No. 875,050. PATENTED DEC. 31, 1907.

D. E. CONLON.

MEASURING DEVICE.

APPLICATION FILED APR. 15, 1907.

Fig. 1.

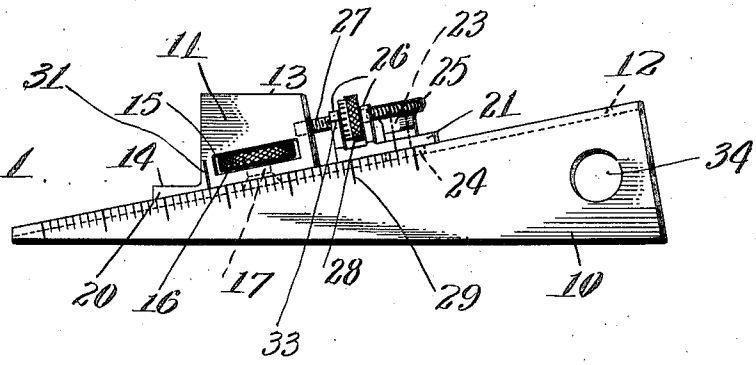


Fig. 2.

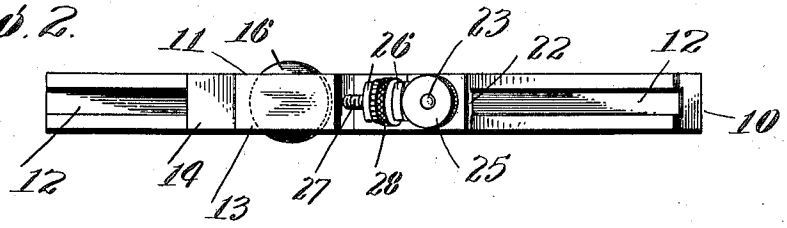


Fig. 3.

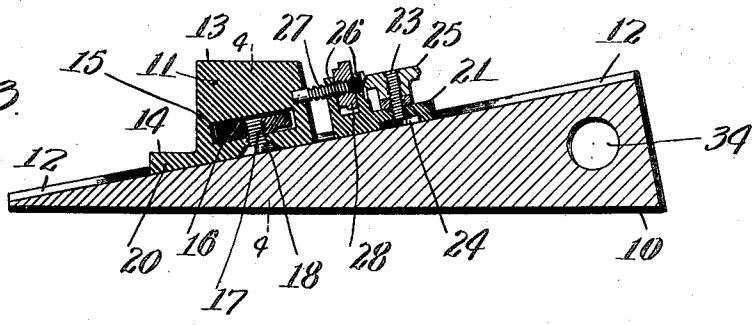


Fig. 4.

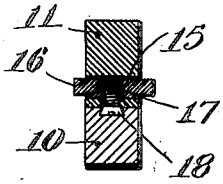
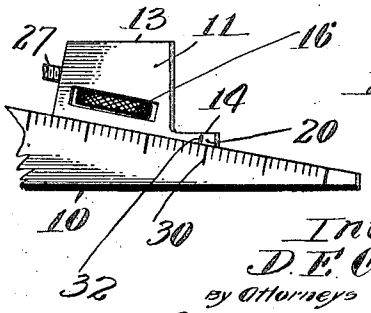


Fig. 5.



Witnesses:

C. F. Wesson

E. M. Allen.

Inventor:

D. E. Conlon.

By Attorneys

Southgate & Southgate.

UNITED STATES PATENT OFFICE.

DANIEL E. CONLON, OF WORCESTER, MASSACHUSETTS.

MEASURING DEVICE.

No. 875,050. Specification of Letters Patent. Patented Dec. 31, 1907.

Application filed April 15, 1907. Serial No. 368,179.

To all whom it may concern:

Be it known that I, DANIEL E. CONLON, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Measuring Device, of which the following is a specification.

This invention relates to an improvement in machinists' tools, designed for accurately measuring heights on planers, lathes, and similar machines, for setting calipers and for similar purposes.

The principal objects of the invention are to improve the structure of devices of this character, whereby the adjustment will not be limited by the length of an adjusting screw, and to provide a convenient and simple arrangement for adjusting the gage-block in such a manner that it can be roughly set to position by hand and then moved to secure final adjustment.

Further objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawings which show a preferred form of the invention, and in which

Figure 1 is a side elevation of a measuring device constructed in accordance with this invention. Fig. 2 is a plan of the same. Fig. 3 is a central longitudinal sectional view of the same. Fig. 4 is a sectional view on the line 4—4 of Fig. 3, and Fig. 5 is a fragmentary side view showing the side opposite to that shown in Fig. 1.

This invention relates to that class of measuring devices in which a wedge-shaped base 10 is provided with a guide on its upper inclined surface along which a gage-block 11 is adapted to move. The guide in the wedge-shaped base in this instance is formed by a dove-tail slot 12 extending from one end to the other. The gage-block is preferably provided with two or more steps 13 and 14 at different heights. The upper surfaces of these steps are parallel with the lower surface of the wedge-shaped base, and they are preferably at such a distance apart that when the gage-block is at the bottom of the inclined plane, the top of the step 13 will be at about the same height as the top of the step 14 when the gage-block is at the highest point of the inclined plane.

The gage-block is provided with a slot 15 in which is located a tightening nut 16 mounted on a screw 17 which has a head 18 of a shape similar to that of the dove-tail groove and located in a recess in the bottom of the gage-block. The gage-block is provided with a guiding projection 20 forming a continuation of the screw head, located in the dove-tail guiding slot of the wedge-shaped base. This slot therefore holds the head of the screw in proper position with respect to it, and the nut 16 serves to tighten the screw so as to secure the gage-block in any desired position on the upper slanting surface of the wedge-shaped base.

In order that the gage-block may be adjusted with more accuracy than can be secured by simply moving it to desired position by hand, an adjusting block 21 is mounted in line with it. This block has a projection 22 for entering the slot 12, and it is provided with a screw 23 having a head 24 like the head 18, and for the same purpose. This screw is provided with a tightening nut 25 for securing the adjusting block in any desired position. On this block are mounted a pair of bearings 26 spaced apart for the reception of a screw 27 which is fixed in the gage-block. Located between these bearings is a nut 28 which can be turned to adjust the distance between the gage-block and the adjusting block. This provides for fine adjustments.

The opposite sides of the wedge-shaped base 10 are provided with scales 29 and 30, the gage-block being provided with marks 31 and 32 respectively which indicate the position of the gage-block with respect to the scale to give the distance between the bottom of the wedge-shaped base and top of either step of the gage-block. One of the bearings 26 is also provided with a mark 33 adapted to show the micrometric adjustments of the screw 27 by means of a scale on the nut 28.

The base may be conveniently provided with a perforation 34 by means of which the instrument may be hung up when not in use.

While I have illustrated and described a preferred form of the invention, I am aware that modifications may be made therein by any person skilled in the art without departing from the scope of the invention as expressed in the claims. Therefore, I do not wish to be limited to the particular form shown, but

What I do claim is:—

1. In a measuring tool the combination of a wedge-shaped base having a dove-tailed slot in one edge thereof, an adjusting block having a guiding projection along said slot,

a screw having a dove-tailed shaped head in said slot, said screw passing through the block, a nut for clamping said screw for holding the block in any adjusted position on the base, a gage block mounted on the base and guided by said slot, means for holding the gage block on the base in said slot, and an adjusting device mounted on the gage block and connected with the adjusting block.

2. In a measuring tool, the combination of a base having a slot in one edge thereof, an adjusting block having a guiding projection in said slot, a screw passing through said block and having a head in said slot, a nut for clamping said screw to hold the block in adjusted positions on the base, a gage block having a guiding projection mounted in the slot and having a gaging surface parallel with the bottom of the base, a screw mounted in the gage block and having a head located in said slot, a nut for said screw mounted in the gage block for tightening the same, and an adjusting screw connecting the gage block with the adjusting block.

3. In a measuring tool, the combination of a base having a slot in one edge thereof, an adjusting block movable along said slot, means for securing the adjusting block in adjusted positions along said slot, a gage block having a guiding projection mounted in the slot and provided with a gaging surface, a screw having a head located in said slot for fixing the gage block in adjusted positions thereon, a nut for said screw mounted on the gage block and projecting beyond the side surfaces thereof, and an adjusting screw connecting the gage block with the adjusting block.

4. In a measuring tool, the combination of a wedge-shaped base having a dove-tail slot in one edge thereof, an adjusting block having a guiding projection entering said slot, a screw having a dove-tail shaped head in said slot passing through said block, a nut for clamping said screw for holding the block in any adjusted position on the base, a gage-block having a guiding projection also mounted in said slot, and having a plurality of gaging surfaces at different elevations parallel with the bottom of said base, a screw having a dove-tail head located in said groove, a nut for said screw mounted in the gage-block for tightening the same, said nut projecting beyond the side surfaces of the gage-block, and an adjusting screw mounted on the gage-block and connected with the adjusting block.

In testimony whereof I have hereunto set my hand, in the presence of two subscribing witnesses.

DANIEL E. CONLON.

Witnesses:
J. ELMER HALL,
ALBERT E. FAY.