

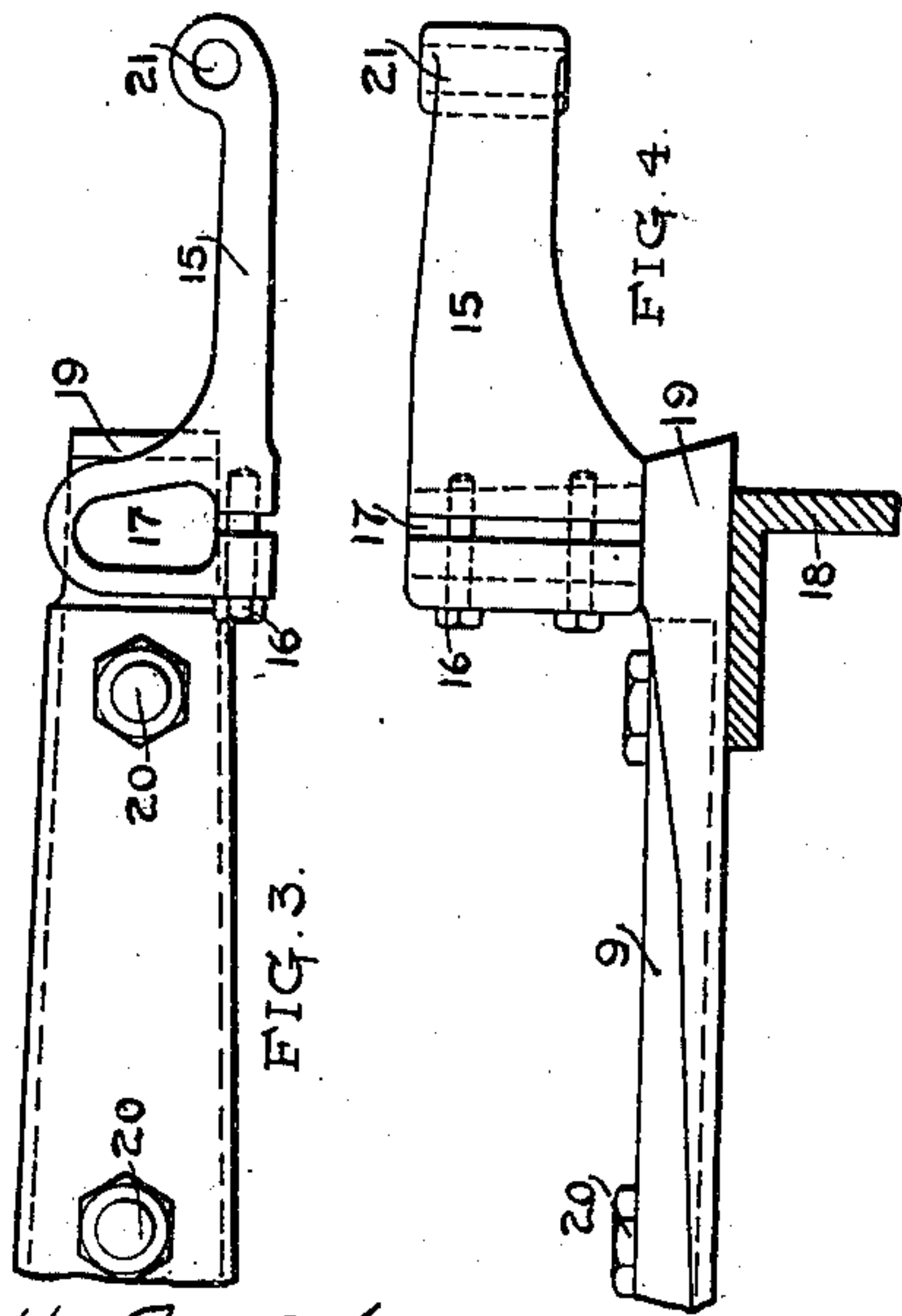
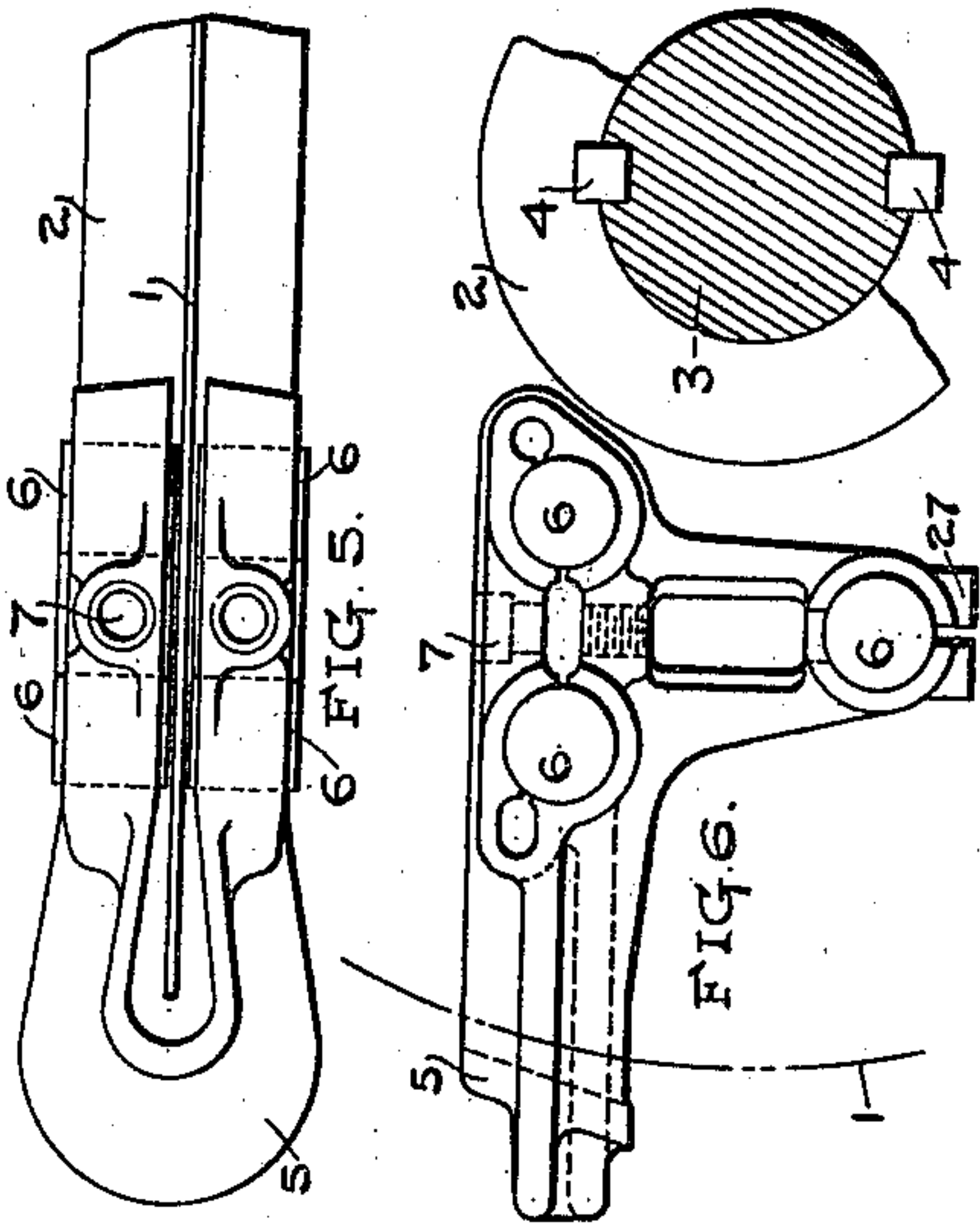
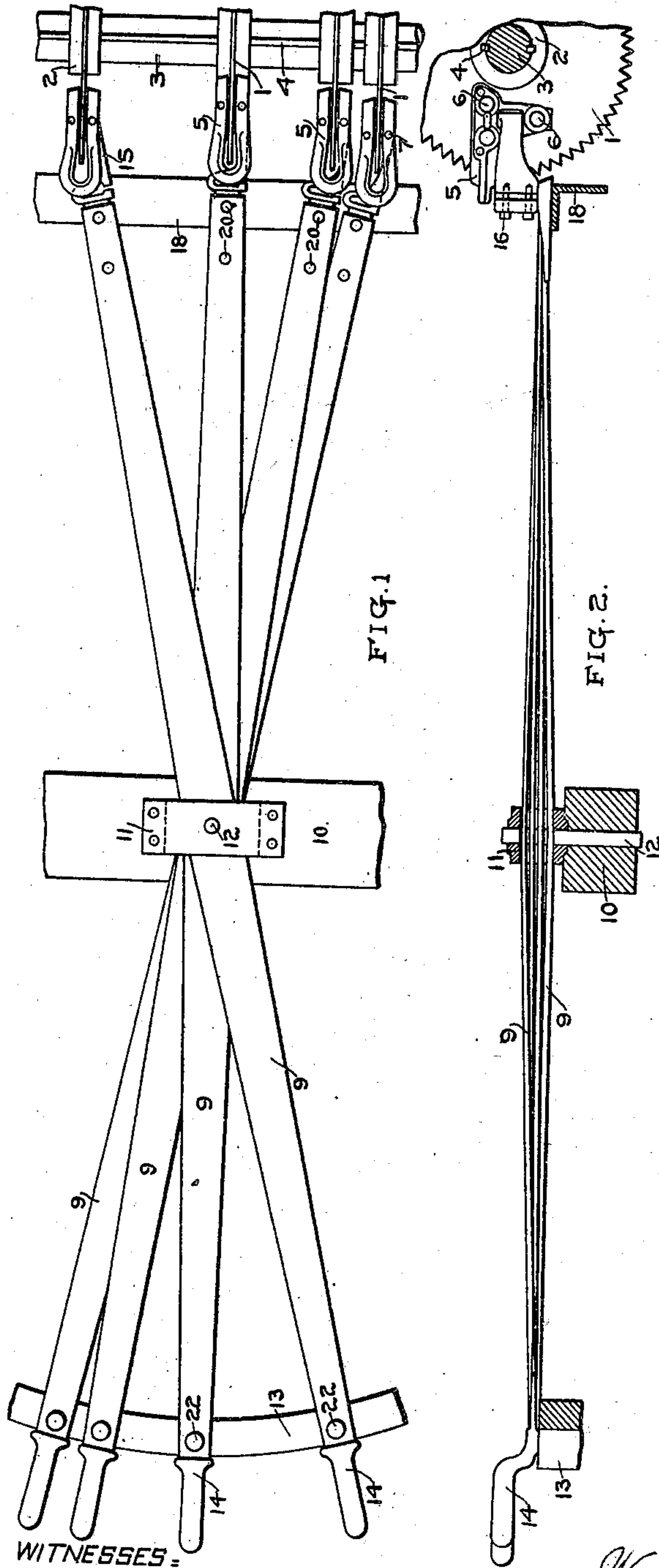
995,991.

W. H. TROUT.  
SAW GUIDE.

APPLICATION FILED DEC. 30, 1908.

Patented June 20, 1911.

2 SHEETS-SHEET 1.



WITNESSES:

*W. H. Trout*  
*Ella Brickell*

*W. H. Trout* INVENTOR

BY *G. J. DeWitt* ATTORNEY.

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2 SHEETS—SHEET 2.

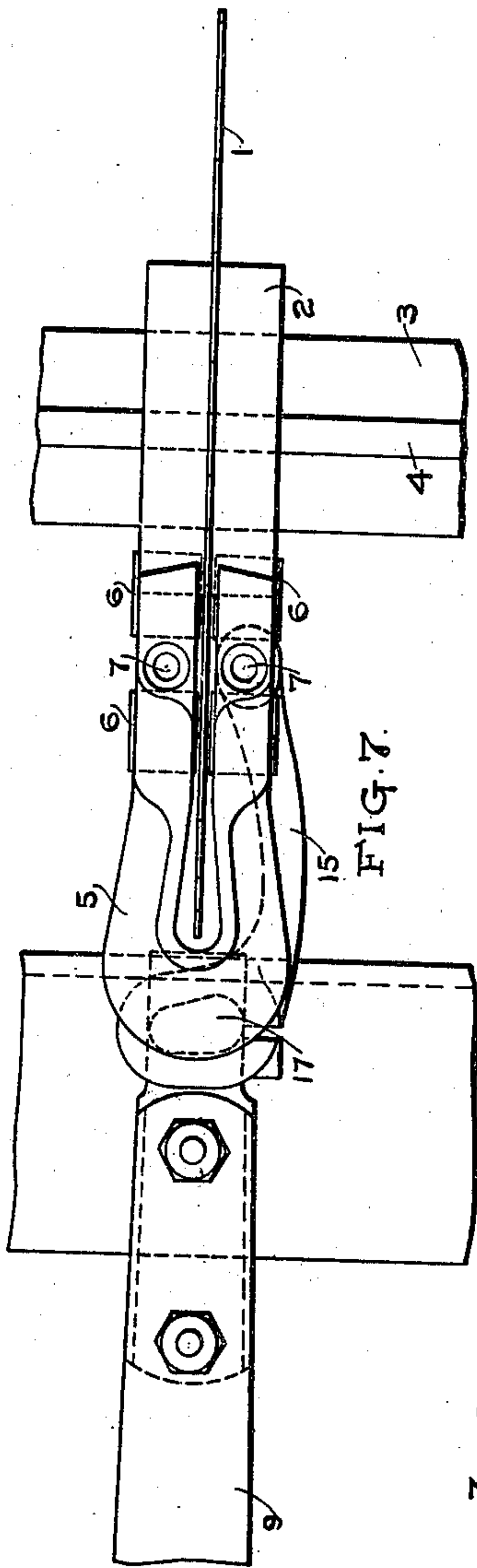


FIG. 7.

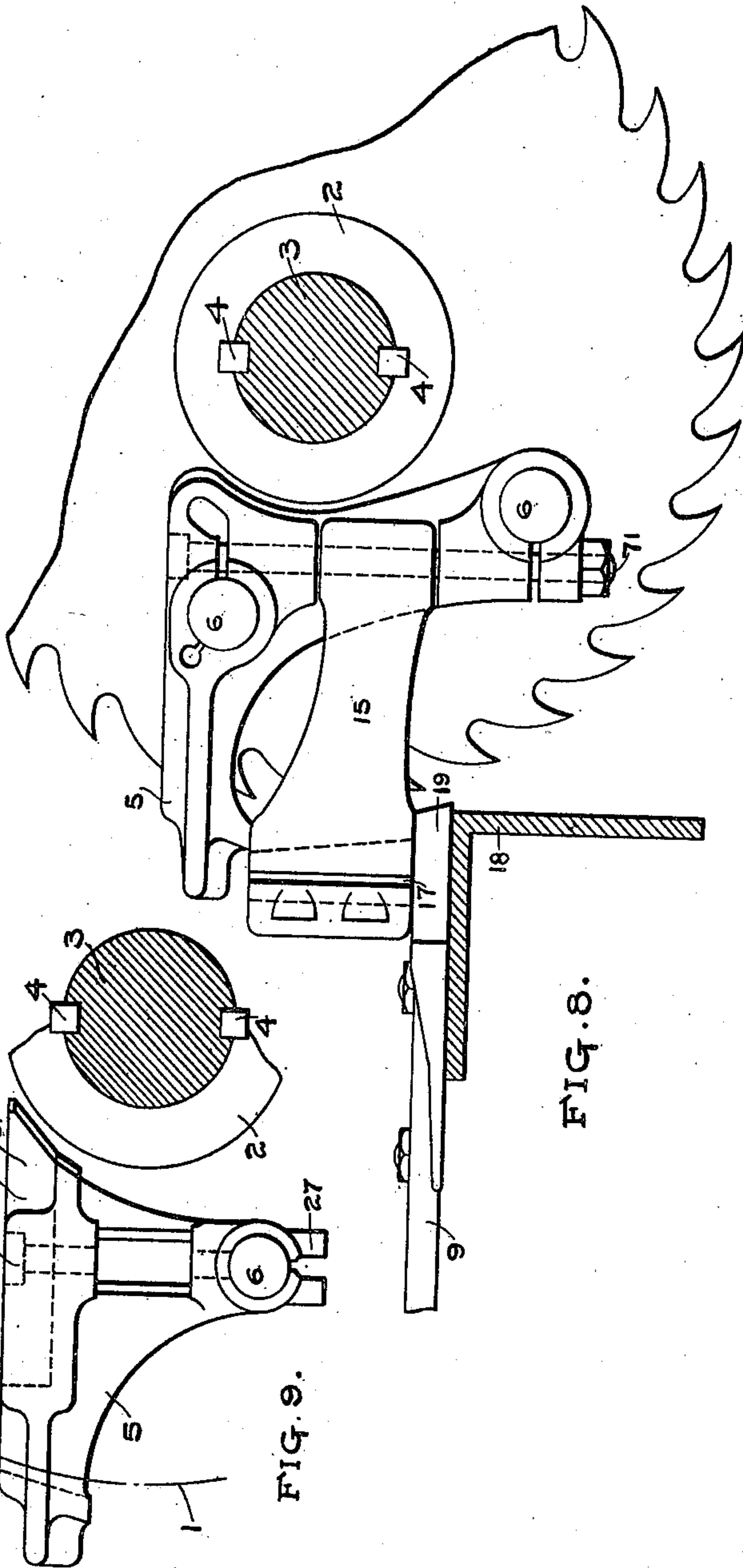


FIG. 8.

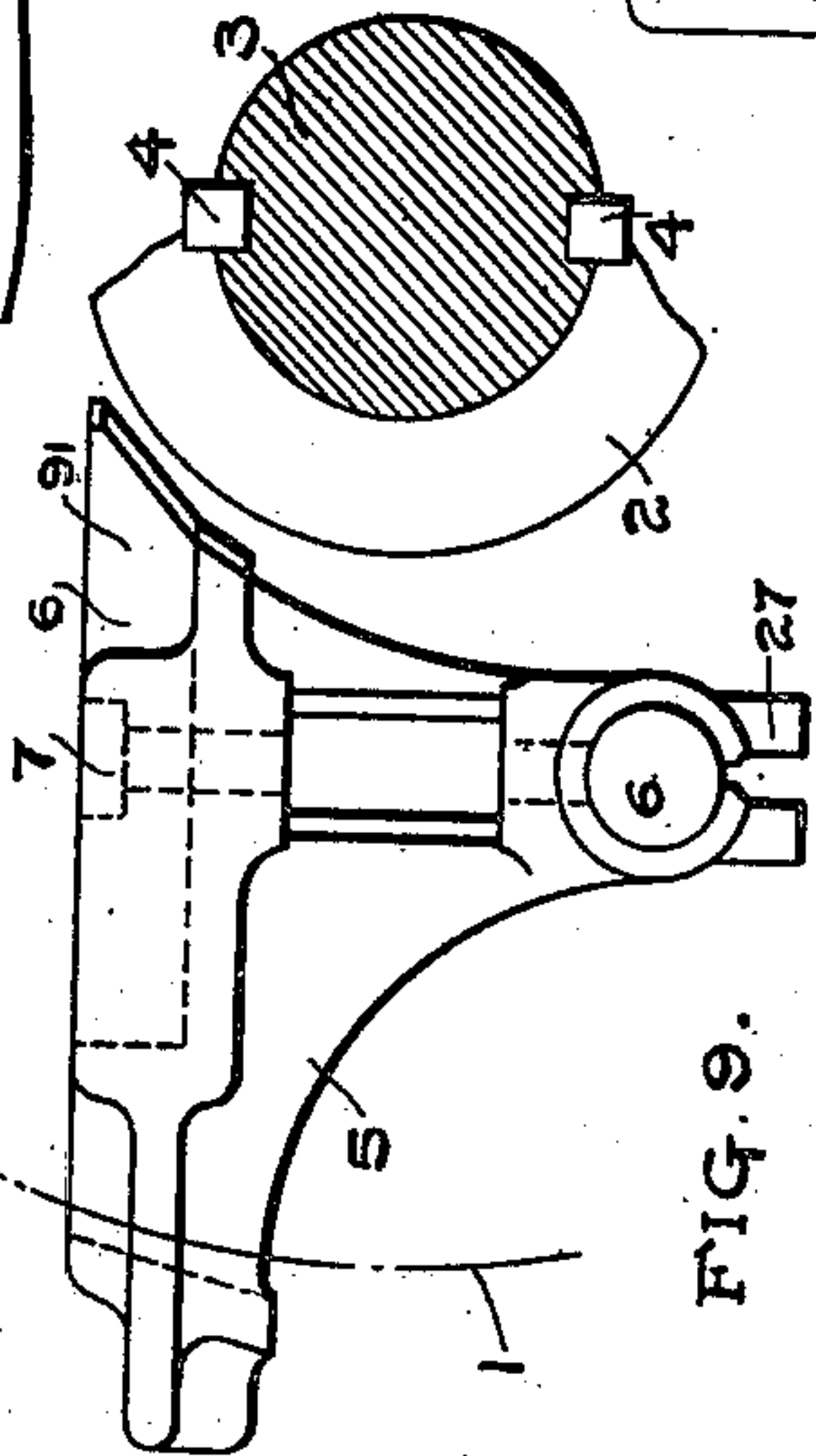


FIG. 9.

WITNESSES:

*W. H. Trout*  
*Ella Brickell*

BY

*W. H. Trout*

INVENTOR

*G. P. DeWitt*

ATTORNEY.



# UNITED STATES PATENT OFFICE.

WILLIAM H. TROUT, OF MILWAUKEE, WISCONSIN, ASSIGNOR TO ALLIS-CHALMERS COMPANY, OF MILWAUKEE, WISCONSIN, A CORPORATION OF NEW JERSEY.

## SAW-GUIDE.

995,991.

Specification of Letters Patent. Patented June 20, 1911.

Application filed December 30, 1908. Serial No. 469,950.

*To all whom it may concern:*

Be it known that I, WILLIAM H. TROUT, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a certain new and useful Improvement in Saw-Guides, of which the following is a specification.

This invention relates to improvements in saw shifters for gang edgers which include a series of circular saws laterally shiftable on a common arbor.

The object of the invention is to provide a simple and durable contrivance for shifting and maintaining the saws along a common rotating shaft so that they can be set and maintained at any desired distances apart for sawing lumber into various widths.

A clear conception of the invention can be obtained by referring to the accompanying drawings in which like reference characters designate the same part in different views.

Figure 1 is a plan of part of a gang edger having the invention applied thereto. Fig. 2 is an elevation of the device shown in Fig. 1 partly in section. Fig. 3 is a plan of the shifter arm, Fig. 4 being an elevation of same. Fig. 5 is a plan of the three pin shifter guide, Fig. 6 being an elevation of same. Fig. 7 is a plan of the two pin shifter guide with the shifter arm attached, Fig. 8 being an elevation. Fig. 9 is an elevation of a shifter guide similar to that shown in Figs. 5 and 6, but having long blocks instead of the upper pins.

The saws 1 are mounted on collars 2 which are seated so as to receive the feathers 4 fastened to shaft 3. By means of this arrangement the saws 1 can be placed or shifted to any position along the shaft 3 and still be fixed to it in such a way that they will be rotated as the shaft 3 rotates.

Horse-shoe shaped guides 5 embrace the saws 1 and are mounted on the shifters 15 by means of pivot pins extending through the holes 21 at the overhanging ends of the shifters and at right angles to the plane of motion of the shifter levers 9 carrying the shifters 15. Each branch of the horse-shoe shaped guide 5 carries oppositely located contact pieces 6 for coacting with the saw.

The guide 5, see Figs. 5, 6, 7 and 8, must be kept in alinement with the saws 1 so as to prevent the teeth from interfering with the guide when the saws 1 are shifted.

These guides 5 are provided with contact pieces 6, in the present instances formed as pins, made preferably of some soft material, such as wood, which bear against the surface of saws 1 during shifting.

In the three pin guide shown in Figs. 5 and 6, the two upper contact pieces 6 are shaped as pins and are extended through openings in the casting and are clamped into place by means of a bolt, not shown, screw-threaded into the casting below the centers of the contact pieces 6 and passing through the upper portion of the castings. The casting is recessed to spring the upper portion thereof toward the lower portion, by means of the bolt in order to clamp the contact pieces 6 in place. The lower part of the bolt is stripped of threads for pivotal connection to the shifter 15. The lower contact piece 6 is also a pin clamped into place by means of a bolt, not shown, passing through lugs 27 between which is formed the opening through which the pin extends.

The guide 5 shown in Figs. 7 and 8, uses but two contact pieces located on opposite sides of the pivot pin 71, connected to the shifter 15 in such a way that the line connecting the centers of the pins is at an oblique angle to the pivot pin instead of at right angles thereto as shown in guide in Figs. 5 and 6. The pivot pin 71 in this modification is located midway between the pins and also serves as the clamping means for both pins as is clearly shown in Fig. 8. The pins are located equidistant from the center of the saw for that position of the saw 1 where it ordinarily and normally operates. Due to the angularity of the shifting levers 9, the guides will be slightly withdrawn from the saws in proportion as the angularity increases.

The guide 5, shown in Fig. 9, employs above the pivot pin connection to the guide a block 91 extending transversely of the pivot pin. This block 91 forms a multiple point contact means as in the case of the two pins for which it is substituted, due to the coaction of the entire surface of the block 91 adjacent the saw 1 with the saw surface, during the shifting operation. Below the pivot pin connection a single pin 6 is used as in the three pin guide of Figs. 5 and 6.

The shifter 15, see Figs. 3 and 4, is formed as a clamp at one end which fits over pin 17 on the shifter lever 9 and is



clamped thereto by bolts 16. The other end of the shifter 15 has a bored hole 21 which coacts with the pivot pin 71 to form the pivotal connection between the shifter 15 and the guide 5. This connection should be as nearly as possible in the plane of the shifting lever 9 in order to prevent twisting of said lever. Twisting is also avoided by locating the multiple point contact means above and below the plane of motion of the shifter means.

The pins 17, see Figs. 3, 4, 5, 6, 7 and 8, are attached to the supports 19 which are bolted to the arms 9 by means of bolts 20 and rest upon the slide 18. The arms 9 are pivoted at their centers by a pin 12 which passes through the housing 11 and the housing support or machine frame 10, see Figs. 1 and 2. The other ends of the arms 9 are provided with suitable handles 14 which can be stationed at any desired position along the guide 13 and fixed into position by means of pins 22.

In operating the shifter, the handles 14 are moved to any desired position. This moving of handles 14 causes the arms 9 to swing about pin 12 as a pivot, giving motion to the shifter arm 15. This shifter arm 15 presses against the pin at 7 in the shifter guide 5, which in turn presses against the saws 1 through contact pieces 6. Since the saws 1 are movable on the shaft 3, the pressure against them caused by the movement of handle 14 will cause them to move in an opposite direction from the motion of handles 14. The shifter guides 5 will always remain in alinement with the saw blades 1 since the pins or blocks 6 are located on opposite sides of the pins 71. By this means the saws can be placed in any

desired positions in order to cut lumber into any desired widths.

It should be understood that it is not desired to be limited to the exact details of construction shown and described, for obvious modifications will occur to a person skilled in the art.

It is claimed and desired to secure by Letters Patent,—

1. The combination of a saw, a horseshoe shaped guide extending on both sides of said saw, multiple point contact means extending toward said saw from each arm of said guide, a shifter, and a vertical pivot adjacent said contact means for mounting said guide on said shifter, portions of said contact means coacting with said saw above and below said pivot.

2. The combination of a saw, a guide extending on both sides of said saw, multiple point contact means extending toward said saw from said guide on both sides of said saw, a shifter for said guide, and a vertical pivotal connection between said shifter and said guide, a portion of said contact means coacting with said saw above and below said connection.

3. The combination of a saw, a shifter, a guide pivoted to the shifter, and a multiple point contact means on the guide disposed on either side of the pivot for maintaining the guide in alinement with the saw and also disposed above and below the plane of the shifter for preventing twisting thereof.

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

WILLIAM H. TROUT.

Witnesses:

G. J. DE WEIN,

JOHN DAY, Jr.