No. 822,775. PATENTED JUNE 5, 1906.

# W. SCHNURR.

## CLAMP.

APPLICATION FILED SEPT. 15, 1905.

Fig. 1.

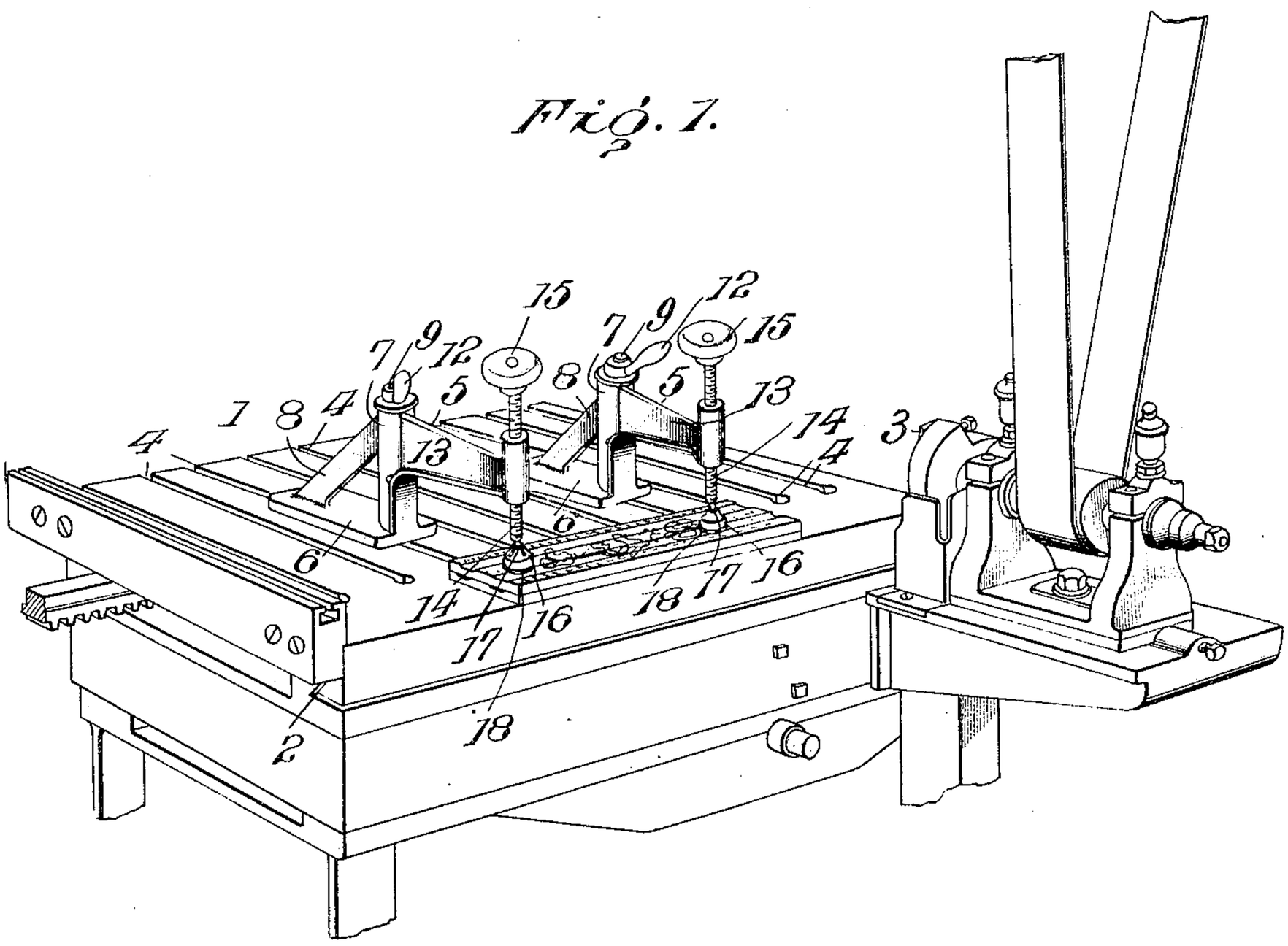
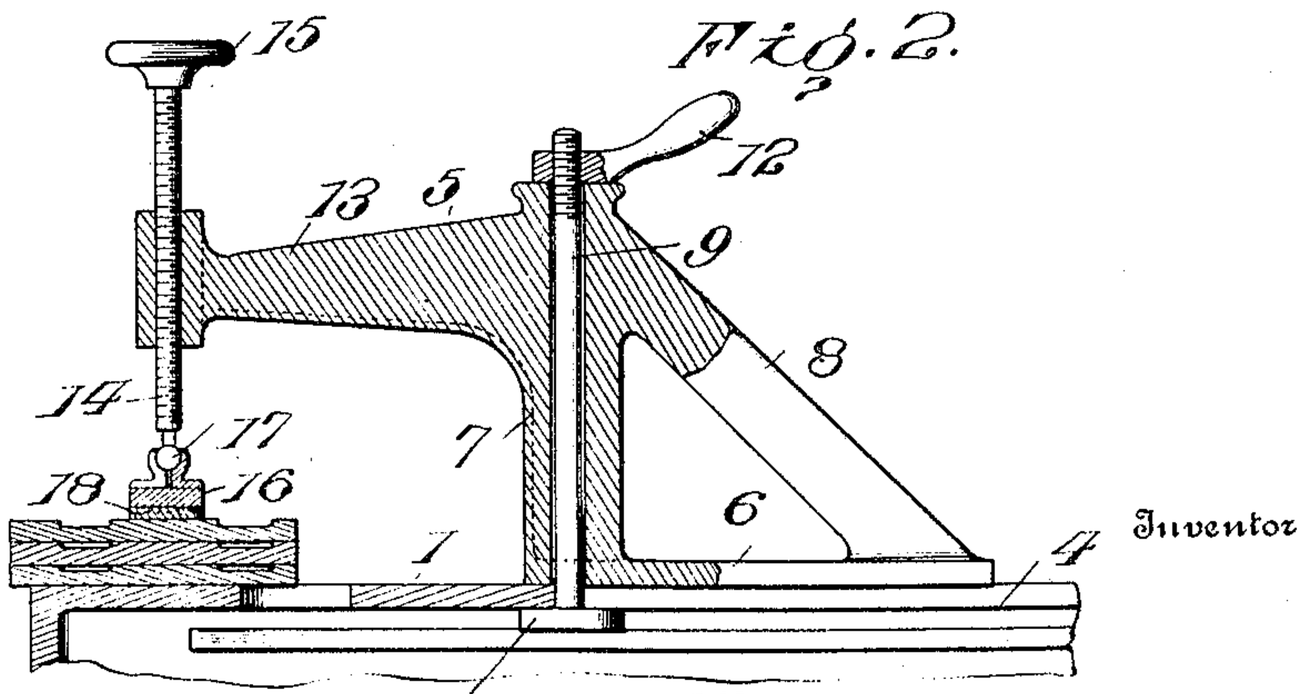



Fig. 2.




Witnesses

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# UNITED STATES PATENT OFFICE.

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## CLAMP.

No. 822,775. Specification of Letters Patent. Patented June 5, 1906.

Application filed September 15, 1905. Serial No. 278,660.

*To all whom it may concern:*

Be it known that I, WILLIAM SCHNURR, of New York, in the county of Kings and State of New York, have invented certain new and useful Improvements in Clamps; and I do hereby 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.

The object of my invention is to provide improvements in that class of clamps employing means for adjustably securing the clamp as an entirety to a table, and independent means for holding the work to be operated upon.

When used upon metal-trimming machines in the making of electroplates where a number of such plates must have their corresponding edges cut precisely alike, it is essential that the clamps shall not only be equipped with means for holding the work, which may be tightened and released independently of the means for securing the clamp to the table-bed, but it is also necessary that the clamp as an entirety be evenly balanced and capable of nice adjustment to securely hold it in its adjusted positions. Furthermore, it is essential when a series of superposed plates is to be cut that the element holding the work be moved into engagement therewith in a truly vertical plane, so as to avoid the possibility of the plates being moved relatively to each other. Where this holding element in its adjustment moves in an arc, there is a pulling or pushing action upon the plates which tends to destroy their alinement. These plates are expensive, and as the greatest care is necessary in making them of exactly corresponding size and formation the effectiveness of the clamps becomes an important factor in their manufacture.

In the accompanying drawings, Figure 1 is a perspective view showing portion of a metal-trimming machine equipped with clamps embodying my invention, the clamps being illustrated holding a series of plates. Fig. 2 is a side elevation, partly in section, of the clamp and table.

Referring to the drawings, 1 designates the bed of a metal-trimming machine designed, as usual, to be moved on tracks 2 for the purpose of placing the material to be operated upon in engagement with a rotary cutter 3. The bed is shown formed with a plurality of transverse grooves 4, which are of inverted-T shape beneath the surface of the bed.

5 designates the clamp. This is shown consisting of a casting having a base portion 6, at or near one end of which is a vertical post 7. From the top of the latter to the other end of the base extends an arm or brace 8. The base portion is of greater width than groove 4 of the table over which it is designed to be placed and is of such size that it will provide a firm setting or bearing for the clamp upon the table.

9 is a rod freely movable in the bore of the central portion or post 7 of the casting and extending through the latter and the base 6 and having at its lower extremity a rectangular head 10, designed to be accommodated by the inverted-T grooves 4 of the table. By means of a wing-nut 12 engaging the threaded end of the rod 9 the latter may be tightened to secure the clamp to the table. When this is done, the extent of bearing-surface of the base of the clamp upon the table insures the binding force holding the casting as against possibility of accidental displacement.

Extending forwardly from the post 7 is a horizontal arm 13 of such length that it and its complementary parts will about counterbalance the portion of the clamp at the opposite side of the post—that is, base 6 and brace 8.

14 is a rod threaded in the free end of arm 13, controlled by a hand-wheel 15, and carrying at its lower extremity a presser-foot 16. The connection between this rod and the presser-foot is a swivel-joint 17, so that the presser-foot will be caused to securely hold metal or other work the upper face of which may be irregular or slanted. On the lower face of the presser-foot I have provided a cushion 18.

In practice a series of clamps may be placed in any desired position upon a table—that is to say, they may be moved to any point longitudinally of the grooves 4 or turned axially until their respective presser-feet are at the desired points over the work. Upon tightening wing-nuts 12 the clamps will be firmly held in position, and the presser-feet may then be brought into engagement with the work. It is obvious that

these presser-feet may be released without affecting the adjustment of the clamp relative to the table.

From the foregoing it will be seen that the objects of my invention are fully attained. The clamp as an entirety is firmly held to the bed and is evenly balanced. The presser-feet move in a vertical plane and effectively hold the series of superposed plates.

I claim as my invention—

In a clamp, a frame or casting having a vertical post formed with a central bore, a rod freely movable in said bore extending above the top of said post and threaded at its upper end, said rod having an adjusting-nut on such upper end and having a rectangular head at its lower extremity for the purpose stated, a base extending from one side of said post, and an arm projecting laterally from the opposite side of said post, a vertically-adjustable rod in the free end of said arm, a presser-foot carried by the lower extremity of said rod, and a swivel-joint connecting said presser-foot and said rod.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM SCHNURR.

Witnesses:
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