

(No Model.)

2 Sheets—Sheet 1.

E. A. JONES.
SAW TABLE GAGE.

No. 245,075.

Patented Aug. 2, 1881.

Fig. 1.

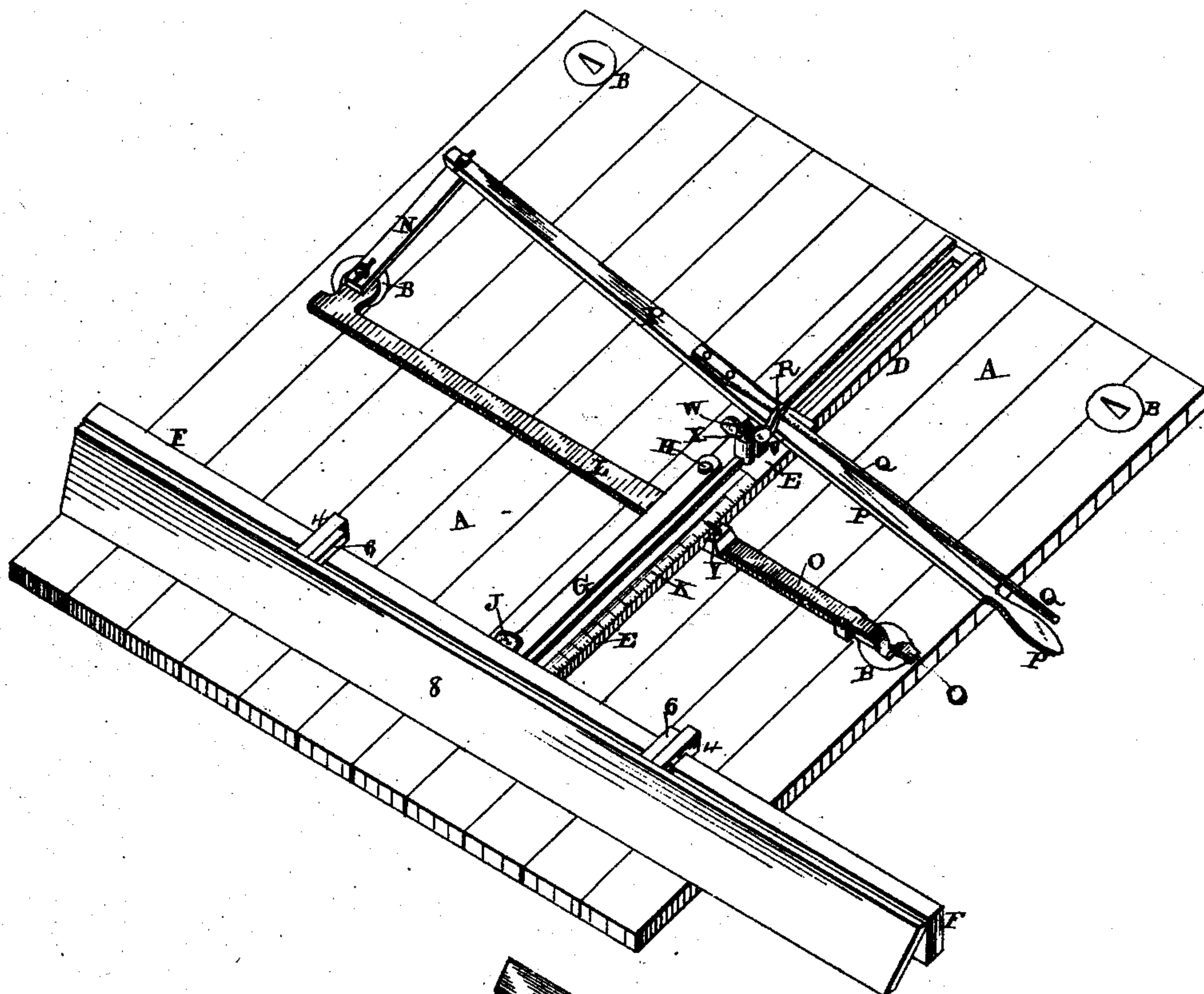
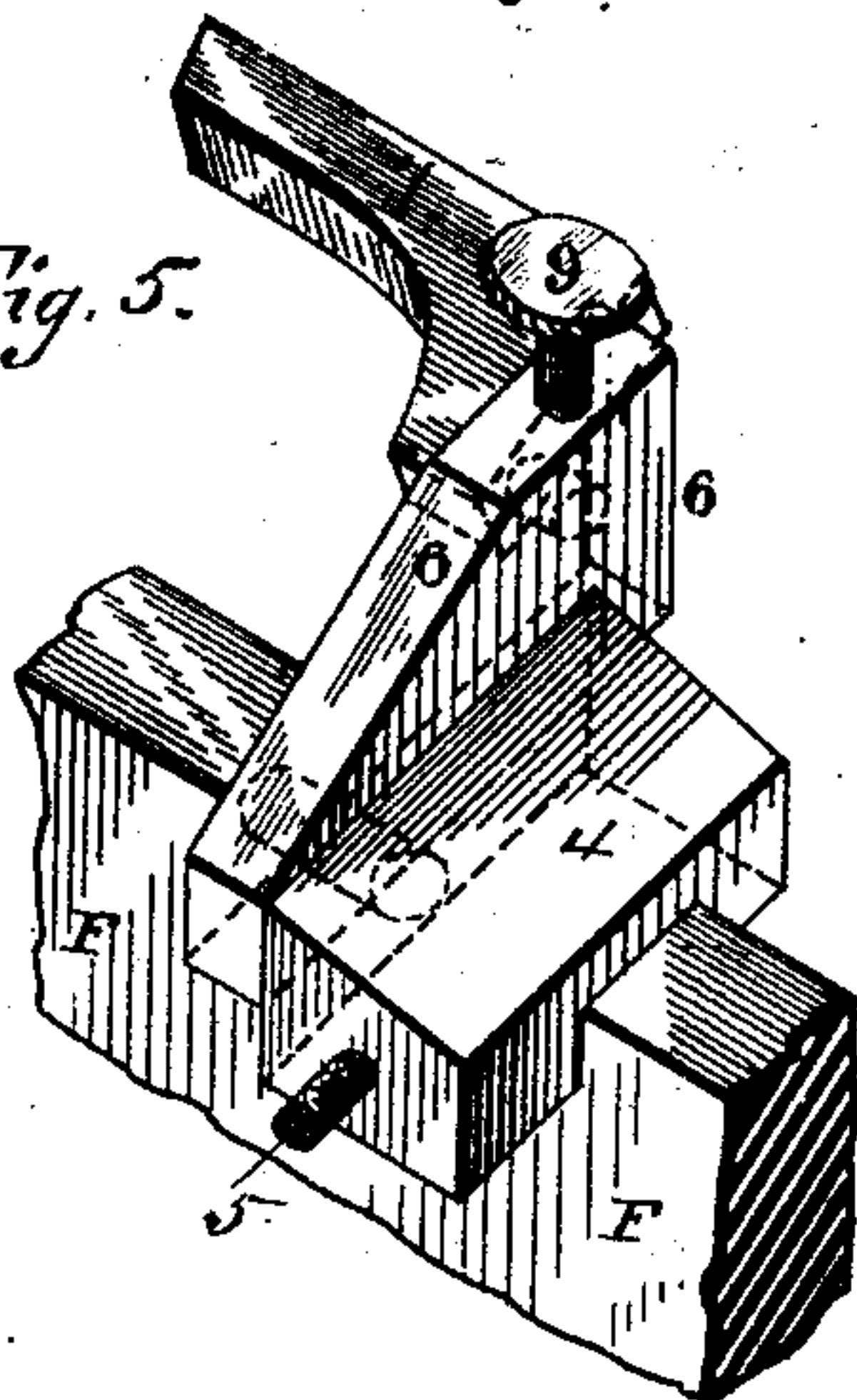


Fig. 5.



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(No Model.)

2 Sheets—Sheet 2.

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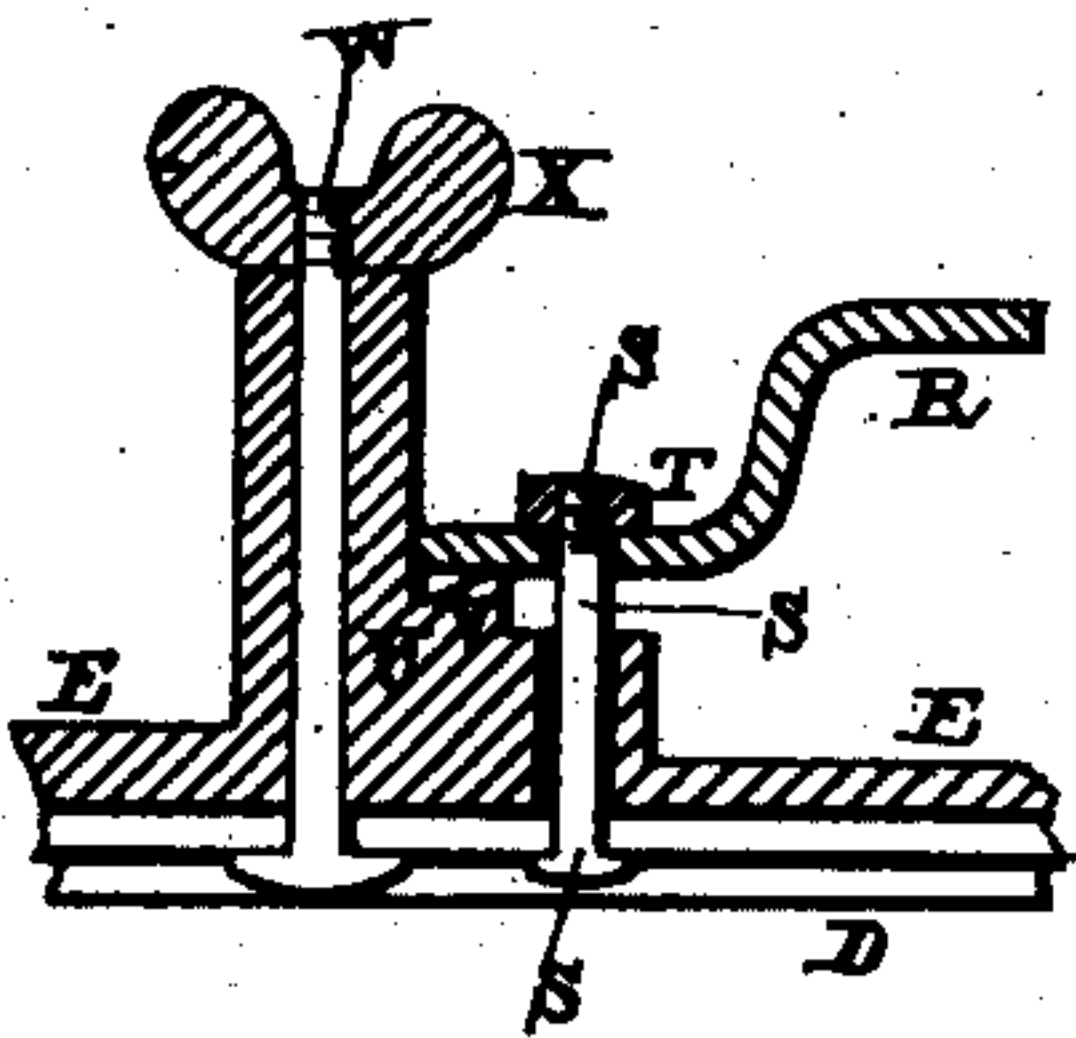
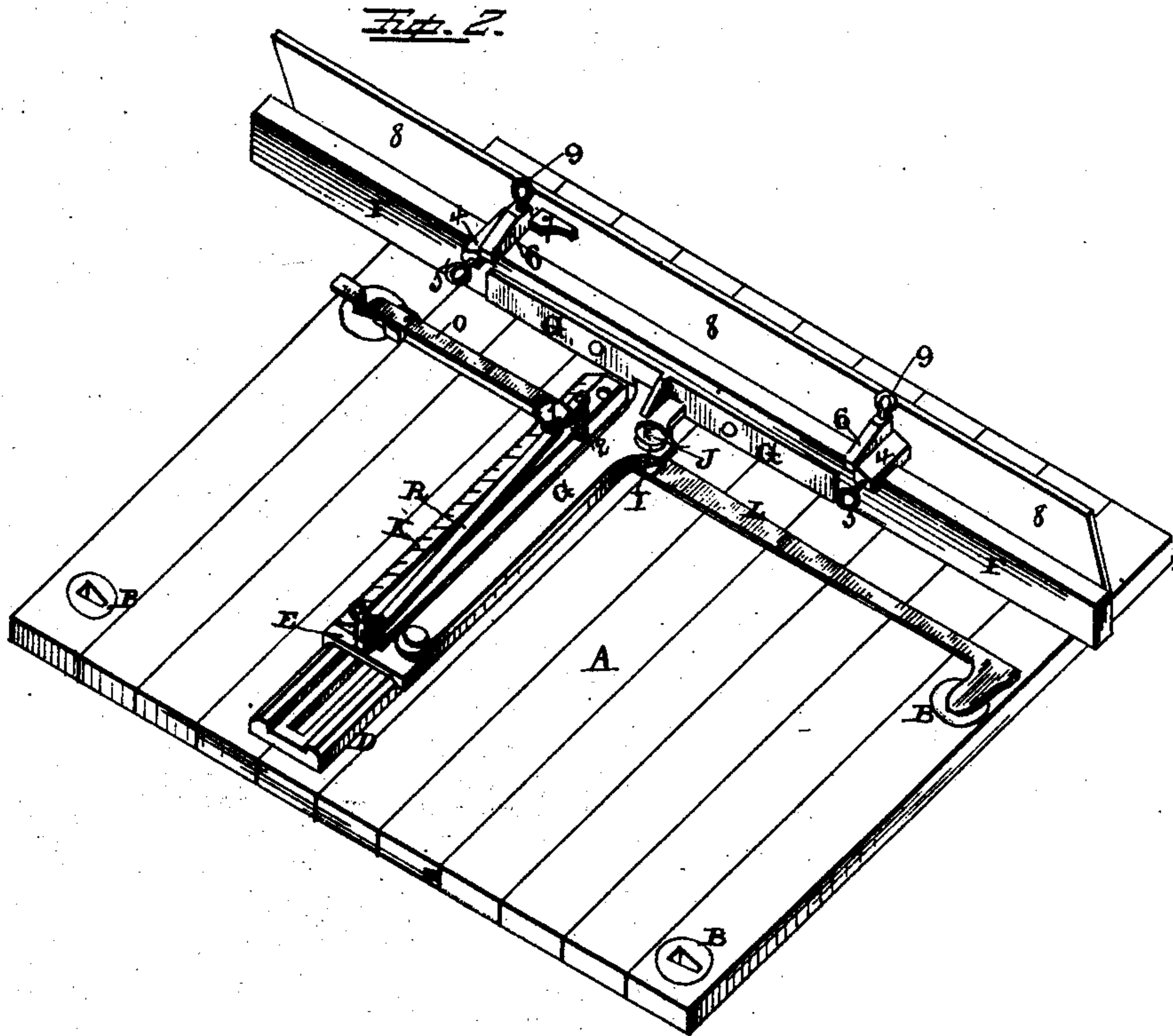


Fig. 3.

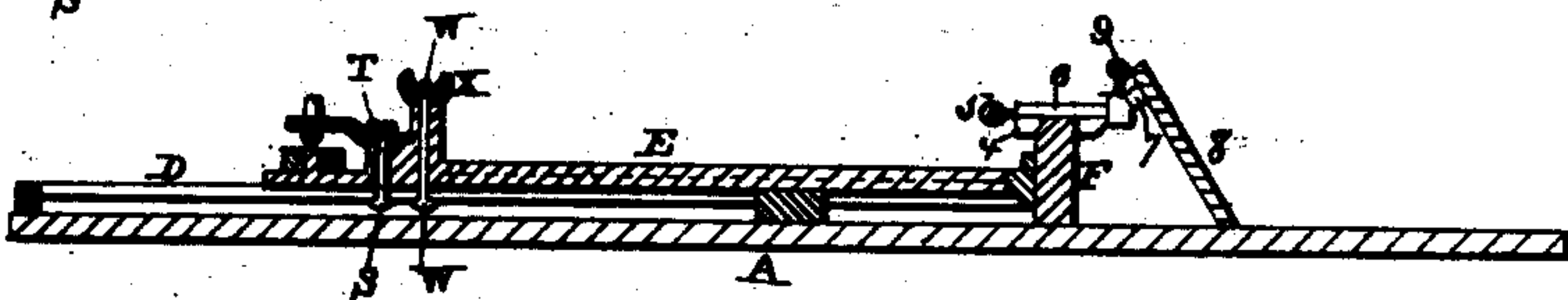
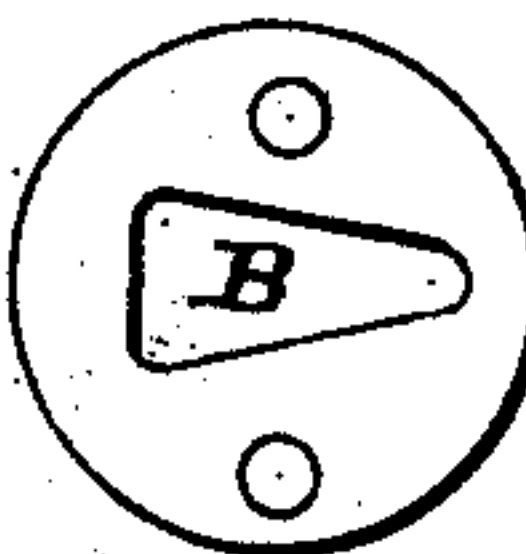
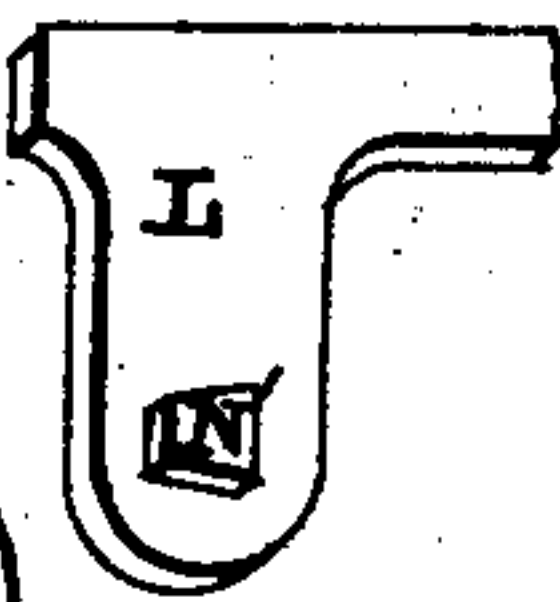


Fig. 4.



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UNITED STATES PATENT OFFICE.

EDGAR A. JONES, OF STURGIS, MICHIGAN.

SAW-TABLE GAGE.

SPECIFICATION forming part of Letters Patent No. 245,075, dated August 2, 1881.

Application filed December 10, 1880. (No model.)

To all whom it may concern:

Be it known that I, EDGAR A. JONES, of Sturgis, in the county of St. Joseph and State of Michigan, have invented certain new and useful Improvements in Saw-Table Gages; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in saw-table gages; and it consists in the combination of a gage which is secured in any suitable manner to a slide which is worked back and forth over a bed-piece, either by means of a lever or by hand, and which slide is provided with an automatic clamping device, by means of which the slide is instantly clamped in position after it has been adjusted.

It further consists in the arrangement and combination of parts, which will be more fully described hereinafter, whereby the whole gage attachment can be adjusted back and forth upon the table, according to the width or thickness of the lumber that is to be sawed.

Figure 1 is a perspective of one form of my invention where it is operated by a hand-lever. Fig. 2 is a similar view of the gage as operated by hand. Fig. 3 is a vertical section taken longitudinally through the slotted bed-piece. Fig. 4 is a detail view of the plates by means of which the attachment is fastened to the table and made adjustable thereon. Fig. 5 is a perspective of the devices by which the beveling-board is fastened to the gage.

A represents the saw-table, of any desired construction, and which has two or more holes made through or in it. In these holes are inserted the plates B, which are flush with the top of the table, and which have triangular openings through them for the purpose of enabling the conical dovetailed projections on the under side of the saw-gage to catch in them. The first pair of these holes is placed about twelve inches from the saw, while the other pair is placed just ten inches distant from the first one, so that the whole gage attachment can be moved backward ten inches farther from the saw. Where the gage is fastened in the first pair of holes, lumber varying in width from any part of an inch up to ten

inches can be sawed; but should a greater width than ten inches be required it will be necessary to move the gage back to the second set of holes. Ten inches is here used as a standard, because but comparatively little sawing is required of a greater width, but more particularly because when the gage is moved into the second set of holes it is very easy to add ten to the number of inches shown by the rule, and thereby readily get the width required.

Resting upon the top of the table is the slotted bed-piece D, and upon the top of this bed-piece moves the slide E, to which the saw-gage F is attached by means of the T-shaped iron casting G. This casting is pivoted upon the top of the slide, near its rear end, by means of the projection H, and then passed through a slot, I, which is made in this casting, is a thumb-screw, J. By means of this slot I the saw-gage is given a slight lateral adjustment upon the slide, and by means of the thumb-screw the gage can be secured at any desired angle thereto. This slide is recessed on its under side, so as to correspond to the shape of the top of the bed-piece, and to fit thereon, so that it will move smoothly back and forth. To one side of this slide is secured an inch-rule, K, preferably ten inches in length, so as to indicate the exact distance the gage is being moved to or from the saw.

Where the gage is to be moved back and forth by means of the lever there is secured to or cast with the bed-piece the rod or bar L, which extends parallel, or nearly so, with the gage, and which rod or bar serves the double purpose of securing the bed-piece in position upon the table, and forming a suitable place to pivot one end of the short connecting-rod N upon. On the under side of each end of this cross bar or rod L is cast a conical dovetailed projection, N', which catches in one end of the plate B, and thus holds the bed-piece of the gage in position. Upon the top of the shorter end of this rod L is secured a suitable spring, O, which drops into the hole and pushes the bed-plate along, so that the dovetailed projections will be forced tightly into the smaller end of the holes in the plates, whereby it is impossible for the bed-plate to move until the spring is first lifted out of the hole.

In securing the saw-gage attachment to the

table the lugs are pressed down through the wide portions of the triangular openings in the plates B, and then the bed-plate is moved horizontally upon the table, so as to bring the dovetailed lugs under the narrower portion of the holes through the plate.

To the rear end of the short connecting-rod N is pivoted the hand-lever P, which has secured upon its top a spring-rod, Q, which is to be operated by the hand each time that the lever is held for the purpose of moving the gage. The hand-lever is pivoted to the rear end of the top of the slide, and the spring-rod bears up against the under side of the lever R, which has the clamping-bolt S passed through its inner end. The hole through this lever is somewhat larger than is necessary for the clamping-bolt S to pass through, and the lever is secured by a nut, T, upon the clamping-bolt in such a manner that the lever is held between the nut and shoulder V, which is formed upon the projection U, which extends above the top of the slide. By means of this construction the lever is given a tilting motion in such a way that when it is left free to assume a horizontal position it exerts no force upon the clamping-bolt, but when forced upward by means of the spring-rod the lever has its fulcrum upon the shoulders, and then bears upward against the under side of the nut and forces the headed lower end of the bolt tightly against the under side of the bed-piece in such a manner as to form a friction-lock. While this spring-rod is forcing the lever upward the lower end of the bolt bears against the under side of the slotted bed-piece with sufficient force to prevent the slide from being moved. When the spring-rod is forced downward toward the hand-lever the clamping-lever releases its pressure against the bed-plate, and then the slide, carrying the gage with it, can be moved freely back and forth. The slide is also provided with a second clamping-bolt, W, which passes up through the projection upon the top of the slide and is operated by the thumb-nut X. This extra thumb-nut lock is added so that it can be used at any time it is desired to fasten the slide particularly tight.

Upon the top of the rod or bar L is placed a pointer, Y, which extends over the top of the inch-rule, which is secured to the top of the slide, and thus shows accurately the distance which the gage has been moved.

Where it is desired to dispense with the hand-lever in moving the gage back and forth the connecting-rod, which is fastened to the end of the rod L, the lever, and the spring-rod connected thereto, will be dispensed with, as shown in Fig. 2, and then the clamping-lever will be extended forward in the direction of the gage and in a line with the slide, and provided with a suitable handle or knob, 1. Underneath the front end of this clamping-lever will be placed a suitable spring, 2, which will serve to force the lever upward as soon as it is released, and thus cause it to operate the clamping device

for holding the gage in position. The two clamping devices will be used as shown in Fig. 1; but in this case they will be reversed in position, and the clamping device which is used to secure the gage rigidly in position, so that it cannot be accidentally moved, will be placed outside of the clamping device which is operated by the clamping-lever. The gage will then be moved by taking hold of the knob or the handle upon the top of the clamping-lever and pressing the lever down so as to loosen the clamping device; and then pushing upon the knob or handle in the direction in which it is desired that the gage shall move.

When it is desired to saw the edge of the lumber on a bevel a beveling attachment is clamped upon the top edges of the gage. This attachment consists of the two clamps 4, which are secured to the gage by means of suitable thumb-screws, 5, and pivoted to the inner sides of these clamps are the adjustable bearings 6. These bearings 6 project over the outer side of the gage, and have openings made through their outer ends, into which the journals, bearings, or pivots 7 of the beveling-board 8 enter. Passed down through the tops of the bearings are suitable thumb-screws, 9, which bear against these pivots and hold the beveling-board at any desired angle to which it may be adjusted. By means of this attachment the lumber can be sawed so that one edge will be wider or thicker than the other.

A slotted bed-plate is here shown and described; but the bed-plate need not be slotted at all, in which case the bed-plate will be made dovetailed at its top, and then the slide will be grooved out so as to be slipped over it from one end. Instead of the base-plate being slotted, so that the clamping-bolts pass through it, the bolts will then bear down upon the top of the bed-plate, and serve to force the slide upward, so that its edges will catch under the top edges of the bed-plate with sufficient force to bind the two parts together. The spring-lock is made exactly the same, only the short clamping-lever is hinged a little way from the end, and when the clamping-lever is raised by the spring the short end bears heavily down on a pin which goes through the slide and bears on the top of the bed-piece, so as to push the bed-piece and slide apart.

The rule can, if so preferred, be fastened at one end to the top of the arm, where the pointer is shown, and have the other end fastened to a little projection made for the purpose, and then place the pointer on the slide.

Having thus described my invention, I claim—

1. In a saw-table gage, the combination of the plates B, having suitable openings through them, with the dovetailed lugs on the under side of the bed-piece, and a spring to hold them pressed into the smaller end of the openings, substantially as shown.

2. The combination of a slotted bed-piece, a slide, E, moving thereon, a clamping-bolt, S,

an operating-lever, R, connected to the bolt, and a spring for forcing the lever R upward at its outer end, whereby the bolt S is made to lock the slide in place, substantially as set forth.

3. The combination of the bed-plate, a slide moving thereon, cross-bar L, having a projection, N', on the under side of each end, the plates B in the table, having openings for the projections to pass through, and a spring, O, with a means for moving the slide and locking it in place, substantially as specified.

4. In a saw-table gage, the combination of a slotted bed-piece, a slide having the gage attached to its front end and moving upon the bed-piece, a clamping device for securing the

gage temporarily in position, and a second clamping device for securing it permanently in position, substantially as shown.

5. The combination of a saw-table gage with the inclined board 8, the clamps 4, fastened to the top of the gage, the adjustable bearings 6, the ears 7, secured to the board 8, and the set-screws for adjusting the parts, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 3d day of December, 1880.

EDGAR A. JONES.

Witnesses:

SETH BARTHOLOMEW,
H. L. ANTHONY.