(No Model.)

W. H. THOMAS.

GAGE FOR GANG PUNCHES.

No. 593,341. Patented Nov. 9, 1897.

Fig. 1.

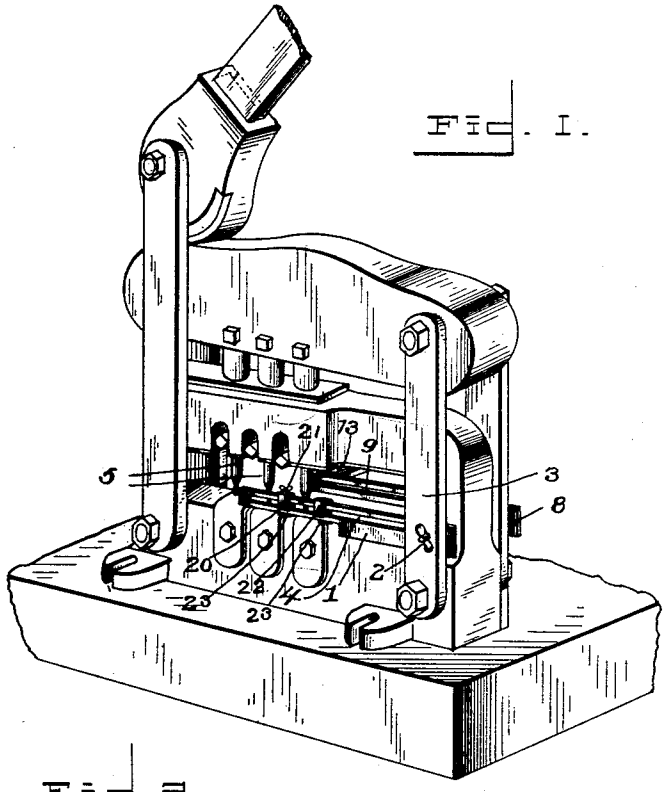


Fig. 3.

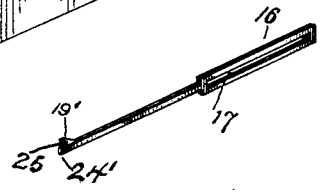
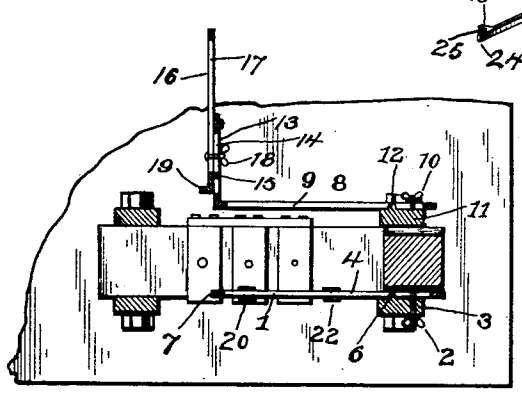


Fig. 2.



Witnesses:
Fenton S. Pelt,
J. Allison

Inventor:
William H. Thomas,
by A. B. Wilson,
Attorney.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM H. THOMAS, OF LAHASKA, PENNSYLVANIA.

GAGE FOR GANG-PUNCHES.

SPECIFICATION forming part of Letters Patent No. 593,341, dated November 9, 1897.

Application filed July 15, 1897. Serial No. 644,717. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. THOMAS, a citizen of the United States, residing at Lahaska, in the county of Bucks and State of Pennsylvania, have invented certain new and useful Improvements in Gages for Gang-Punches; and I do 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.

My invention relates to improvements in gages for gang-punches; and the object is to provide an adjustable gage for increasing the efficiency and utility of this class of tools whereby a series of articles may be rapidly and effectively turned out true to pattern.

To this end the invention consists in the construction, combination, and arrangement of the same, as will be hereinafter more fully described, and particularly pointed out in the claims.

In the accompanying drawings the same reference-characters indicate the same parts of the invention.

Figure 1 is a perspective view of my improved gage attached to a gang-punch. Fig. 2 is a horizontal section of the same. Fig. 3 is a perspective view of a modified form of the gage-bar 16.

For clearness of illustration I have shown my improved gage as applied to that form of punch of which Patent No. 524,691 to J. B. McLane, dated August 14, 1894, may to taken as a type.

1 represents the front gage-plate, adjustably secured by the set-screw 2 to the link 3, the set-screw 2 passing through a longitudinal slot 4 in the gage-plate, so as to permit a horizontal adjustment of the same across the front of the punches 5 5.

6 represents a projecting lug on the link 3, which extends through said slot 4 in the gage-plate to preserve its alinement while being adjusted. It will thus be seen that the front edge 7 of said gage-plate may be adjusted with reference to any of the punches. A second gage-plate 8 is likewise provided with a longitudinal slot 9, through which a thumb-screw 10 passes to adjustably secure it to the link 11 on the back of the press. A projecting lug 12 is also fixed on the face of said link, and it extends into the slot 9 on the gage-plate 8 to preserve its horizontal adjustable alinement. This gage-plate 8 is provided with an integral right-angular horizontal arm 13, having a longitudinal slot 14, which receives a lug 15, fixed on the parallel gage-bar 16, which is also provided with a longitudinal slot 17, through which a thumb-screw 18 extends into the corresponding slot in the horizontal arm to permit the parallel adjustment of the gage-bar. This gage-bar is provided with a right-angular toe 19, against which the metal to be punched abuts.

20 represents a sliding jaw adjustably secured by the thumb-screw 21 on the gage-plate 1, and 22 represents a corresponding jaw which is held in place by friction. Both of the sliding jaws have their lower edges 23 extending transversely across the lower edge of the gage-plate, in the one instance to take up the reactionary pressure of the thumb-screw and in the other to snugly encompass the gage-plate and hold the jaw in place.

In the modified form of the gage-bar 16 shown in Fig. 3 the right-angular toe 19 is set back a short distance from the projecting end 24′ of the gage-bar, so that an angular recess 25 is formed between the contiguous sides of the toe 19 and the projecting end 24′. This forms a very accurate gage for the corner of the work when this end of the gage-bar 16 is adjusted very close to the punch, or, in fact, any point between the punch and the gage-plate 8.

Although I have specifically described the construction and relative arrangement of the several elements of my invention, I do not desire to be confined to the same, as such changes or modifications may be made as clearly fall within the scope of my invention without departing from the spirit thereof.

Having thus fully described my invention, what I claim as new and useful, and desire to secure by Letters Patent of the United States, is—

1. The combination with a gang-punch, provided with the link 3, having the projecting lug 6 and the alined thumb-screw 2, of the horizontal adjustable gage-plate 1, provided with a longitudinal slot 4, adjustably secured

to said link 3, substantially as shown and described.

2. The combination with the gang-punch, of the horizontal gage-plate 8, provided with a longitudinal slot 9, and right-angular arm 13, of the gage-bar 16, provided with a longitudinal slot 17, and a right-angular toe 19, and adjustably secured to said arm by means of the thumb-screw 18, substantially as shown and described.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

WILLIAM H. THOMAS.

Witnesses:
C. MATHER,
EDWARD HEACOCK.