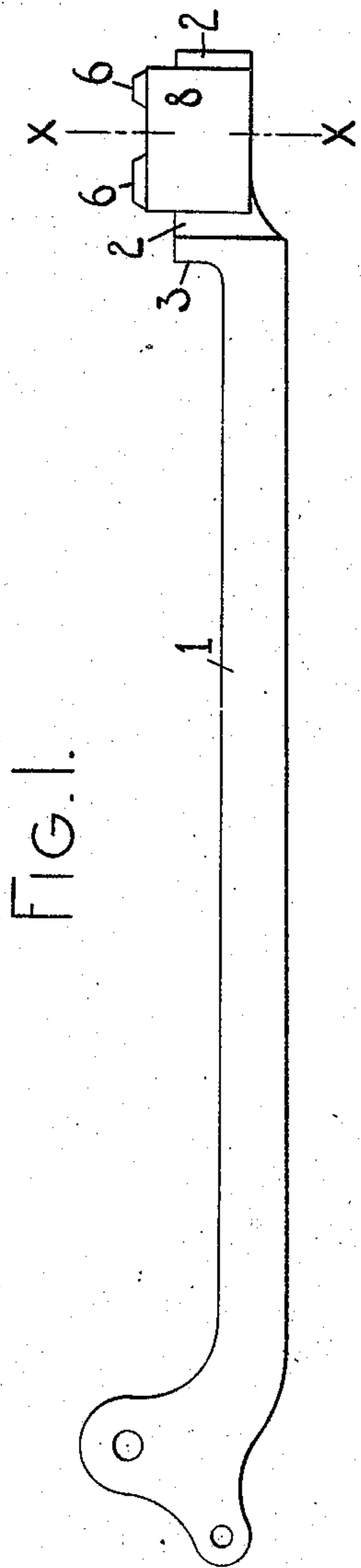


932,664.

Patented Aug. 31, 1909.



WITNESSES:

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*Charles E. Smith*

INVENTOR:

*C. B. Yaw*  
*By Jacob Felbel*

HIS ATTORNEY.

# UNITED STATES PATENT OFFICE.

CLIO B. YAW, OF ARLINGTON, NEW JERSEY, ASSIGNOR TO REMINGTON TYPEWRITER COMPANY,  
OF ILION, NEW YORK, A CORPORATION OF NEW YORK.

## TYPE-WRITING MACHINE.

932,664.

Specification of Letters Patent.

Patented Aug. 31, 1909.

Application filed April 22, 1909. Serial No. 491,458.

*To all whom it may concern:*

Be it known that I, CLIO B. YAW, citizen of the United States, and resident of Arlington, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

My invention relates to typewriting machines and more particularly to the construction of a type bar and to means for securing the type-carrying portion or type block to the bar proper, and for effecting an adjustment of the type block in order to aline the type.

The object of my invention is to provide a simple and efficient construction of the character specified and one which is easy to manufacture and cheap to construct.

To the above and other ends which will hereinafter appear, my invention consists in features of construction, combinations of devices and arrangements of parts to be hereinafter described and particularly pointed out in the claims.

In the accompanying drawings,—Figure 1 is an enlarged detail side elevation of a type bar, constructed in accordance with my invention. Fig. 2 is a detail transverse sectional view taken through the securing portion of the type bar on a line  $x-x$  of Fig. 1, Fig. 2 being drawn on a larger scale. Fig. 3 is an enlarged detail end elevation of a type block constructed in accordance with my invention, the view showing the block before the sides of the bifurcated portion are pressed toward each other as represented in Fig. 4. Fig. 4 is an enlarged detail end elevation of the type block as it appears just before it is applied to the bar. Fig. 5 is an enlarged detail transverse sectional view on a line  $x-x$  of Fig. 1.

The body or shank 1 of a type bar is provided at its free end with a reduced portion 2 on which the type block is secured or mounted. A shoulder 3 is formed on the body of the bar by an upwardly extending projection in the rear of the reduced portion 2 for purposes which will hereinafter appear. The securing portion 2 is tapered from the upper edge 4 to the bottom edge 5 thereof. In other words, the base or widest

portion of the taper is nearest the type or types 6 on the bar, whereas the narrowest portion of the taper is farthest from the types. This construction provides inclined side walls 7 on the securing portion, which extend from edge to edge of the bar, thus forming a dove-tail member by which the type block or type-carrying member 8 is connected to the bar. The type block is first formed from solid stock. A milled cut is then taken through the block to the proper depth to form a slot 9, as represented in Fig. 3. The inner side walls 10 of the slot are parallel after the cut is made and the distance between the side walls at the bottom wall 11 of the slot corresponds substantially to the width of the edge 4 of the securing portion. The arms or leaves 12 of the bifurcated type block, formed by the slot therein, are then bent or pressed toward each other as represented in Fig. 4.

In practice I prefer to make the slot 9; in the first instance, about ten hundredths of an inch in width and then to incline or taper the side arms or leaves 12 so that the width at the lower or open end of the slot 9 shall be about five hundredths of an inch. The securing portion of the bar I prefer to make about ten hundredths of an inch in width at the edge 4 and to taper the sides 7 down so that the lower edge 5 measures preferably about seven hundredths of an inch in width, thus leaving the lower edge 5 of the securing portion of the bar two hundredths of an inch thicker than the distance between the arms 12 of the type block at the lower free ends of said arm. The opening or slot 9 thus formed in the bifurcated type block is a dove-tail opening which corresponds generally to the form of the dove-tail securing member 2 of the type bar, although the slot is slightly narrower, except at the wall 11 thereof, than the width of the securing portion of the bar.

The formation of the dove-tail openings in the manner described greatly facilitates the manufacture of the type blocks as it would be difficult, if not impracticable, to cut the dove-tail openings in the blocks. When the block is formed as shown in Fig. 4 it may be driven endwise on to the securing member, the act of forcing the block on

the securing member separating the arms 12 of the bifurcated portion and the inherent resiliency of the arms will clamp or bind the side walls 7 of the securing portion from edge to edge thereof and will retain the type block in the position to which it is adjusted along the securing portion, thus preventing accidental endwise displacement of the block on the bar. The block may nevertheless be adjusted by a pair of pliers or a suitable tool along the securing portion of the bar in order to properly aline the type. If a block is to be moved toward the outer or free end of the bar the one jaw of the pliers is placed on the outer end of the type bar, the other jaw engaging the rear end of the type block or that end which is nearest the pivot of the type bar. A compression of the pliers at this time will force the block toward the outer end of the bar. If, on the other hand, the block is to be adjusted toward the pivot of the type bar, the one jaw of the pliers is brought into coöperation with the rear side of the shoulder 3, the other jaw engaging the forward end of the type block. A compression of the pliers at this time will move the block toward the pivot of the type bar. The securing portion 2 should be sufficiently longer than the block to provide for the requisite adjustment of the type block and to afford a purchase for the pliers at the free end of the securing portion.

From the foregoing description it will be understood that the dove-tail connection between the carrying member and the body portion of the bar constitutes means whereby the type-carrying portion or block 8 is prevented from moving laterally with relation to the bar, whereas the clamping engagement between the bifurcated portion of the type-carrying member and the bar constitute means for holding the type carrier or block against longitudinal displacement on the bar, and that no soldering, riveting or other means for securing the type block to the bar are necessary, the dove-tail and clamping connection forming the sole means for connecting the type block to the bar and for affording an adjustment of the type block longitudinally of the bar. Moreover, it will be observed that by forming the narrowest portion of the taper of the securing member farthest from the types 6 on the type block, so that the widest portion of the base 4 coöperates with the bottom wall 11 of the slot in the type block, there is no tendency to dislodge or affect, by the impact of the types against the platen, the connecting means which unites the type block to the bar.

From the foregoing description it will be seen that I have provided an extremely simple and efficient construction in which the

type block or carrier can be readily connected with or detached from the body portion of the type bar and may be adjusted at will for alining the type; and in which, nevertheless, there is little liability of the type block or carrier being accidentally displaced from the bar or dislodged from its adjusted position.

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

1. A type bar with a securing portion having side walls which taper from one edge of the bar to the other; and a detachable and adjustable type block having a slot extending therethrough, the side walls of the slot being inclined throughout to substantially match the tapering walls of the securing portion of the type bar.

2. A type bar having a securing portion that tapers from the edge nearest the type to the edge farthest from the type; and a type block having a bifurcated portion forming an opening that conforms generally to but is slightly smaller than the securing portion of the bar before the block is applied to the bar, said bifurcated portion clamping the bar when the block is in place and holding the block against endwise displacement thereon.

3. A type bar having a longitudinally extending securing portion of dove-tail formation in cross-section with the widest portion of the dove-tail nearest the type, the side walls being inclined from edge to edge; and a type block with a dove-tail opening therein to receive the dove-tail on the bar and connect the type block against lateral movement on the bar but to afford a withdrawal of the block endwise from the bar or afford an adjustment of the block longitudinally on the bar, the dove-tail opening being formed by a bifurcation of the type block and conforming generally to but being slightly narrower than the securing portion of the type bar before the block is applied to the bar, said bifurcated portion clamping the bar when the block is in place and holding the block against endwise displacement thereon.

4. A type bar having a longitudinally extending securing portion of dove-tail formation in cross-section with the widest portion of the dove-tail nearest the type, the side walls being inclined from edge to edge; a type block with a dove-tail opening therein to receive the dove-tail on the bar and connect the type block against lateral movement on the bar but to afford a withdrawal of the block endwise from the bar or afford an adjustment of the block longitudinally on the bar, the dove-tail opening being formed by a bifurcation of the type block and conforming generally to but being slightly narrower than the securing portion of the type bar before the block is applied to the bar, said bi-

furcated portion clamping the bar when the block is in place and holding the block against endwise displacement thereon; and a shoulder on the bar adjacent to the type block to aid in effecting an adjustment of the type block.

Signed at the borough of Manhattan, city

of New York, in the county of New York, and State of New York, this 21st day of April A. D. 1909.

CLIO B. YAW.

Witnesses:

M. F. HANNWEBER,  
CHARLES E. SMITH.