No. 888,070. PATENTED MAY 19, 1908.

W. DISSELL.

COMBINED SQUARE AND CALIPERS.

APPLICATION FILED APR. 19, 1907.

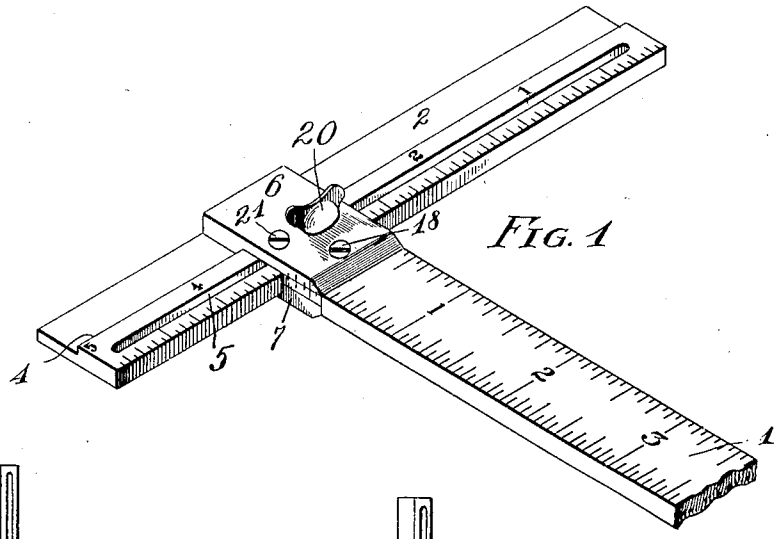


FIG. 1

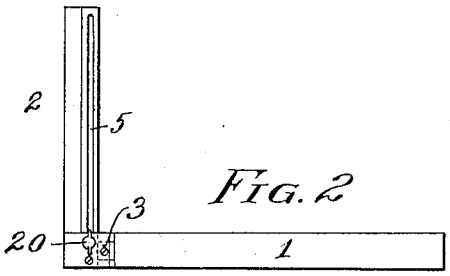


FIG. 2

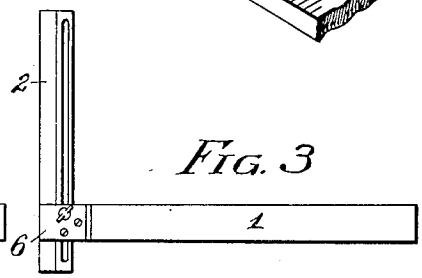


FIG. 3

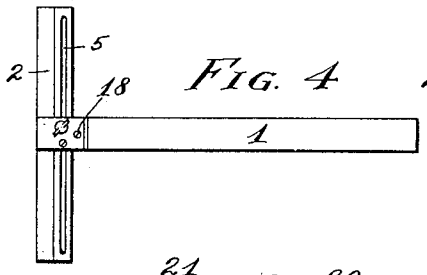


FIG. 4

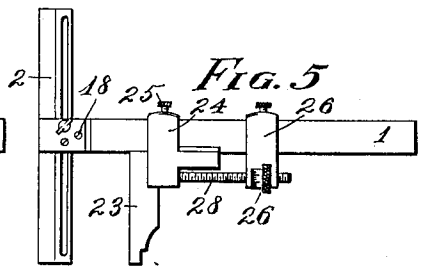


FIG. 5

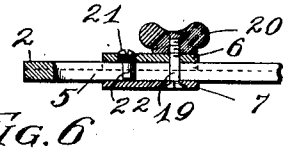
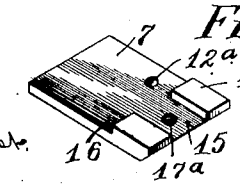


FIG. 6



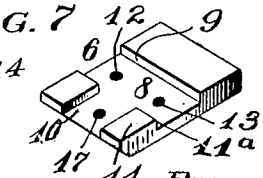


FIG. 7

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COMBINED SQUARE AND CALIPERS.

No. 888,070. Specification of Letters Patent. Patented May 19, 1908.

Application filed April 19, 1907. Serial No. 369,111.

To all whom it may concern:

Be it known that I, WILLIAM DISSELL, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in a Combined Square and Calipers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

My invention relates to measuring devices, and has for its object to produce, in a simple and effective construction, a device which may be employed as a T-square, a try-square, a hook rule and a caliper square.

The invention may be defined as consisting generally of the combinations of elements embodied in the claims hereto annexed.

Referring to the drawings, wherein one embodiment of my invention is illustrated, Figure 1 represents a perspective view of my device. Fig. 2 represents a plan view of the same when employed as a try-square. Fig. 3 represents a similar view of the device when employed as a hook rule. Fig. 4 represents a similar view of the device when employed as a T-square. Fig. 5 represents a similar view of the device when used as a caliper square. Fig. 6 represents a sectional detail taken through the abutting portions of the square members and through two of the clamp screws, and Fig. 7 represents a perspective detail view of the clamping parts by means of which the members of the square may be secured together.

Describing the parts by reference numerals, 1 represents the longitudinal member of the square, and 2 the shorter transverse member. The member 1 is provided with a scale having suitable graduations thereon and has its inner end reduced to form a tenon 3, (shown in dotted lines in Fig. 2.)

The member 2 has its upper surface rabbeted out toward the rear edge thereof, and a ledge or shoulder 4 is provided between the front and rear portions of the upper surface of said member. The front portion is provided with a slot 5 extending longitudinally nearly the full length thereof. The front edge of said member is provided with a scale suitably sub-divided in the same manner as member 1.

In order to form a firm but adjustable connection between members 1 and 2, I make use of a clamping device comprising two clamping members 6 and 7. The member 6 is the upper member of the clamp, and member 7 the lower member. The upper member 6, which is shown in an inverted position in Fig. 7, is provided with front and rear surfaces connected by a recess 8 formed by rabbeting the body of the clamping member to a depth corresponding to the height of the ledge 4, whereby the front portion of member 2 may fit within the rabbeted portion of member 6, the ledge 4 abutting against the ledge 9 of member 6. The front end of member 6 is provided with a mortise 10 formed between the projections 11 and adapted to receive the upper half of tenon 3 on member 1. Screw-threaded apertures 12 and 13 are provided in the member 6, for a purpose to be explained.

The upper surface of the clamping member 7 is provided at the front end thereof with two projections 14, between which there is provided a mortise 15 to receive the lower portion of tenon 3. The rear portion of the upper surface of 7 is preferably in the same plane as the bottom of the mortise, the projections 14 being provided with abrupt ledges or shoulders 16. The member 7 is provided with an aperture 12^a and said members 6 and 7 are provided each with registering threaded apertures 17 and 17^a.

In assembling the square, the members 6 and 7 are placed together in the position shown in Figs. 1 and 6 with the tenon 3 inserted in place within the mortises 10 and 15, and the member 1 is secured to the clamping members by means of a screw 18 extending through apertures 17 and 17^a, and a corresponding aperture in tenon 3. The member 2 is then inserted between the jaws or the rear portions of clamping members 6 and 7 with the ledge 4 in engagement with the ledge 9 and the front edge of said member abutting against the ledges 16 of the lower member 7 and ledges 11^a of member 6. Clamp-screw 19 is then inserted through apertures 12 and 12^a and slot 5. The upper end of this screw may be provided with a wing nut 20 whereby member 2 may be clamped in any desired adjusted position between members 6 and 7. As it is desirable that member 2 should be easily slidable with reference to the clamping members and at the same time should not be rotatable with respect to member 1, I employ means whereby the front edge of the member 2 may be abutted firmly against the ledges 16 and 11^a. This means is shown at 21 as a screw which is adapted to be inserted into aperture 13,

the length of the body of said screw being substantially equal to the depth of said aperture and being provided with an eccentric pin 22 which enters the slot 5. It will be apparent that, by rotating the screw 21, the pin 22 may be made to engage the front face of the slot and force the front edge of 2 in contact with ledges 16.

With the parts constructed as described, it will be only necessary to slacken up the wing nut 20 and rotate screw 21 a slight distance, whereupon the member 2 may be adjusted to any of the positions shown in Figs. 2, 3 and 4. In the first mentioned figure, my device is shown as a try-square, the end of the slot 5 being so located as to engage pin 22 when either end of member 2 is substantially flush with the adjacent side edges of the clamping members 6 and 7. By adjusting member 2 to the position shown in Fig. 3 and clamping the same in such adjusted position, I am enabled to provide a hook rule. When member 2 is adjusted to the position shown in Fig. 4, a T-square is provided.

In Fig. 5, I have shown my device arranged for use as a caliper square. The member 2 is adjusted so that one end thereof projects beyond the member 1 a distance substantially equal to the length of the caliper jaw 23. This caliper jaw may be conveniently supported by a clasp 24 which may be secured to the member 1 by binding screw 25. 26 denotes the fixed clasp which is provided with a similar binding screw and which carries the micrometer nut 27, mounted on operating screw 28. By constructing the member 2 in the manner described, the inner edge thereof is of the same thickness as the member 1 and lines up properly with the sliding jaw of the caliper.

It will be apparent that, with an extremely simple construction, I have provided a device which is capable of a wide range of utility.

While I have shown and described one embodiment of my invention in the drawings, I do not propose to be limited to such embodiment.

Having thus described my invention, I claim:

1. A device of the character described comprising a member having one end thereof provided with a tenon, a clamping device provided with a mortise for said tenon, and a sliding member carried by said clamping device and adjustable transversely with respect to the former member, substantially as specified.

2. A device of the character described comprising a square-member having one end thereof provided with a tenon, a clamping device comprising a pair of clamping members, the inner end of each of which is provided with a fractional mortise adapted when the clamping members are secured together to form a complete mortise for the reception of said tenon, a shoulder or ledge being provided at the outer end of said mortise, a second square-member adjustably mounted in said clamping device with its inner edge abutting against said ledge, and means for securing the second member to said clamping device, substantially as specified.

3. In a device of the character described, the combination of a square-member having an end thereof provided with a tenon, a clamping device comprising a pair of clamping members provided with fractional mortises adapted to receive said tenon and with one or more ledges adapted to receive the inner edge of the second square member, a second square-member slidably fitted between said clamping members, said second member being provided with a slot extending longitudinally thereof, and a clamping screw extending through said clamping device and through the said slot, substantially as specified.

4. In a device of the character described, the combination of a square-member having an end thereof provided with a tenon, a clamping device comprising a pair of clamping members provided with fractional mortises adapted to receive said tenon and with one or more ledges adapted to receive the inner edge of the second square member, a second square-member slidably fitted between said clamping members, said second member being provided with a slot extending longitudinally and terminating short of the ends thereof, and a clamping screw extending through said clamping device and through the said slot, substantially as specified.

5. In a device for the purposes specified, the combination of a square-member, a clamping device connected to one end of said member and provided with a ledge or abutment, a second square-member carried by said clamping device and having an inner edge adapted to engage said ledge or abutment, said second member being provided with a slot extending longitudinally thereof, a clamping screw carried by said clamping device for retaining the second member in adjusted position, and an eccentric pin carried by said clamping device and projecting into said slot, substantially as specified.

6. In a device for the purposes specified, the combination of a square-member, a clamping device connected to one end of said member and provided with a ledge or abutment, a second square-member carried by said clamping device and having an inner edge adapted to engage said ledge or abutment, said second member being provided with a slot extending longitudinally thereof, a clamping screw carried by said clamping device for retaining the second member in

adjusted position, and extending through said slot, and an eccentric pin carried by said clamping device and projecting into said slot, substantially as specified.

7. In a device for the purposes specified, the combination of a square-member, a clamping device applied to an end of said member, said clamping device comprising a pair of clamping members, one of which is provided with a ledge adjacent to the outer end of the aforesaid square member and the other of which is provided with a ledge intermediate of the ends thereof, a second square-member slidably fitted between the members of the clamping device and having its inner edge adapted to engage the first mentioned ledge and having a ledge adapted to engage and abut against the second ledge of the clamping device, means for adjusting the second square member toward the adjacent end of the first mentioned square member, and means for clamping said second member in adjusted position, substantially as specified.

8. In a device of the character described, the combination of a square-member, a clamping device for an end of said square member, said clamping device being provided with a ledge adapted to receive a corresponding surface on the second square-member, a second square member slidably fitted to said clamping device and being provided with a slot extending longitudinally thereof, and means carried by said clamping device and projecting into said slot for the purpose of forcing the aforesaid surface thereof into engagement with the ledge of the clamping device, substantially as specified.

9. In a device of the character described, the combination of a square-member, a clamping device for said member, said clamping device being provided with a ledge adapted to receive a corresponding surface on a second square-member, a second square-member slidably fitted to said clamping device and being provided with a slot extending longitudinally thereof, and means carried by said clamping device and projecting into said slot for the purpose of forcing the aforesaid surface into engagement with the ledge of the clamping device, substantially as specified.

10. In a device for the purpose specified, the combination of a square-member, a clamping device connected to said member and provided with a ledge or abutment, a second square-member carried by said clamping device and having a surface adapted to engage said ledge or abutment, said second member being provided with a slot extending longitudinally thereof, means for clamping the second member in adjusted position, and an eccentric pin carried by said clamping device and projecting into said slot, substantially as specified.

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

WILLIAM DISSELL.

Witnesses:
W. L. McGARRELL,
J. B. HULL.