

No. 756,058.

PATENTED MAR. 29, 1904.

V. ROYLE.
CLAMP FOR ROUTING MACHINES.

APPLICATION FILED APR. 10, 1903.

NO MODEL.

Fig. 1.

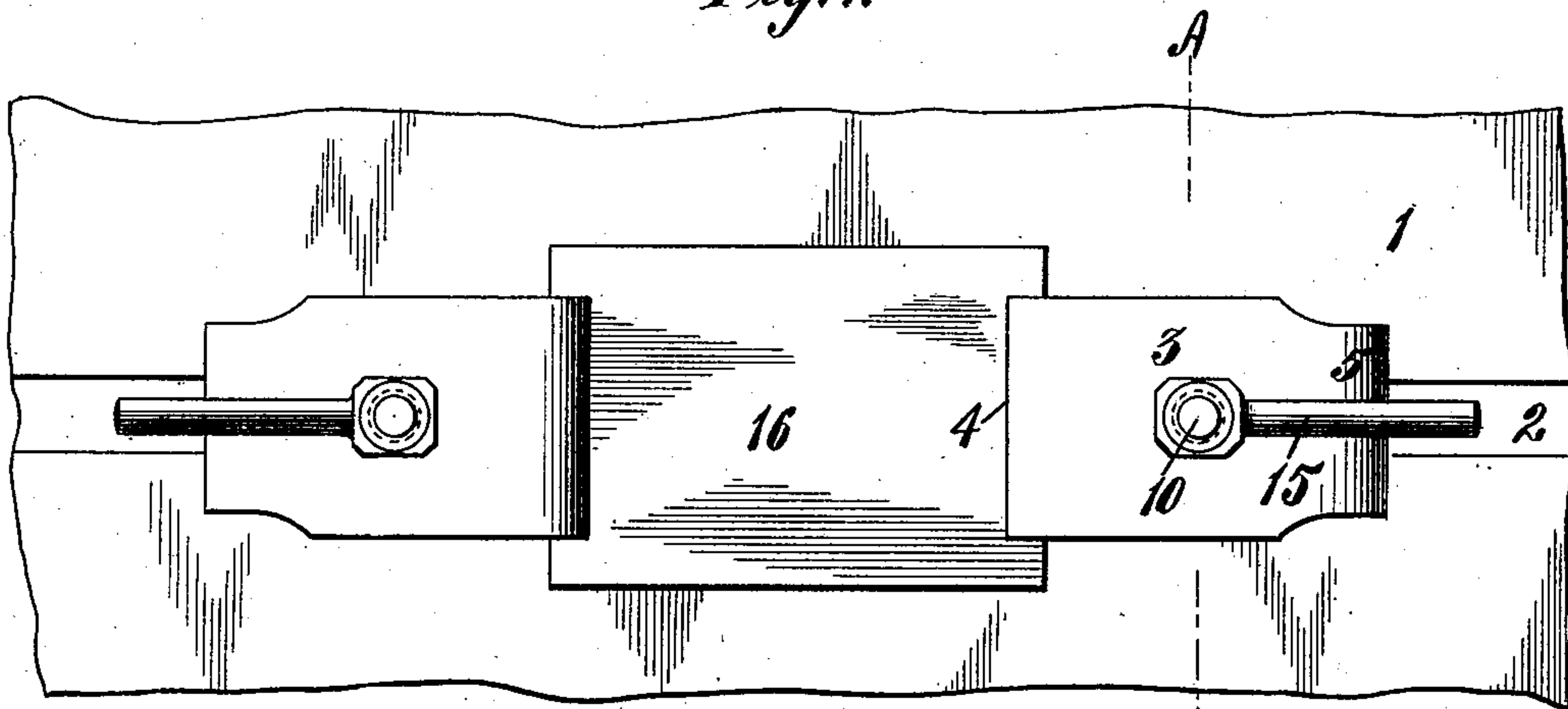


Fig. 2.

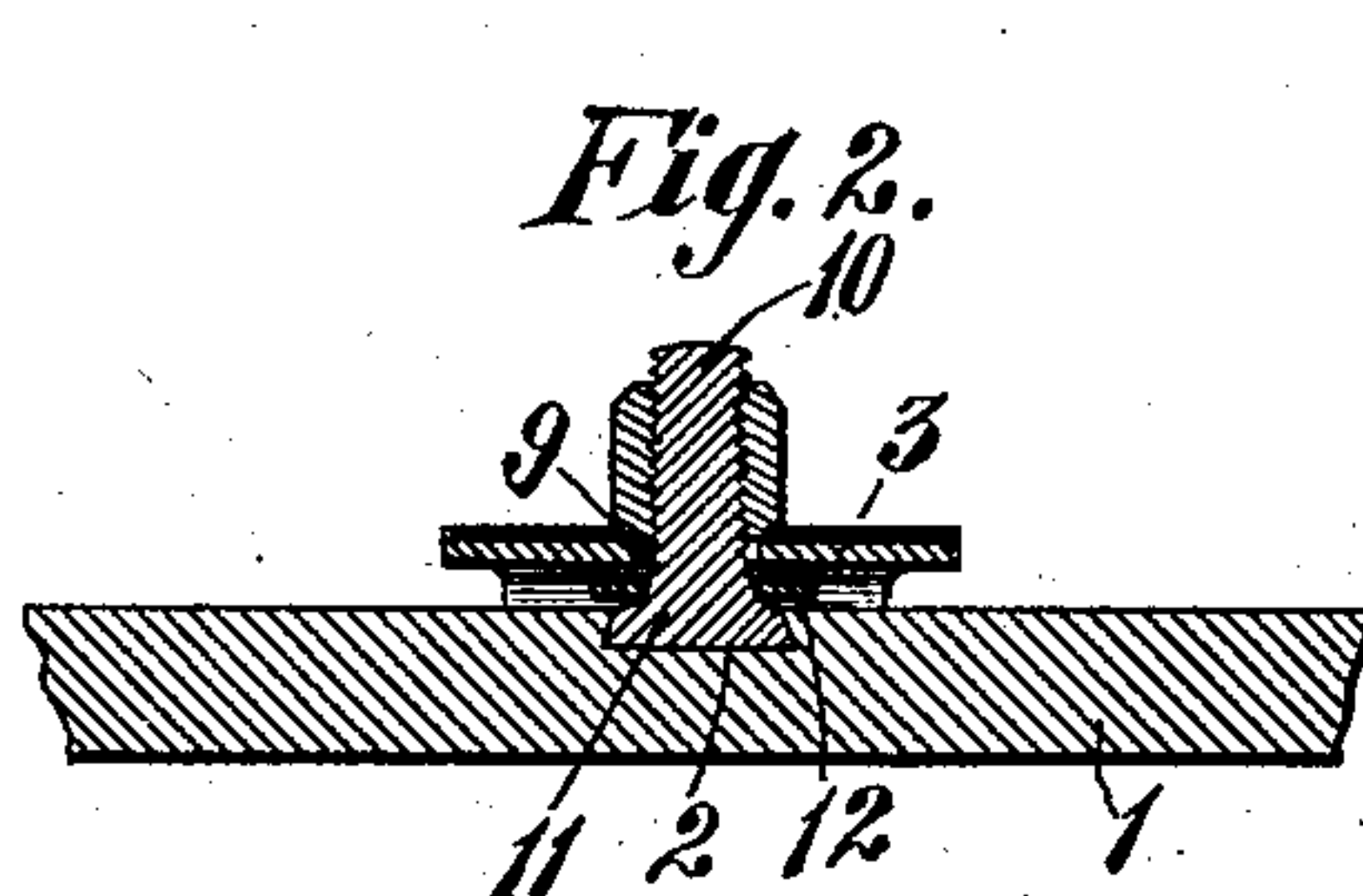


Fig. 3.

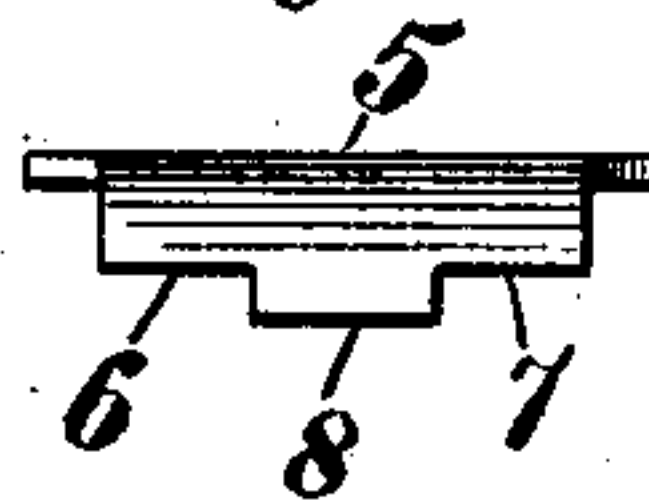


Fig. 4.

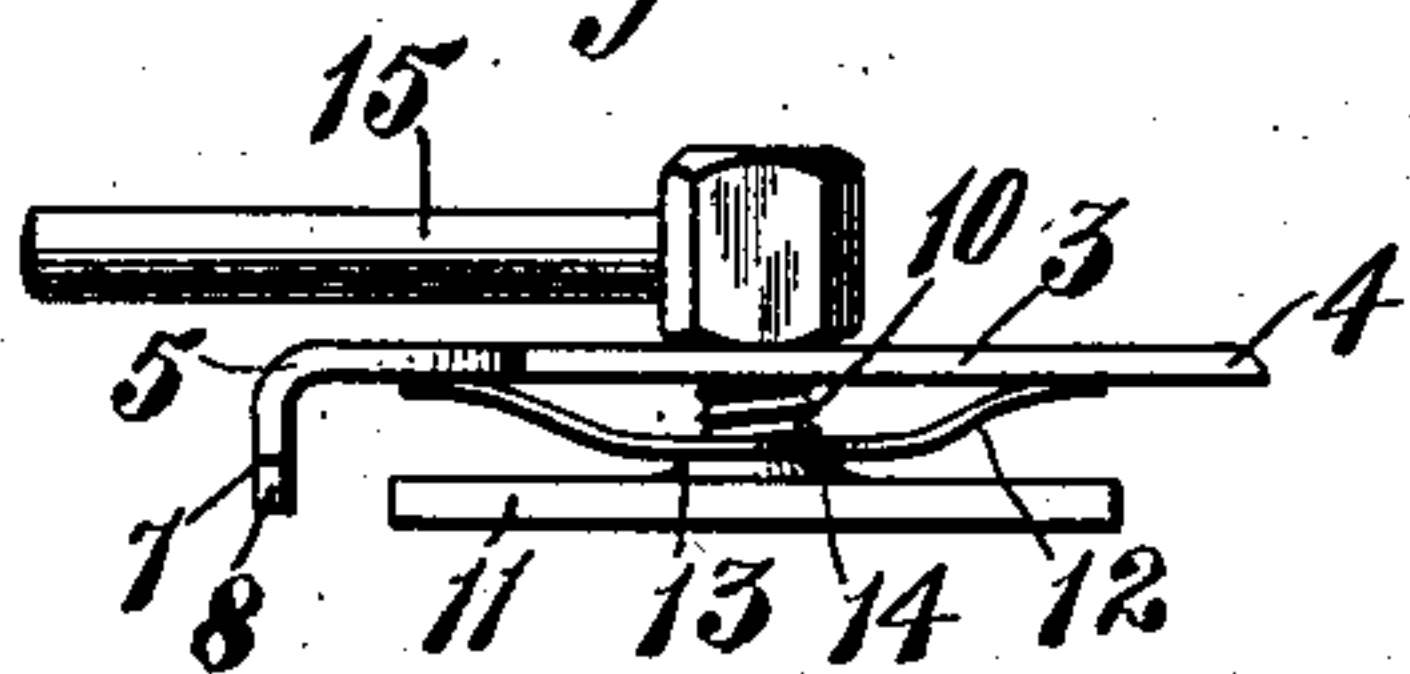
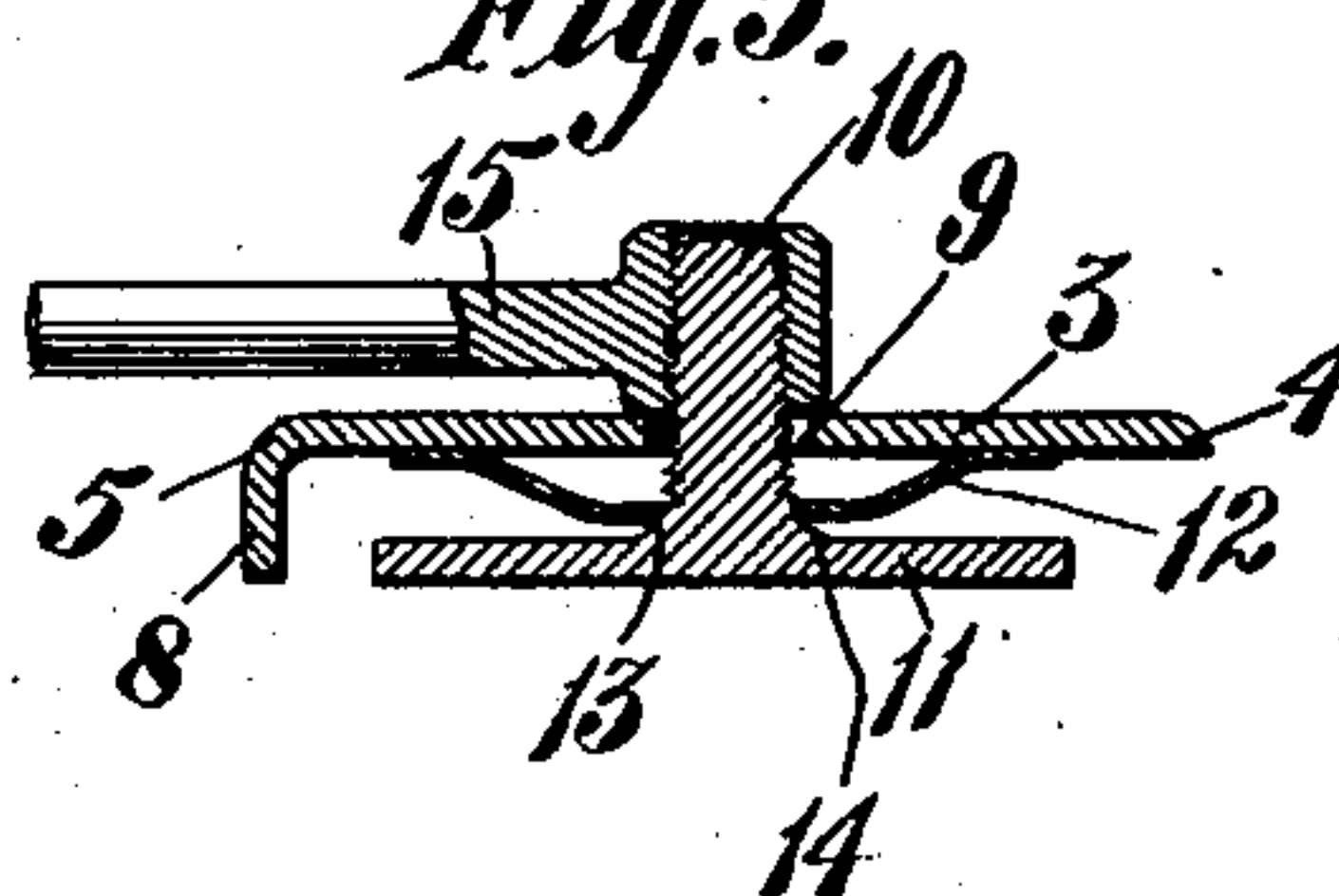


Fig. 5.



Witnesses:

F. G. Hackenberg

Henry Pheme

Inventor:

Vernon Royle

*By Brown & Howard
his Attorneys*

UNITED STATES PATENT OFFICE.

VERNON ROYLE, OF PATERSON, NEW JERSEY.

CLAMP FOR ROUTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 756,058, dated March 29, 1904.

Application filed April 10, 1903. Serial No. 151,948. (No model.)

To all whom it may concern:

Be it known that I, VERNON ROYLE, a citizen of the United States, and a resident of Paterson, in the county of Passaic and State of New Jersey, have invented a new and useful Clamp for Routing-Machines, of which the following is a specification.

My invention relates to clamps for routing-machines, with the object in view of facilitating work upon small and thin plates.

It has hitherto been common to fasten thin plates to blocks of wood before attempting to hold them by the usual clamping devices in position to be operated upon.

My present invention contemplates one or more (preferably two) special clamps which may be slid into position along one of the dovetail grooves with which the router-table is commonly provided, the said clamp or clamps being adapted to hold a small or thin plate firmly in position on the table without resorting to the use of blocking or other temporary backing of the plate.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is a top plan view of a portion of a router-table, showing two of the special clamps in operative position with respect to a plate. Fig. 2 is a transverse section of the same in the plane of the line A A of Fig. 1. Fig. 3 is a rear end view of one of the clamping-jaws. Fig. 4 is a view of one of the clamps in side elevation, and Fig. 5 is a view of the same in longitudinal vertical section.

The router-table is denoted by 1 and is provided, as usual, with one or more dovetail grooves 2, in which the ordinary clamping means are slid into position to hold the ordinary plates in position to be operated upon. The clamps are duplicates of each other, and hence a description of one will suffice for both.

The jaw of the clamp is denoted by 3. It consists of a flat plate—steel, for example—its clamping edge 4 being preferably broad and straight, its rear end narrowed, as at 5, and curved downwardly to the surface of the table 1, where it is provided with shoulders 6 7 (see Fig. 3) and a tailpiece 8, having a width corresponding to the width of the top of the dove-

tailed slot 2 in the table, the said tailpiece being intended to travel along the slot 2 as the clamp is slid toward and away from its work. The jaw 3 is provided with a perforation 9, which permits it to be slipped freely over the end of the screw-threaded stem 10 of a slide 11. The slide 11 is made dovetail in cross-section, as shown in Fig. 2, to fit the dovetail groove 2 in the table and is elongated to cause it to slide freely along the groove without any tendency to bind. The stem 10 and slide 11 constitute, in effect, a screw-bolt with elongated dovetail head. The jaw 3 is supported in raised adjustment on the sliding bolt by a bow-shaped spring 12, perforated intermediate of its ends to be slipped over the stem 10, the perforation 13 being made of such size relative to the tapered portion 14 of the stem in proximity to the slide 11 that the spring is held at all times bodily above the surface of the table 1, and hence where it will not exert a frictional bearing on the table no matter what the tension on it may be, thus leaving the clamp free to be slid along the groove into and out of operative position. The jaw 3 is forced downwardly and permitted to rise under the tension of its supporting-spring by means of a tail-nut 15, engaged with the stem 10 above the jaw. As pressure is exerted on the top of the jaw its clamping edge 4 will be depressed, while its heel will rest with its shoulders 6 7 on the surface of the table, throwing the jaw into a tilted position with its clamping edge in biting contact with the plate to be held, (denoted in Fig. 1 by 16,) and when pressure is removed from the top of the jaw it will rise into its level position under the tension of its supporting-spring.

These clamps may be kept within convenient reach of the operator, to be applied to the table as occasion may require, and have been found in practice very efficient and time and labor saving devices.

In using the term "dovetail" in the specification and claims I wish to be understood as referring to any of the common or approved forms of undercut.

What I claim is—

1. A clamp comprising a screw-bolt having an elongated dovetailed head, a clamping-jaw

surrounding the stem of the bolt, a spring supported on the bolt and forming the sole support for the jaw when the latter is in its non-clamping position and a nut for forcing the jaw against the tension of the spring.

2. A clamp comprising a screw-bolt having a dovetail head, a clamping-jaw surrounding the stem of the bolt and having a tailpiece turned downwardly into the plane of the dovetail head, a spring forming a support for the jaw and a nut for forcing the jaw against the tension of the spring.

3. A clamp comprising a screw-bolt having a dovetailed head, a clamping-jaw surrounding the stem of the bolt and having a tailpiece turned downwardly and shouldered to form a guide and fulcrum for the jaw, a spring supported on the bolt forming a support for the jaw and a nut for forcing the jaw against the tension of the spring.

4. A clamp comprising a screw-bolt having a dovetail head, the stem of the bolt being enlarged in proximity to the head, a clamping-

jaw surrounding the stem of the bolt, a spring seated on the said enlarged portion of the stem of the bolt and spaced from the head of the bolt, and forming a support for the jaw, and a nut for forcing the jaw against the tension of the spring.

5. A clamp comprising a screw-bolt having an elongated dovetail head, a spring seated on the stem of the bolt and spaced from the head, a broad flat clamping-jaw surrounding the stem of the bolt and supported on the spring, the said jaw being provided with a shouldered tailpiece turned down into the plane of the bolt-head and a tail-nut engaged with the stem of the bolt for operating the jaw.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 16th day of March, 1903.

VERNON ROYLE.

Witnesses:

SEBASTIAN HUBSCHMITT,
HEBER ROYLE.