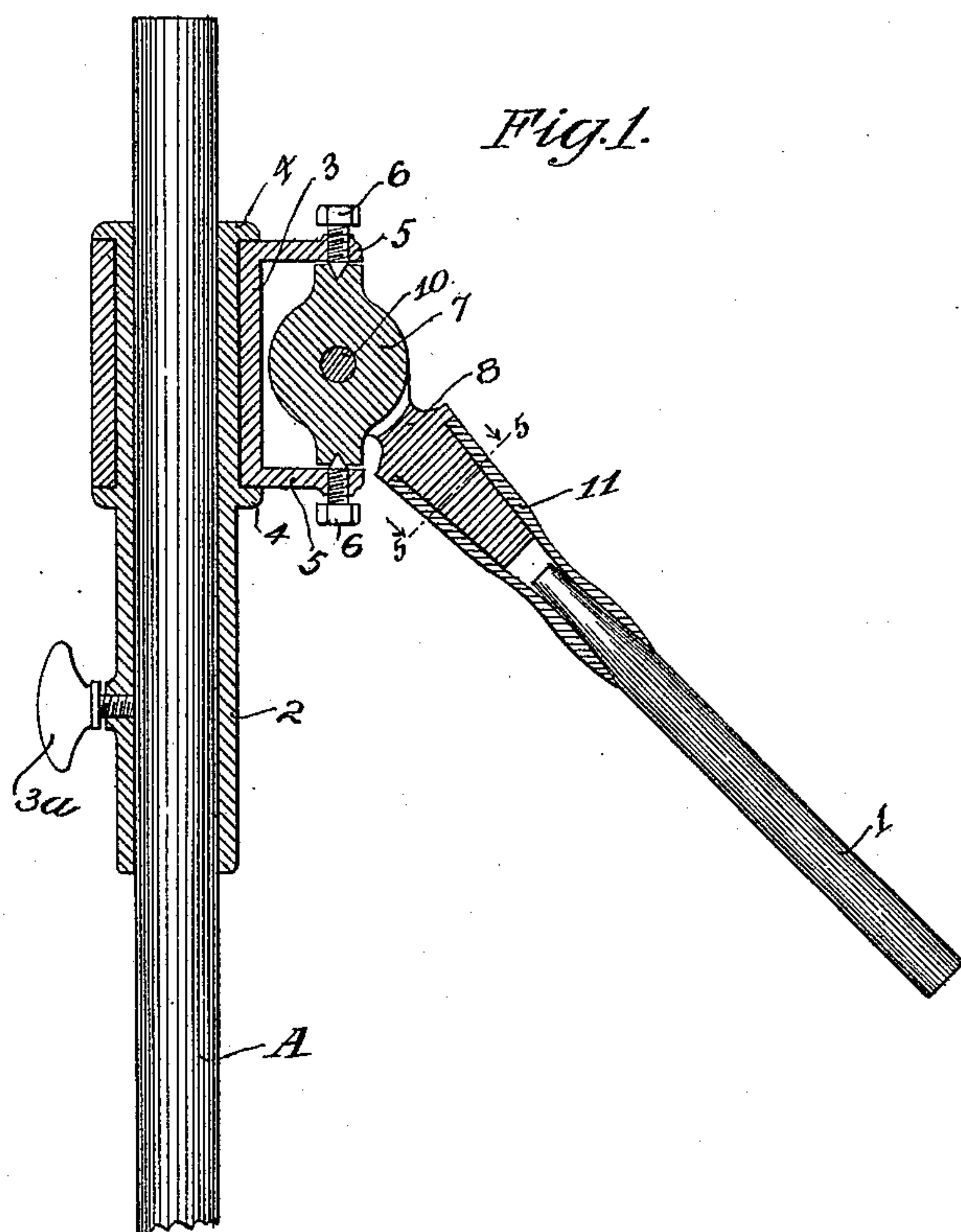


(No Model.)

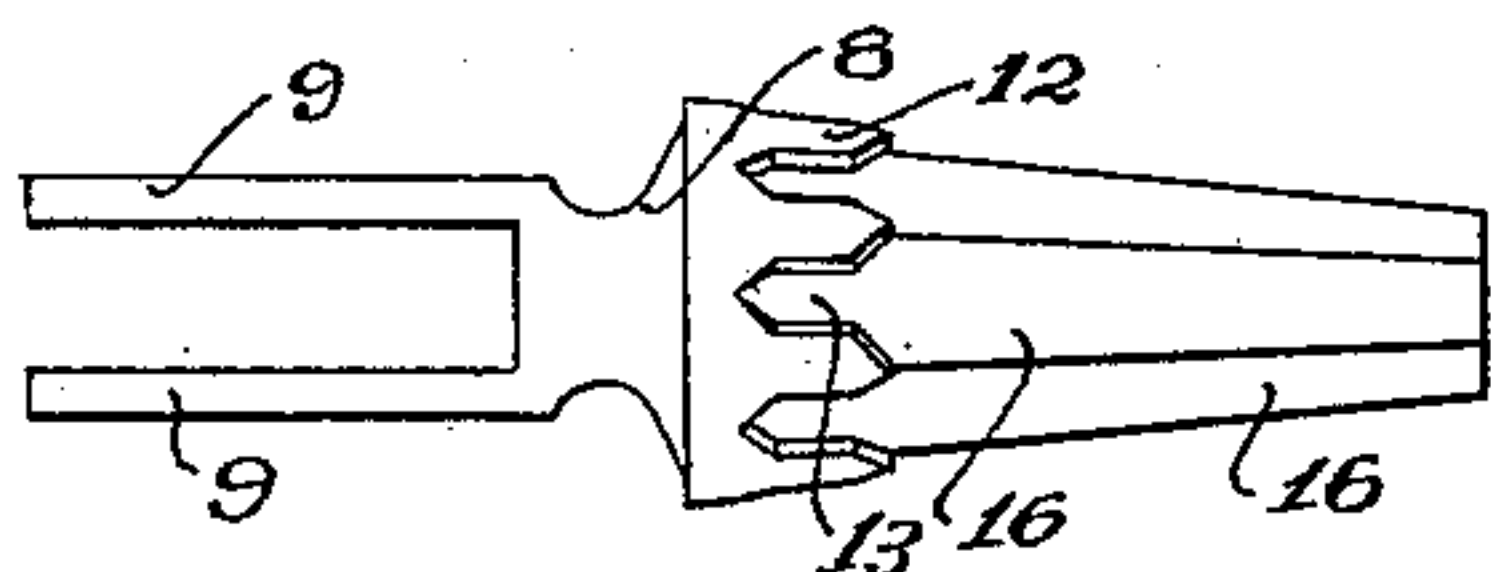
F. J. ESSIG.  
STONE CUTTER'S JIG.

No. 538,190.

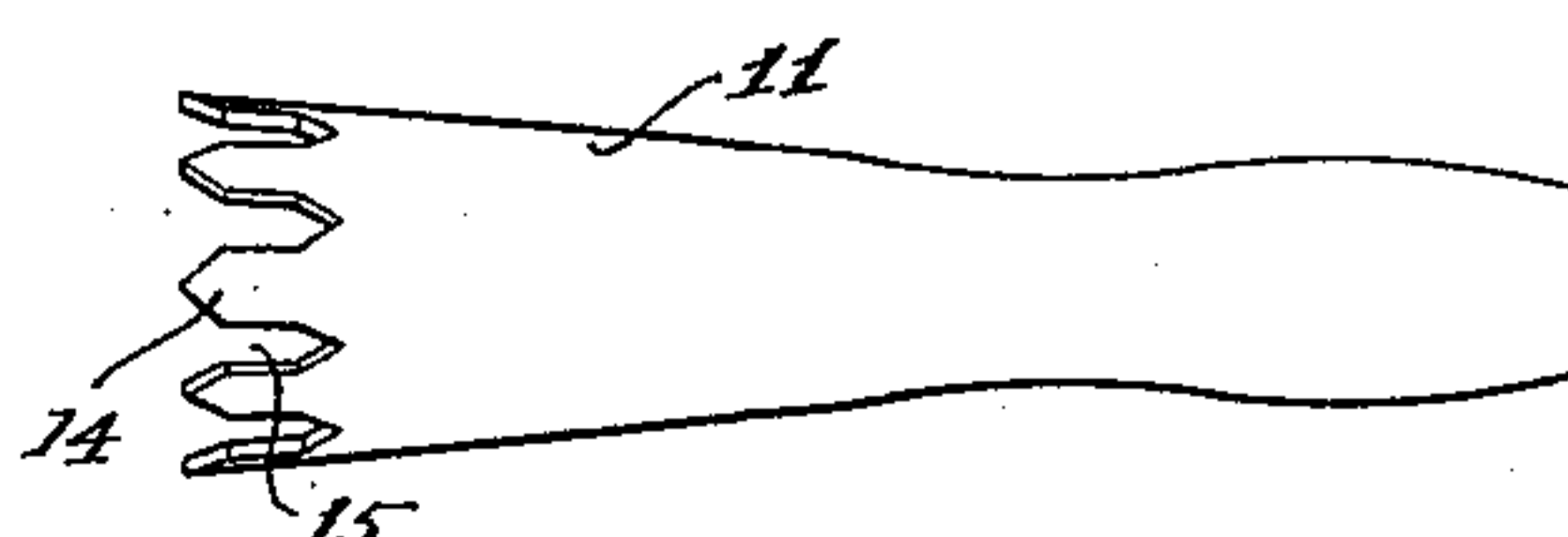
Patented Apr. 23, 1895.



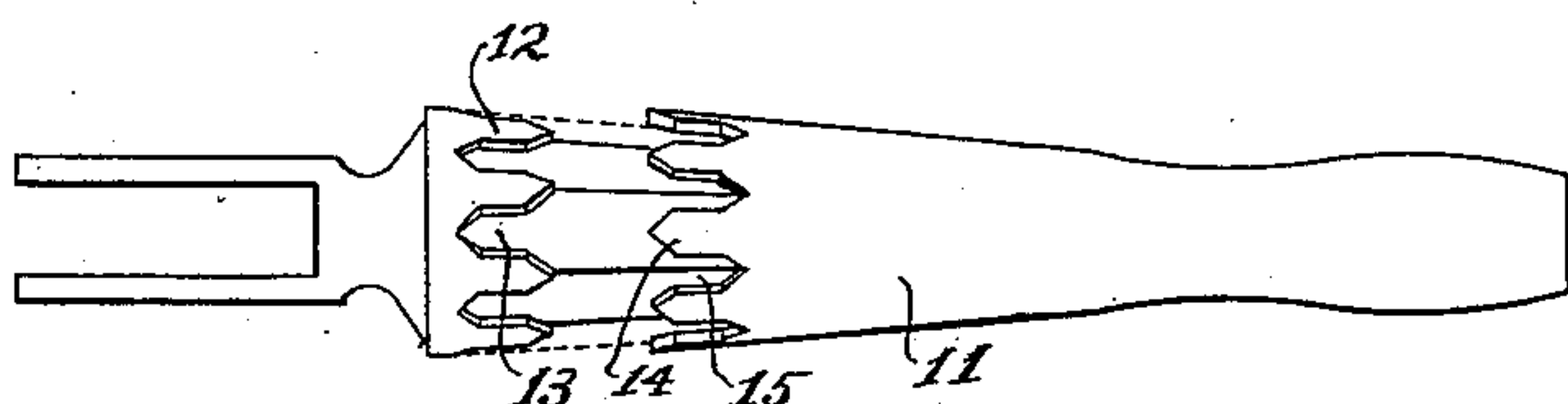
*Fig. 2.*



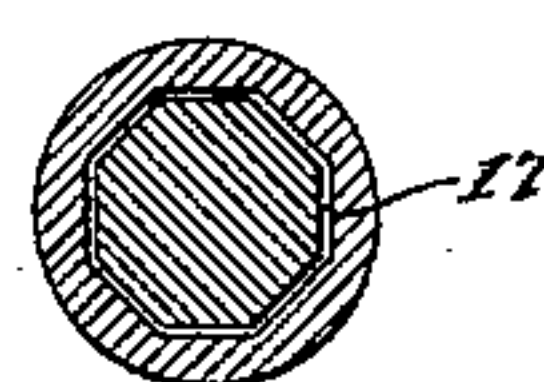
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



Witnesses:

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Inventor:  
*Frederick J. Essig*  
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Attorneys.



# UNITED STATES PATENT OFFICE.

FREDERICK J. ESSIG, OF CHICAGO, ILLINOIS.

## STONE-CUTTER'S JIG.

SPECIFICATION forming part of Letters Patent No. 538,190, dated April 23, 1895.

Application filed April 1, 1893. Serial No. 468,742. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK J. ESSIG, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Stone-Cutters' Jigs; 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.

This invention relates to a novel construction in a stone-cutter's jig, the object being to provide a device of this kind that will insure the evenness of the angle of the stone being cut.

The invention consists in the features of construction and combinations of parts hereinafter fully described and specifically claimed.

In the accompanying drawings illustrating my invention,—Figure 1 is a vertical sectional view of a jig constructed in accordance with my invention. Fig. 2 is a detail side elevation of the socket piece that receives the sleeve carrying the stone. Fig. 3 is a detail side elevation of said stone carrying sleeve. Fig. 4 is a detail side elevation of the socket piece and sleeve together. Fig. 5 is a cross section of the same on the line 5—5 of Fig. 1.

Referring now to said drawings, A indicates the upright spindle that is located adjacent to the lap or table employed by lapidists. The jig is mounted upon this spindle and carries a stick or piece of wood to the end of which the precious stone is secured in the usual manner. In use the lapidist manipulates the holder 1 to bring the stone down upon the revolving lap to give it the desired face, and by turning the holder 1 the stone can be held in different relations and thus give the faces of the stone.

The object of my invention is to provide means whereby these faces can be cut with precision and exactness, and in accordance with the principle involved by my invention a regulating sleeve and socket piece are interposed between the holder 1 and the upright spindle A of the device. The said regulating sleeve and socket piece have regularly disposed interfitting portions, and are loosely fit upon each other, that is to say, the sleeve fits upon the socket piece and can slide back and forth. The regularly disposed interfit-

ting portions of the socket piece and sieve control their relative positions and prevent their relative revolution. I have found it convenient to secure the socket piece to the spindle, and the holder 1 to the regulating sleeve, and have therefore illustrated my invention constructed in this manner. The said interfitting portions of the socket piece and sleeve can be constructed in various ways, and although I have shown a preferred construction, yet except in the claims for the specific construction I do not wish to be limited to the exact construction shown, as my invention consists broadly in the socket piece and sleeve having regularly disposed interfitting portions.

In the drawings I have illustrated a construction of the regularly disposed interfitting portions I contemplate employing, which consists in a socket piece having a plurality of regularly disposed faces and a regulating sleeve provided interiorly with a corresponding number of regularly disposed faces to fit the faces of the socket piece. This makes a practical and efficient construction, and of course both the socket piece and sleeve can have the same number of teeth or projections, and I have so illustrated them.

I contemplate further employing the teeth or projections only and in Fig. 1 have so illustrated my device, and I will now proceed to describe the construction illustrated in Fig. 1 which is adapted especially for cutting eight faces, although it will be understood that it can be varied to cut any number of faces desired.

Upon the spindle A a sleeve 2 is mounted and held adjustably thereon by a thumb-screw, or other suitable means, 3<sup>a</sup>. This supporting sleeve 2 carries at its upper end a collar 3 that is revoluble thereon and retained by angular shoulders or projections 4 upon said supporting sleeve 2. The said collar 3 is provided with lateral bearing lugs 5 through which pass the adjustable pivot pins 6 that hold between therein the pivot plate 7 which thus has an upright pivotal support. The socket piece 8 is preferably bifurcated at one end, and the arms 9 of said bifurcated portion are located on opposite sides of the pivot plate 7 and secured thereto by a pivot 10.

The regulating sleeve 11 is adapted to fit upon the socket piece 8 and said socket piece



is tapered toward its free end and the sleeve is tapered interiorly to correspond to the taper of the socket piece, so that while said parts can move longitudinally with relation to each other, yet, when the sleeve is pushed upon the socket piece, a close fit will be made between said parts.

The socket piece 8 is provided with eight teeth or projections 12 regularly disposed around the same, and between such teeth or projections 12 eight regular spaces 13. These teeth and spaces are arranged near the rear end of the socket piece and stand out from the face thereof, while the rear end of the regulating sleeve 11 is provided with eight teeth or projections 14 and between such teeth or fingers 14 eight regular spaces 15. The teeth or fingers upon the socket piece and sleeve are adapted to interfit when said sleeve is held in its operative position upon the socket piece, as shown in Fig. 1 and in dotted lines in Fig. 4.

In Figs. 2, 4 and 5 I have shown the socket piece and regulating sleeve having the flat faces in connection with the teeth or projections. The said socket piece is provided with eight regularly disposed sides or faces 16 and the inside of the regulating sleeve 11 is provided with a like number of corresponding faces 17 to fit the same. In this way it will be seen that in connection with the said teeth or projections the said sleeve can be held tightly upon the socket piece and always in a predetermined and regular position, so that

after a face of the stone has been finished by sliding the sleeve outwardly upon the socket piece and turning it the desired extent, and then shoving it back in place, the said stone will be turned the desired extent, which in the present case would amount to one-eighth of a revolution, so that eight faces will be cut upon the stone.

I claim as my invention—

1. In a device of the kind specified, a socket piece, and a regulating sleeve, said parts being provided with regularly disposed interfitting portions, substantially as described.

2. In a device of the kind specified, a socket piece and a sleeve adapted to fit thereon, said socket piece and sleeve being provided with a plurality of regularly disposed and interfitting teeth or projections, substantially as described.

3. A device of the kind specified comprising an upright spindle A, an adjustable sleeve mounted thereon, a revoluble collar 3 upon said sleeve 2, a pivot plate 7 having an upright pivotal connection with said collar 3, a socket piece having a horizontal pivotal connection with said pivot plate 7, and a regulating sleeve upon said socket piece, substantially as described.

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

FREDERICK J. ESSIG.

Witnesses:

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E. J. BOILEAU.