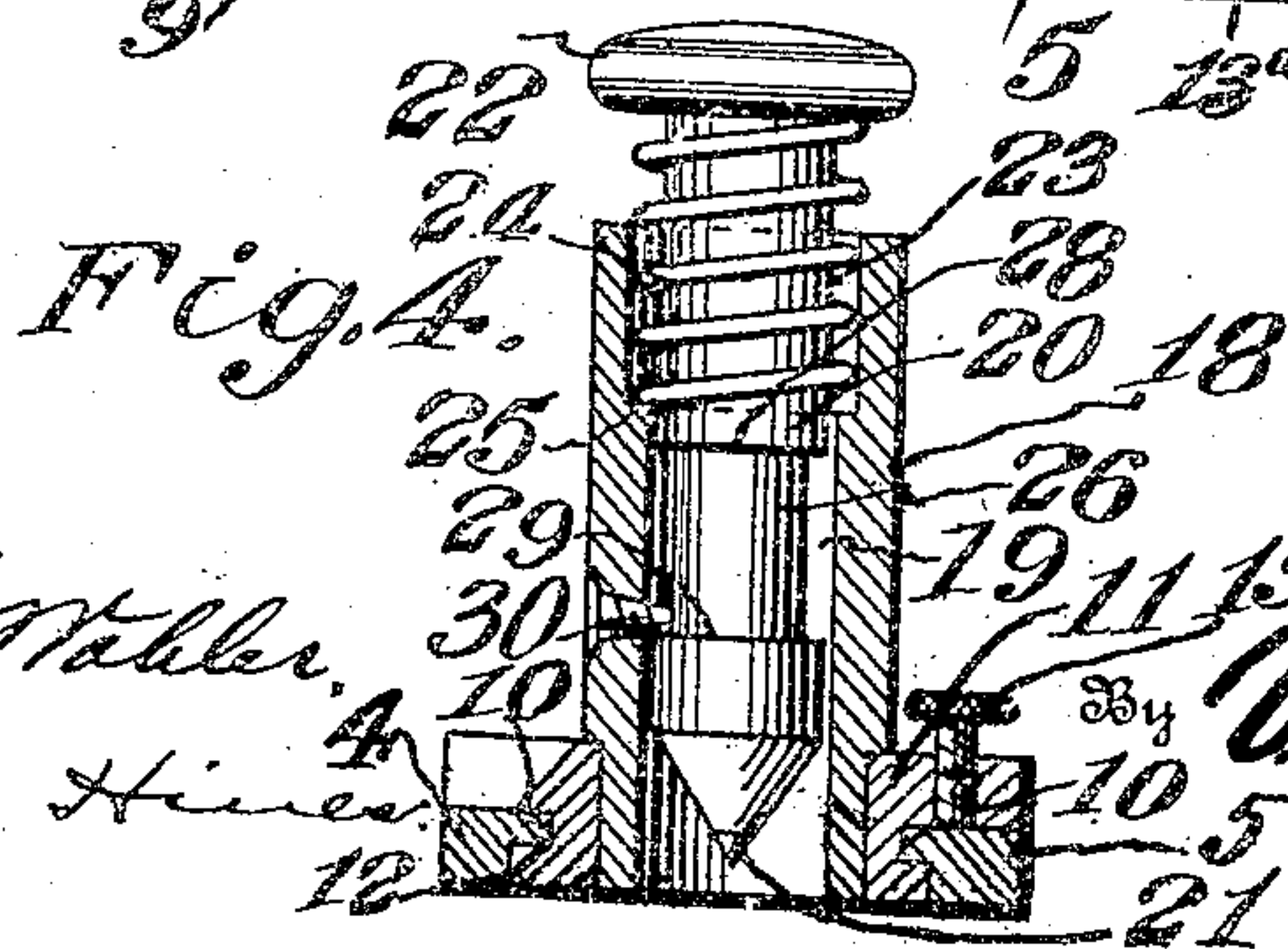
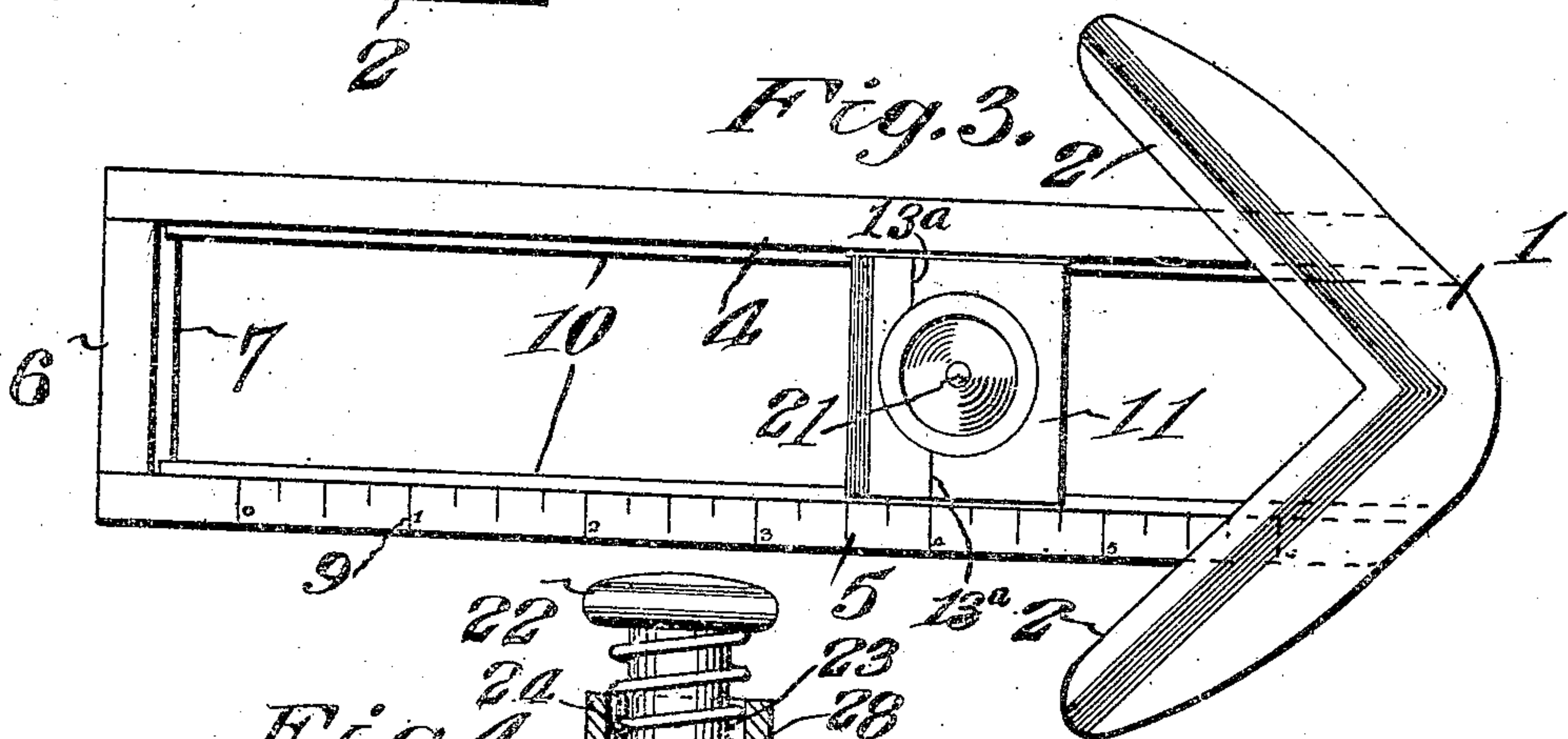
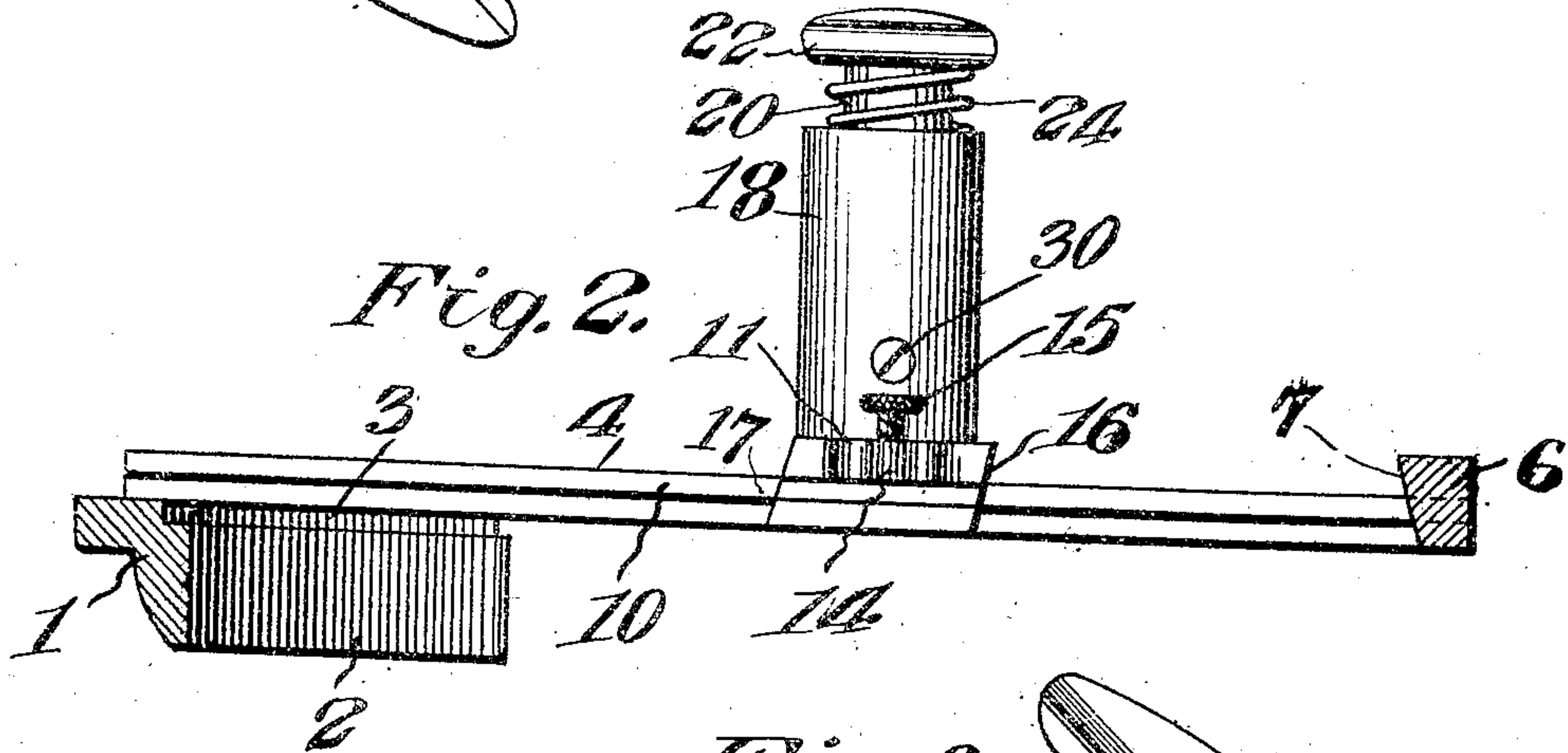
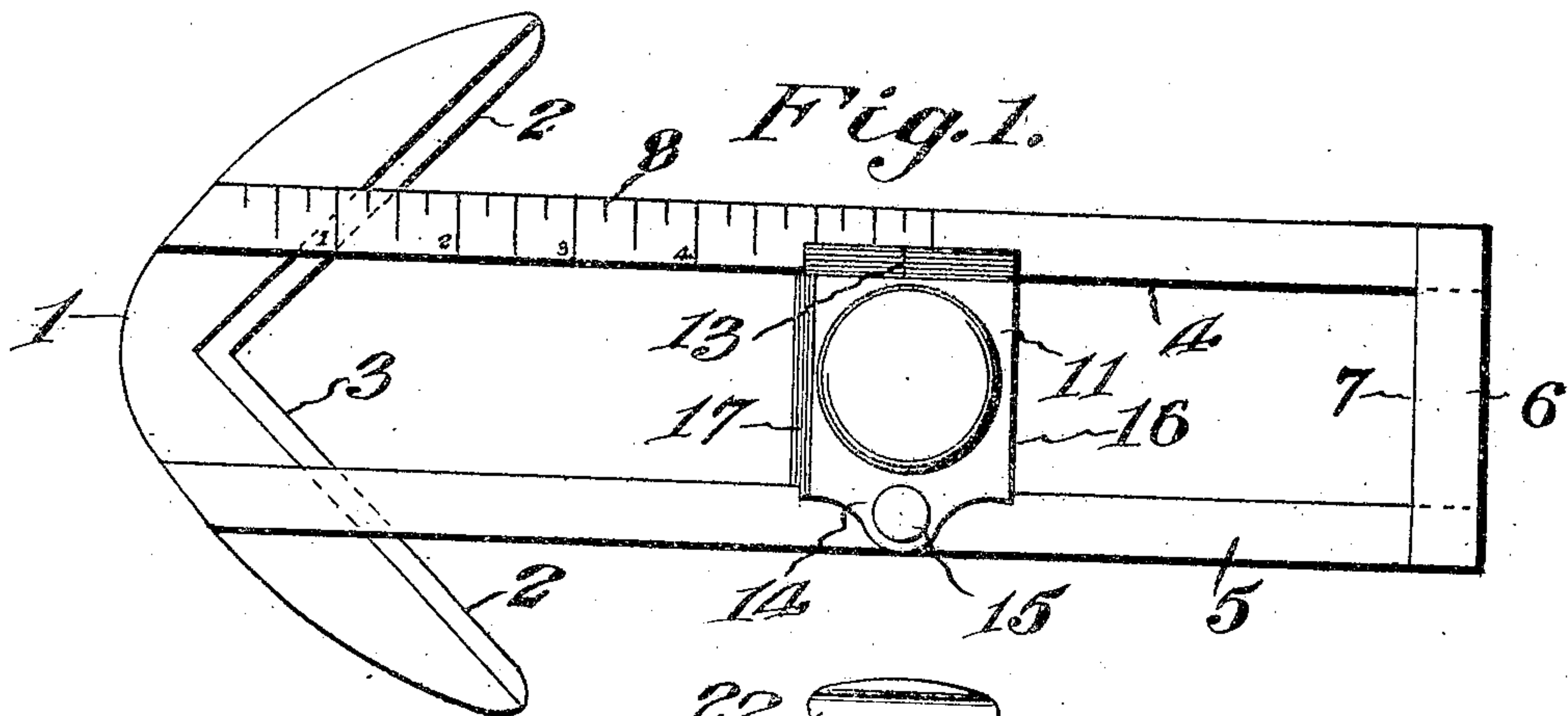


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 CENTERING OR MARKING TOOL.
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912,052.

Patented Feb. 9, 1909.



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CENTERING OR MARKING TOOL.

No. 912,052.

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To all whom it may concern:

Be it known that I, ORLANDO LEE ALBERTSON, a citizen of the United States, residing at Richmond, in the county of Henrico and State of Virginia, have invented new and useful Improvements in Centering or Marking Tools, of which the following is a specification.

This invention relates to a centering or marking tool for the use of wood turners, machinists, die makers, boiler makers, carpenters and other mechanics for ascertaining and marking the center of a shaft or other object of circular or other form, for marking an object parallel with an edge thereof to facilitate the scribing of a line at a desired distance from the edge, and for various other uses, the object of the invention being to provide a simple, inexpensive, reliable and efficient device of this character whereby the above stated and other operations may be readily and conveniently performed.

The invention consists of the features of construction, combination and arrangement of parts hereinafter fully described and claimed, reference being had to the accompanying drawing, in which:—

Figure 1 is a top plan view of a centering or marking tool embodying my invention. Fig. 2 is a sectional side elevation of the same. Fig. 3 is a bottom plan view of the tool. Fig. 4 is a vertical transverse section through the scale bars of the frame of the tool and the marking device.

The frame of the tool comprises a stock or abutting member 1, which is of V-form and has its working edges 2 disposed at an angle of 45° to the center line of the tool, said stock or abutting member being rabbeted or recessed above its working edges, as indicated at 3, for a purpose hereinafter described. Secured in any suitable manner to the upper faces of the angular arms of the stock are parallel blades 4 and 5, which project outwardly in parallel relation and are connected at their outer or free ends by a cross bar 6 projecting above the top surfaces of the blades and provided with a downwardly and outwardly beveled or inclined engaging face 7. The upper surface of the blade 4 is provided with suitably designated lines of graduation forming a scale 8 which extends outwardly from the inner end of said blade, or the end secured to the stock 1, while the opposite or lower surface of said

blade is provided with suitably designated lines of graduation forming scale 9 which extends toward the stock from the outer or free end of said blade. These scales 8 and 9 are in the respective relative proportions of $1\frac{1}{2}$ to 1, and as the member 1 is right angled, with its sides arranged at an angle of 45° from the line of travel of the punch, the ratio of the scales is that of the cosine of 45° to 1, as will be readily understood. The purpose of the scale 8 is to determine the center of an object whose diameter has been measured through the use of the scale 9. The inner edges of the blades are recessed, rabbeted or beveled to provide inwardly extending guide flanges 10.

Mounted for sliding movement on the blades is a head 11 comprising a block of generally rectangular form, said block being formed in its lateral or side faces with guide grooves 12 receiving said flanges. One of the side faces of the head is beveled and provided with an indicating mark 13 to cooperate with the graduations of the scale 8, while the other side face of the head is provided with a lug 14 having a threaded opening for the passage of a binding screw 15 adapted to engage the upper surface of the blade 5 to secure the head in any of its adjusted positions. The outer side of the head is formed with a downwardly and inwardly beveled engaging surface 16 for cooperation with the beveled face 7 of the cross bar 6, while the inner face of the head is provided with a correspondingly beveled engaging surface 17 for cooperation with the working edges 2 of the stock or abutting member 1. The lower surface of the head is provided with an indicating mark 13^a to cooperate with the scale 9 and which registers with the zero graduation of said scale when the points of the engaging surfaces 7 and 16 are in contact. The head is formed with a central opening for the reception of the lower reduced end of a tubular casing 18 which extends upwardly therefrom and is secured thereto in any suitable manner, but may constitute an integral part thereof if desired. Within the bore or passage of this tubular casing is mounted for vertical movement a marking device comprising a stem 20 provided at its lower end with a conical or tapered center punch or marking point 21. The stem normally projects at its upper end above the open upper end of the casing and is provided with a head 22 of proper form to

be struck by hammer or like tool for the purpose of forcing the punch downward to mark the object. The upper end of the bore of the casing is counterbored or enlarged, as at 23, for the reception of a coiled retracting spring 24 surrounding the upper end of the stem between the head 22 and a shoulder 25 formed at the point of intersection of the bore and counterbore. This spring holds the stem normally elevated with the punch point 21 inclosed within and lying above the lower end of the casing and automatically returns the marking device to normal position after depression. The stem is formed with a reduced portion 26 and upper and lower contact shoulders 28 and 29 for cooperation with a stop pin or screw 30 extending into the casing through one side thereof. The reduced portion 26 provides an intervening space for the reception of the inner end of the pin or screw to enable the stem to move to the limits of its upward and downward strokes without interference from the screw, which is engaged at the ends of such strokes by the shoulders 29 and 28, the shoulder 29 operating when in engagement with the screw to prevent the stem from being elevated to too great an extent by the spring 24.

In employing the device for ascertaining the diameter and center of a shaft or other object of cylindrical or other form, the set screw 15 is loosened to free the head 11 for adjustment and the tool is then placed with the scale 8 facing downward and the scale 9 facing upward over the end of the shaft or surface of the object against one side of which the engaging surface 7 of the cross bar 6 is brought to bear. The head 11 is then adjusted until its cooperating surface 16 bears against the opposite side of the shaft or object, when the set screw 15 is tightened and the indicating mark 13^a inspected in connection with the graduation with which it registers on the scale 9, by which the width or diameter in inches or fractions thereof will be determined. The set screw is then loosened again to free the head and the tool inverted so that the point end of the punching stem faces downwardly and the stock 1 is brought to bear against one side of the shaft or object, while the head 11 is adjusted until its indicating mark 13 registers with the graduation on the scale 8 which corresponds with the graduation on the scale 9 with which the mark 13^a has previously registered, whereupon the point of the marking device will lie immediately above the center of the shaft or object, so that upon striking the head 22 with a hammer or other suitable tool the point 21 will be forced down to form the center mark. In like manner the diameter and axial center of various forms of objects may be determined and marked, rendering the tool use-

ful for the performance of a variety of operations in laying out centers and marking scribing point guides in both wood and metal working. The device may also be employed for marking a piece of work to form guides for scribing one or more lines parallel with the edge of the work, and is useful in many other operations of like character, rendering the device of value to mechanics of various kinds.

The purpose of beveling or providing the recess 3 in the stock and beveling the engaging faces 7, 16 and 17 of the cross-bar 6 and head 11 is to adapt these parts for effective use in measuring the diameter and determining the center of a shaft or other object provided with a bur or projection. The bur or projection will be accommodated between the engaging surfaces in such manner as to enable the projecting points of the surfaces to come in contact with the body of the shaft or object for a true measurement.

Having thus fully described the invention, what is claimed as new is:—

1. A device of the character described comprising a frame having upper and lower engaging members at its opposite ends and provided on its reverse faces with scales arranged for respective cooperation with said engaging members, a slide mounted for movement on the frame between the engaging faces and having its upper and lower surfaces provided with indicating means to cooperate with the respective scales, and a marking tool carried by the slide.

2. A device of the character described comprising a frame having upper and lower engaging members at the opposite ends thereof and provided on its reverse faces with scales between and arranged for respective cooperation with said engaging members, a slide mounted for movement on the frame between the engaging members and having cooperating engaging faces and provided on its upper and lower surfaces with indicating means for coaction with the respective scales, and a marking tool carried by the slide.

3. A device of the character described comprising a frame having engaging members at its opposite ends and provided with scales for respective cooperation with said engaging members, an engaging slide mounted for movement on the frame between the engaging faces and provided with indicating marks to cooperate with the respective scales, and a marking tool carried by the slide.

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

ORLANDO LEE ALBERTSON.

Witnesses:

L. D. GRANT,
D. BOWENS.