

(No Model.)

R. L. LEVIN.
CENTERING DEVICE FOR LATHES.

No. 517,466.

Patented Apr. 3, 1894.

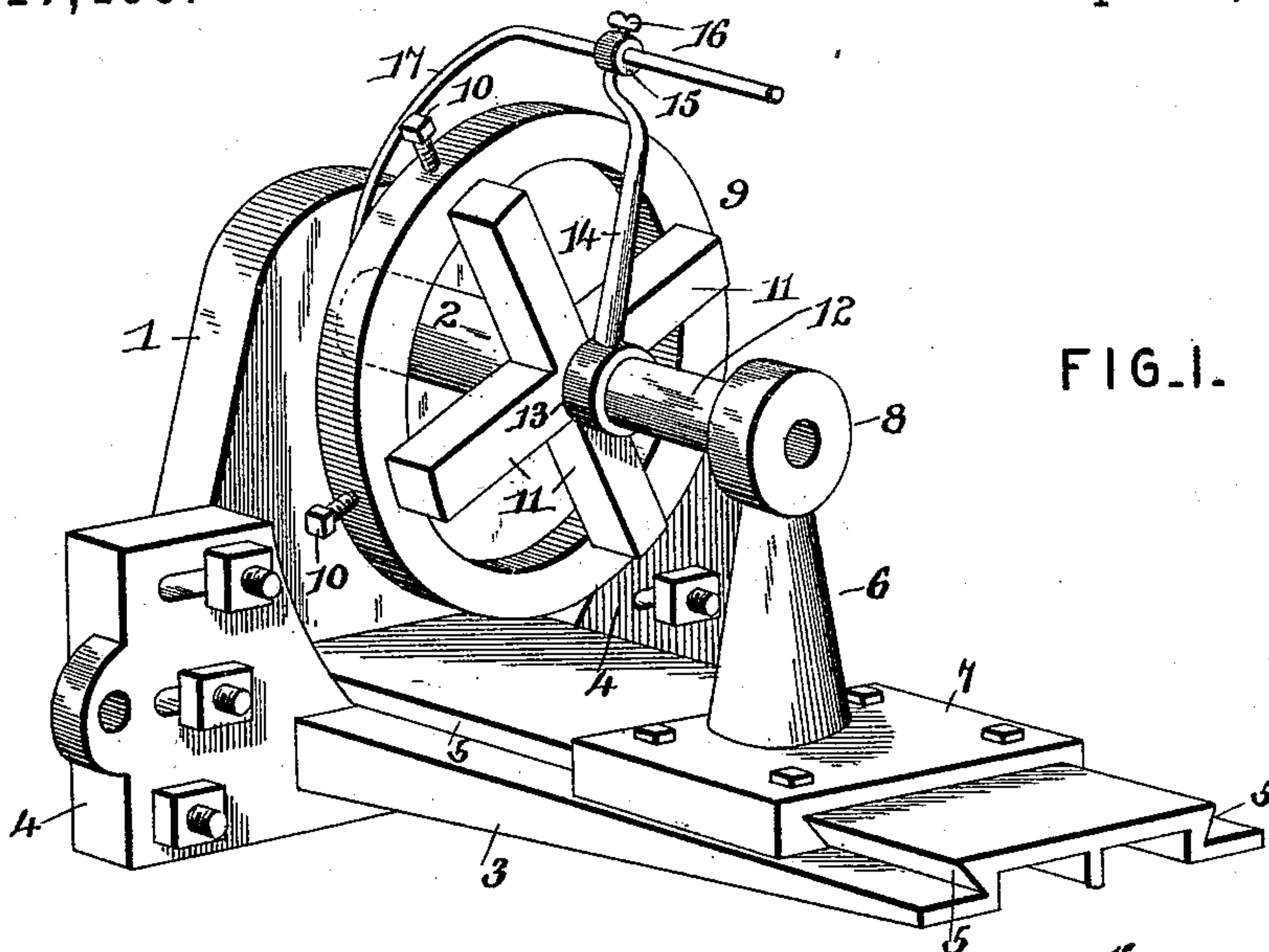


FIG. 1.

FIG. 2.

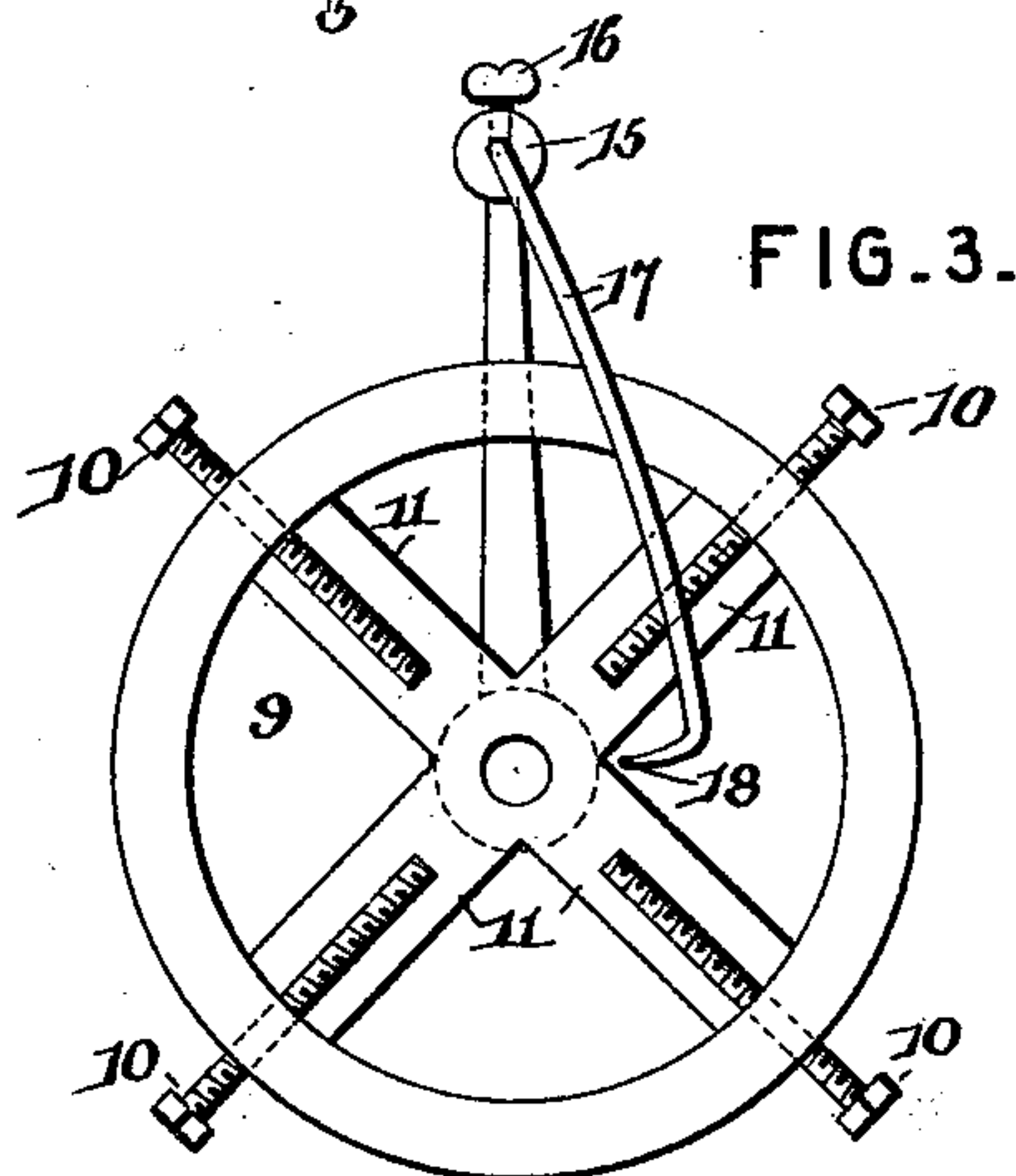
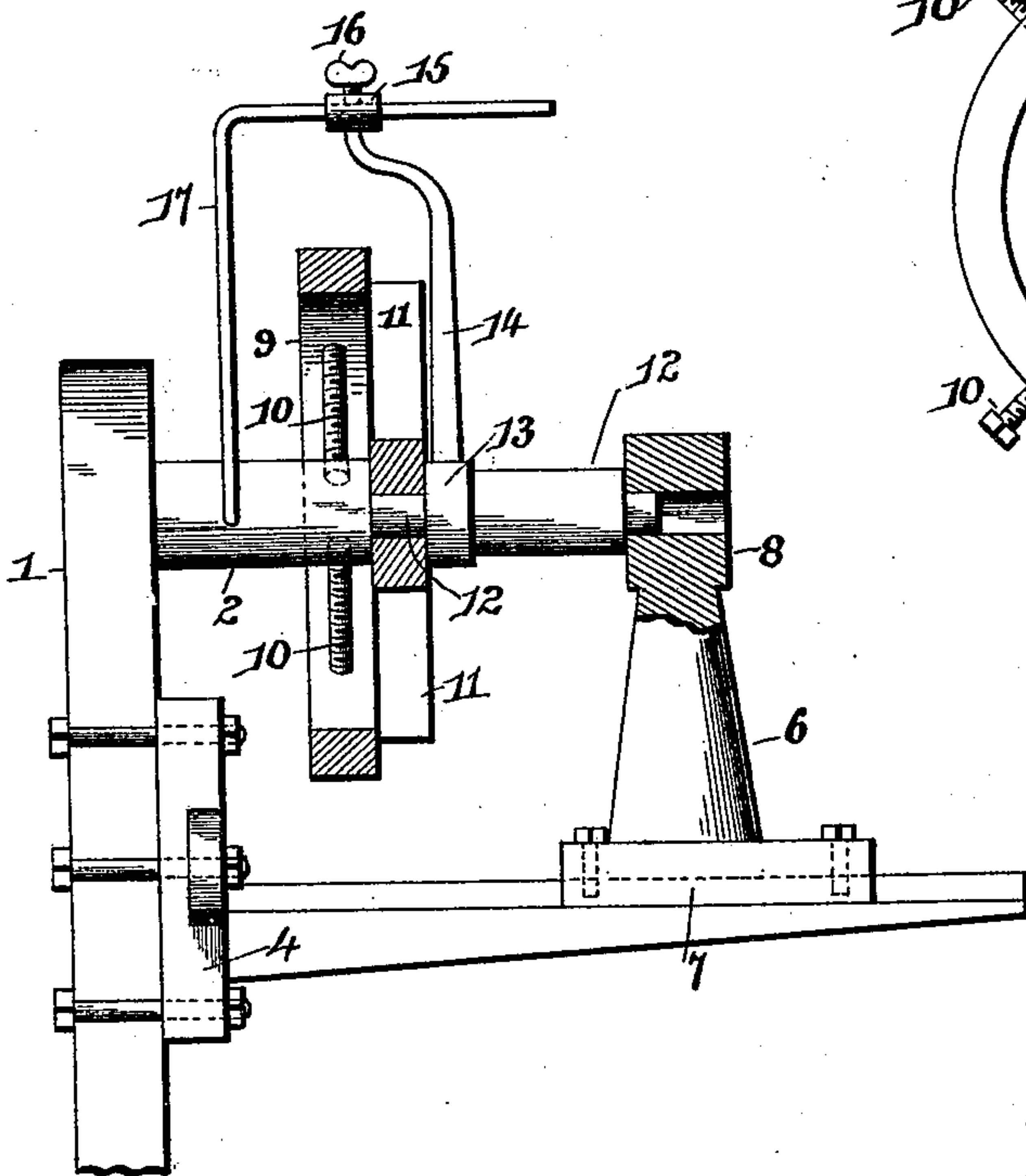
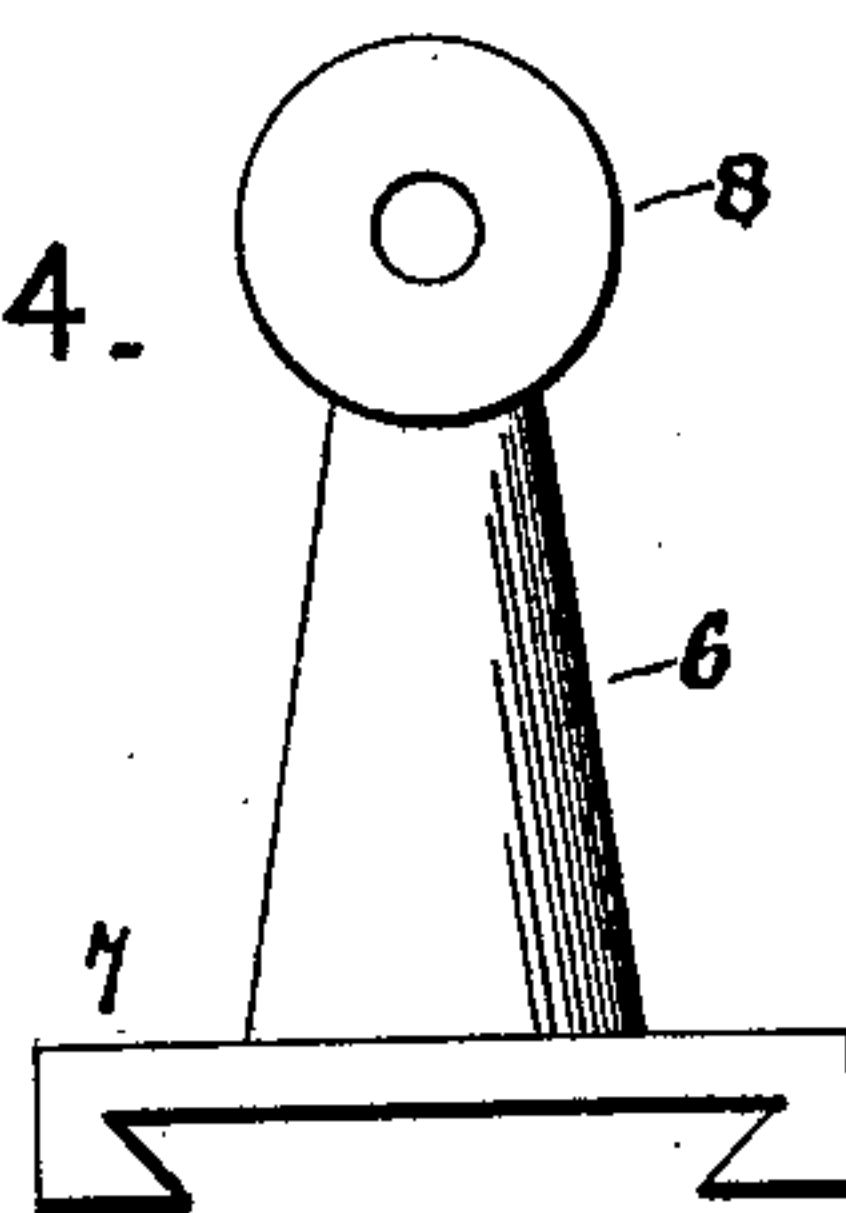


FIG. 3.

FIG. 4.



Inventor

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RUDOLPH LEANDER LEVIN, OF MENOMINEE, MICHIGAN.

CENTERING DEVICE FOR LATHES.

SPECIFICATION forming part of Letters Patent No. 517,466, dated April 3, 1894.

Application filed January 16, 1894. Serial No. 497,070. (No model.)

To all whom it may concern:

Be it known that I, RUDOLPH LEANDER LEVIN, a citizen of the United States, residing at Menominee, in the county of Menominee and State of Michigan, have invented a new and useful Centering Device for Lathes and Turners, of which the following is a specification.

My invention relates to a centering device for use in connection with wrist-pin turners and similar machines and is designed to secure an accurate adjustment of the base of the turning machine, whereby the spindle of such machine will be centered with the wrist-pin to be turned when the machine is applied to its base.

The centering device embodying my invention is shown in Letters Patent No. 511,053, granted to me on December 19, 1893, and is adapted especially for use in connection with a turning machine such as that forming the subject-matter of such patent.

Various objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings: Figure 1 is a perspective view of a centering device embodying my invention applied in the operative position to a base representing that of a turning machine, said base being attached to the crank-arm carrying the wrist-pin to be turned. Fig. 2 is a section, taken centrally and parallel with the axis of the wrist-pin, and showing the parts in the positions indicated in Fig. 1. Fig. 3 is a detail view of the clamp and scriber. Fig. 4 is a similar view of the standard or gage.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 represents a crank-arm, having a crank or wrist pin 2, which it is desired to turn; and 3 represents a base adapted to support a turning machine, such as that indicated in the Letters Patent above mentioned, and provided with securing devices 4, of any desired or preferred construction. This base may be provided, as shown in the drawings, with a guide 5, adapted for the turning machine.

6 represents a standard or gage, provided with a recessed foot 7 to fit upon the guide

5, and having at its outer end a sleeve 8, the axis of which is arranged at a distance from the plane of the base 1, which corresponds accurately with the distance between the axis of the spindle of the turning machine and the plane of the base, and therefore it is obvious that when the base is secured upon a crank-arm at such a point that when the standard or gage is fitted thereupon its sleeve is aligned accurately with the axis of the wrist-pin to be turned, that when the turning machine is applied to the said base it will be properly adjusted for operation.

It is well known that wrist-pins turn out of center as they wear, from the fact that, under ordinary circumstances, the wear is unevenly distributed, and is concentrated, more or less, upon one side of the pin, and therefore, in order that the axis of the wrist-pin, after it has been dressed or turned, may remain the same as before, it is necessary to provide some means for ascertaining the accurate center, whereby the sleeve of the standard or gage may be aligned therewith. The means which I employ for ascertaining this correct axis or center of the wrist-pin consist of an annular clamp 9, which is provided with the radially-disposed gage-screws 10, projecting into the space inclosed by the clamp and adapted to engage the surface of the wrist-pin, as shown clearly in Figs. 1 and 2. This clamp embodies a spider 11, which supports a spindle 12, said spindle being concentric with the periphery of the clamp. After applying this clamp to the wrist-pin, and adjusting the gage-screws to bear at their inner ends upon the surface of the pin, and thus hold the clamp in place, the eye 13 of an arm 14 is fitted upon the spindle 12, said arm being longer than the radius of the clamp and being provided, at its outer end, with a terminal guide 15, having a set-screw 16. In this guide is adjustably fitted one arm of an angular scriber 17, provided with a point 18, which is adapted to traverse the surface of the wrist-pin. It is evident that the scriber is angularly adjustable in the guide to bring its point close to the surface of the wrist-pin irrespective of the size of such pin; and by swinging the arm 14 around the spindle of the clamp, and watching the point of the scriber as it trav-

erses the surface of the pin, the operator is enabled, by the proper adjustment of the gage screws to arrange the clamp so that its spindle will be in accurate alignment with the correct axis of the wrist-pin. After this has been accomplished, the swinging arm may be released, and the base 1, upon which the standard or gage 6 has been fitted, must be moved to enable the sleeve of said standard or gage to be fitted upon the projecting end of the spindle 12, which corresponds in diameter with the sleeve, as shown clearly in Fig. 2, after which, and while the base is held in such adjusted position by the engagement of the sleeve 8 with the spindle 12, the securing devices should be adjusted or tightened to fasten the base. The centering apparatus may now be detached from the wrist-pin and the base to allow the operator to apply the turning machine.

The utility of the above-described device will be manifest to those skilled in the art to which it appertains, in that the accurate centering of the turning machine is essential to efficient work, is under ordinary circumstances difficult of attainment, and is, by means of the construction above described, attainable without loss of time, and with mathematical accuracy.

It will be understood that various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having described my invention, what I claim is—

1. In a device of the class described, the combination with a base, and means for securing the same in its adjusted positions, of a clamp adapted to be secured to a wrist-pin and provided with a concentric spindle, means for centering the clamp with the wrist-pin, and a standard or gage fitted upon the base and provided with means to engage the spindle of the clamp, such means being arranged

at a predetermined interval from the plane of the base, substantially as specified.

2. In a device of the class described, the combination of a clamp provided with gage screws and having a concentric spindle, a standard or gage having a sleeve to engage said spindle, and a rotatable scriber mounted concentric with the spindle, substantially as specified.

3. In a device of the class described, the combination of a clamp provided with gage screws to engage a wrist-pin, and having a concentric spindle, an arm swiveled upon said spindle, and a scriber carried by the arm, substantially as specified.

4. In a device of the class described, the combination of a clamp provided with adjusting devices, an arm swiveled concentric with said clamp, and a scriber carried by said arm, substantially as specified.

5. In a device of the class described, the combination of a clamp provided with gage screws and having a concentric spindle, an arm swiveled upon said spindle and provided with a terminal guide, and an angular scriber having one arm fitted in said guide and the other arm provided with a terminal point, substantially as specified.

6. The herein described centering device for wrist-pins, the same comprising a clamp provided with adjusting devices to engage the surface of a wrist-pin and having a concentric spindle, a scriber-carrying arm fulcrumed upon said spindle, and a standard or gage adapted to be fitted upon the guide on the base of a turning machine and provided with a sleeve to fit the extremity of the spindle of said clamp, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

RUDOLPH LEANDER LEVIN.

Witnesses:

JAMES C. JOHNSON,
FRANK BRACELIN.