

No. 859,819.

PATENTED JULY 9, 1907.

J. S. KIRSTEIN.
TRUING TOOL.

APPLICATION FILED NOV. 20, 1906.

Fig. 1.

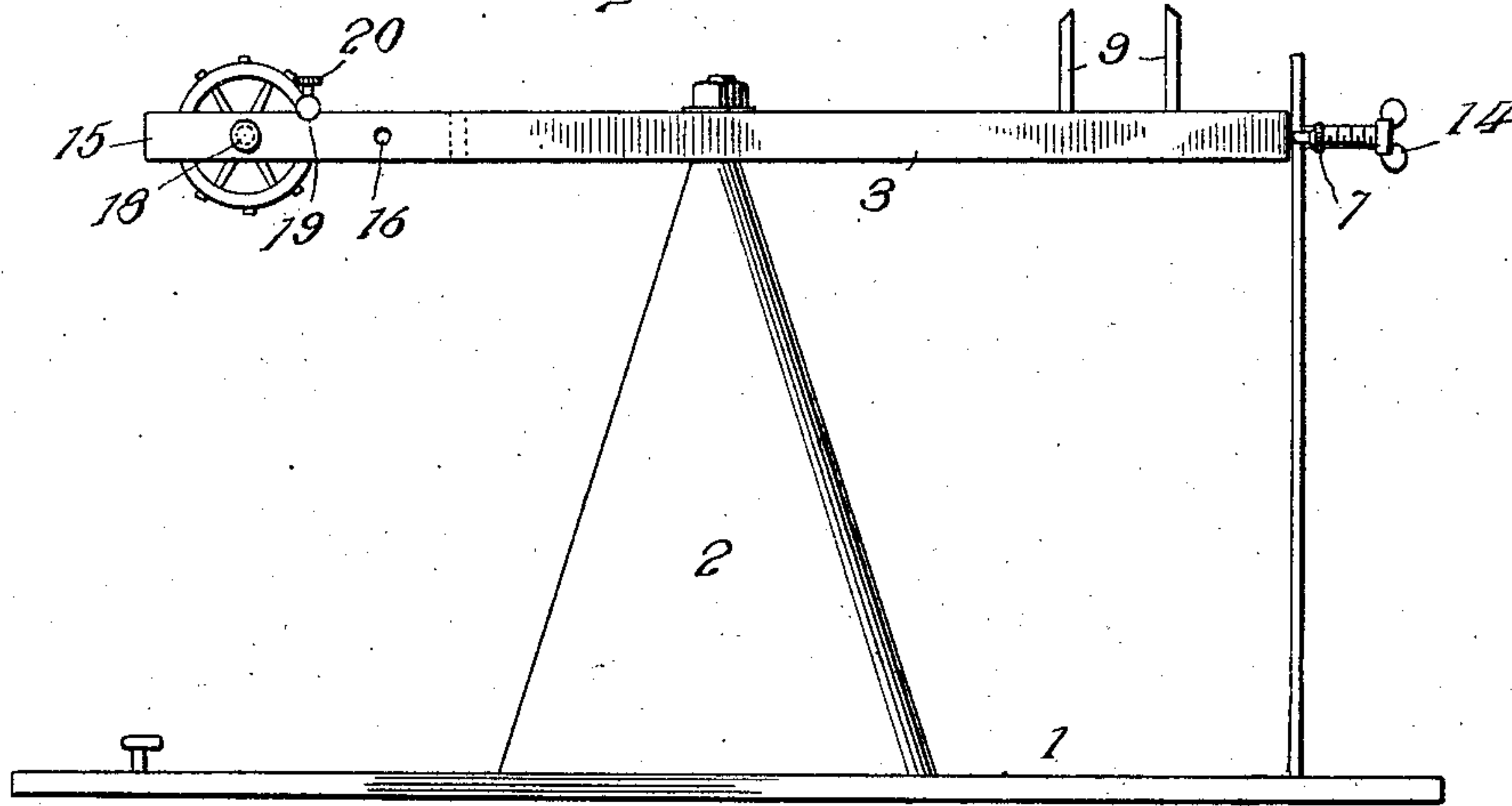


Fig. 2.

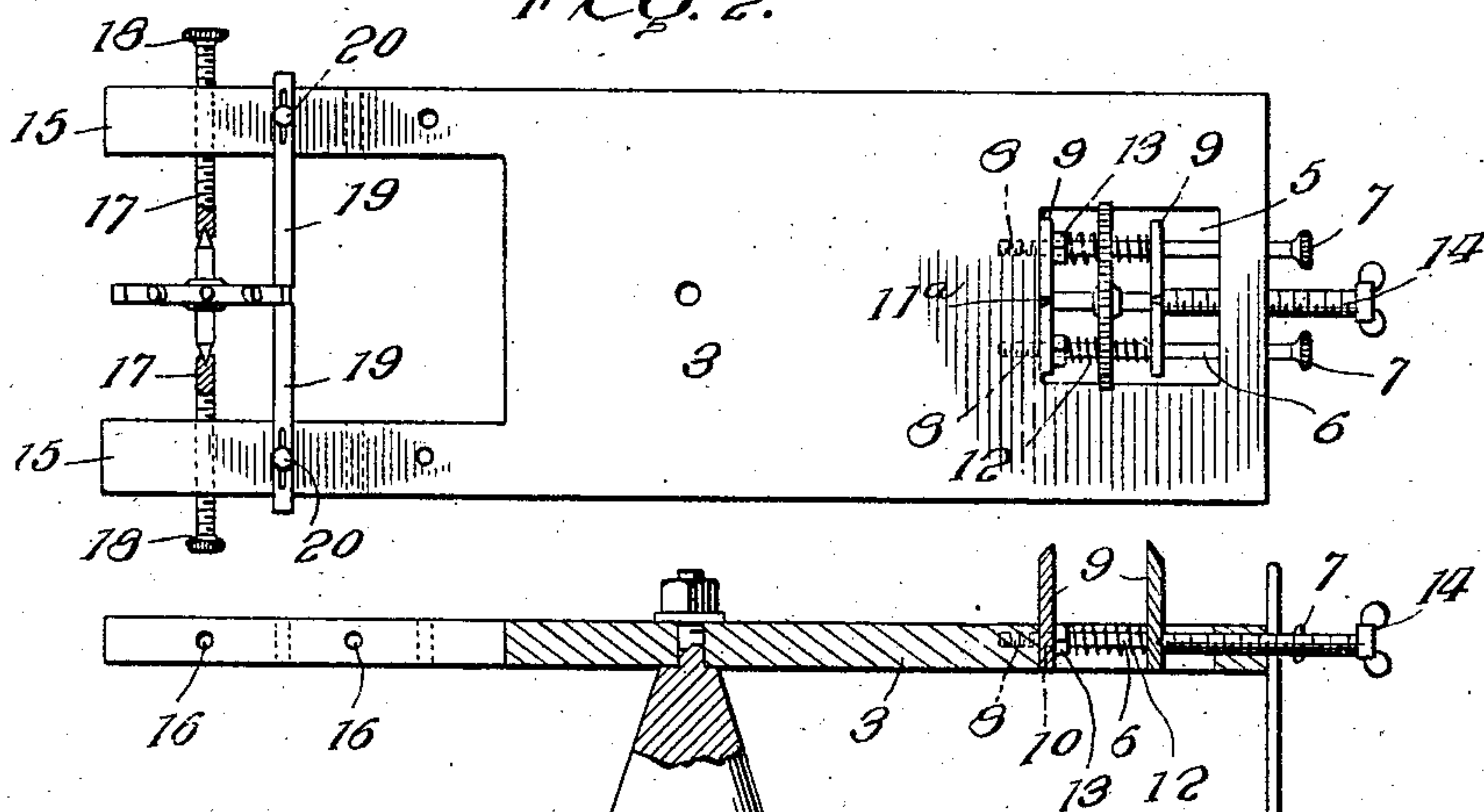
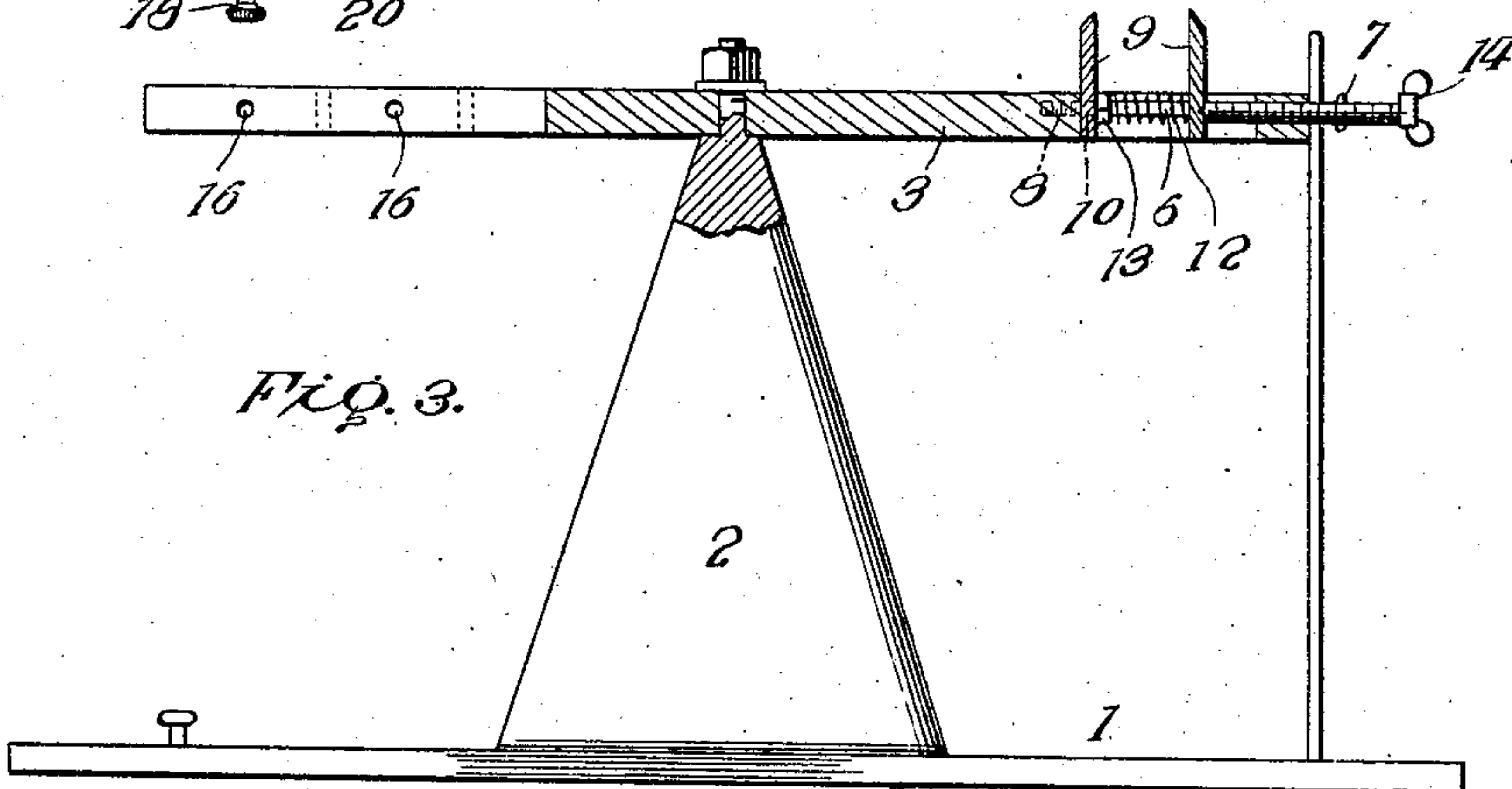


Fig. 3.



Witnesses

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JOHN S. KIRSTEIN, OF CANTON, SOUTH DAKOTA.

TRUING-TOOL.

No. 859,819.

Specification of Letters Patent.

Patented July 9, 1907.

Application filed November 20, 1906. Serial No. 344,337.

To all whom it may concern:

Be it known that I, JOHN S. KIRSTEIN, a citizen of the United States, residing at Canton, in the county of Lincoln and State of South Dakota, have invented certain new and useful Improvements in Truing-Tools, of which the following is a specification.

The object of this invention is to provide a truing device or tool, particularly designed for the use of watch makers, for the purpose of accurately and quickly truing balance wheels of watches.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a side elevation of a device in which is embodied my improved truing tool or device. Fig. 2 is a top plan view of the supporting beam or stand for the tool and its supported devices, detached from the base. Fig. 3 is a longitudinal sectional view through the said beam.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

This invention contains subject matter which has been divided out of a prior application for Letters Patent of the United States, #333,204, filed September 4, 1906. The said former application embodies both a poising device or tool and the herein described truing tool, both arranged at opposite ends of a revoluble beam, it being my purpose to introduce the two devices together as a convenient mechanism for the two operations necessary in attending to the balance wheels of watches and particularly useful for watch makers' use, in that after the truing tool had been used, the beam can be swung around upon its axis to bring the poising device or tool into proper operative relation to the watch maker or vice versa. The beam 3 for the two tools, as set forth in the prior application, is mounted to revolve upon its center in a horizontal plane upon the outer end of a conical support 2 projecting upwardly from a base 1. The poising mechanism which is mounted on one end of the beam 3 and which forms the basis of the prior application and the subject matter of the claims thereof, is herein shown for the purpose of illustration only, and briefly described, the same consists of a pair of supporting rods 6 extending across an oblong opening 5 and provided with projecting finger pieces 7 for the manipulation of the rods, said rods supporting a pair of vertically extending plates 9 nicked upon their upper edges, as indicated at 11^a, and provided with apertures 10 by which they are supported upon said rods 6. Springs 12 are interposed between the plates 9 and encircle the respective rods 6, the tension of the springs effecting the outward movement of one plate

with respect to the other, one of said plates being held stationary by means of nuts 13. The other plate is designed to be adjusted towards the stationary plate by means of an adjusting screw 14, as shown, so that the space between the plates may be changed in order to provide for the shafts of different lengths, it being understood that the ends of the shafts are received in the notches 11^a. For a further description of poising elements of the device, reference is to be particularly had to the other application, above mentioned.

The present invention consists, essentially, of the truing mechanism which is mounted on the opposite end of the beam from that where the poising tool is located. This truing mechanism comprises a pair of laterally adjustable supports 17 mounted in transverse alinement and screwing through horizontally extending threaded openings 16 of which there are two in each of the spaced supporting members 15 formed by cutting a recess in the end of the beam 3, as shown. The laterally adjustable supports 17 consist of threaded stems, each of which is formed with a suitable finger piece 18 at its outer end for the manipulation thereof, while its inner end is formed with a conical bearing to receive the outer end of the arbor of the balance wheel 6 to be trued.

19 designates the truing means proper which includes opposing members in the shape of pins or bars adapted for direct contact with the wheel at opposite sides, said pins being also mounted in transverse alinement with each other upon the members 15 of the beam 3, and parallel to the threaded stem 17. Set screws 20 are preferably utilized to hold the truing pins 19 at a predetermined adjustment with respect to the supporting members 15, said pins being formed with longitudinal slots for the reception of said set screws. The arrangement of the pins 19 insure that the adjacent extremity of the pins are adapted to be nicely adjusted against opposite sides of the periphery of the balance wheel. Hence if the balance wheel is bent at any point, no matter how slightly, the rotation of the wheel between the pins 19 will cause the latter to contact and bind against that portion of the wheel which is bent or which is untrue, thereby enabling the operator to quickly ascertain and remedy the defect.

As the threaded stems 17 are adjustable, the device is manifestly susceptible to use in truing balance wheels with arbors or a shaft of different length, and the adjustability of the truing pins 19 is advantageous for the same reason, so that balance wheels with peripheries of different thicknesses may be examined and trued.

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

A device of the character described, consisting of a base, a beam supported on said base and provided with an end

recess producing two parallel supporting arms 15 with a space between, each of said arms being provided with horizontally extending openings, a threaded stem working in one of the openings of each arm, said stems being arranged
5 in transverse alinement and adapted to support a balance wheel between them, turning pins provided at their outer ends with slots and set screws working in the respective arms and through the slots of the pins, whereby either one of said pins may be adjusted towards or away

from the other of the pins and held in transverse alinement, as and for the purpose set forth. 10

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

JOHN S. KIRSTEIN. [L. S.]

Witnesses:

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