Jan. 19, 1932. J. E. MOSLEY 1,841,972

COMBINATION SQUARE

Filed Feb. 7, 1930 2 Sheets-Sheet 1

Fig. 1.

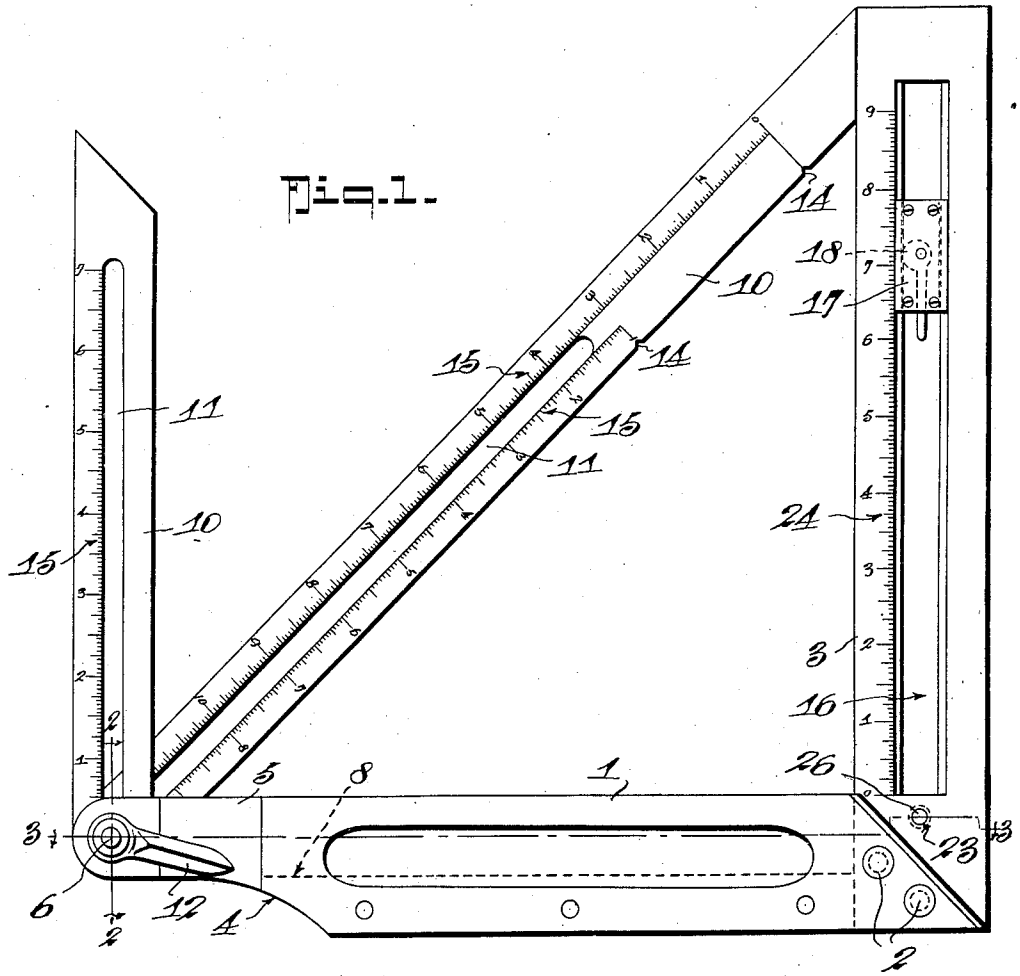


Fig. 3.

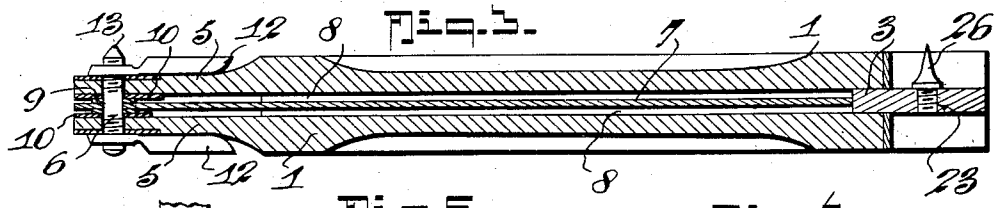


Fig. 2.

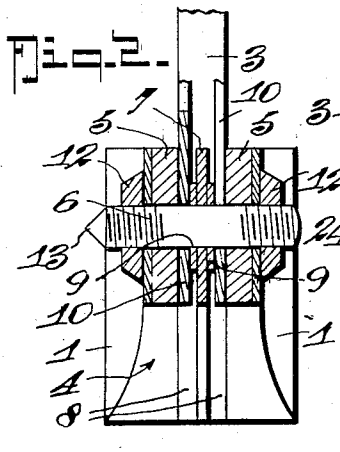


Fig. 5.

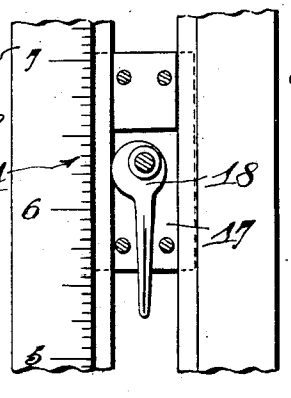
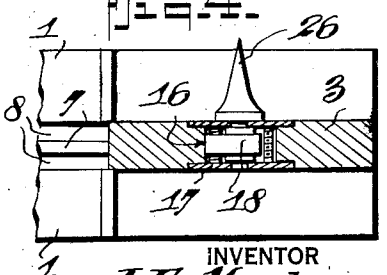


Fig. 4.



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COMBINATION SQUARE

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Fig. 6.

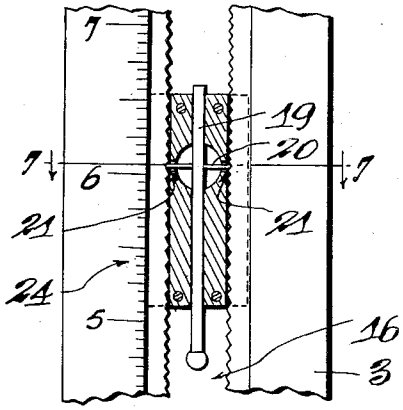
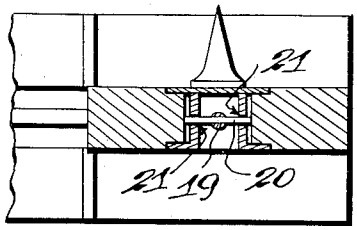
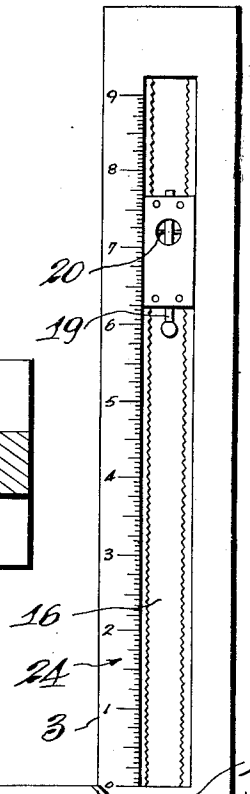


Fig. 7.





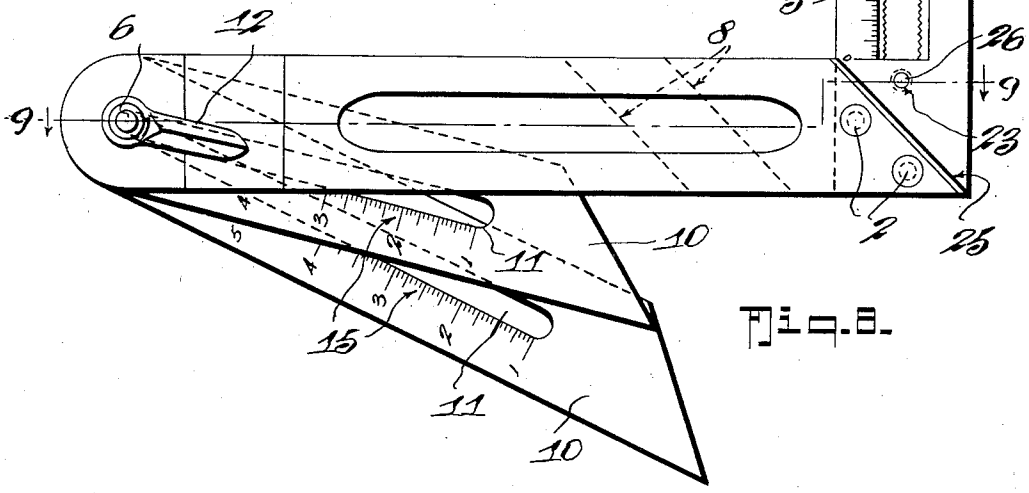


Fig. 8.

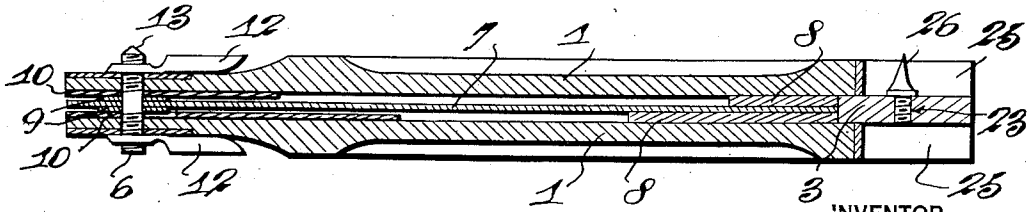


Fig. 9.

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UNITED STATES PATENT OFFICE

JESSE EDWARD MOSLEY, OF GALVESTON, TEXAS

COMBINATION SQUARE

Application filed February 7, 1930. Serial No. 426,663.

The invention primarily has for its object to provide a novel combination tool which is adapted for use by carpenters and other mechanics and which combines in a single simple, compact and inexpensive article a try-square, mitre and bevel squares, calipers, compasses and scribers.

Another object of the invention is to provide means to pivotally mount a plurality of blades on a common pivot and in a manner enabling the securing of one blade independently of another blade.

Another object of the invention is to provide a novel blade slide for use in holding a marking element during scribing and arc describing operations.

Another object of the invention is to provide novel means for effecting scribing and arc describing operations.

Another object of the invention is to construct the main body or handle of my improved implement in a manner enabling it to accommodate the mounting of a plurality of blades without materially affecting the strength and compactness thereof.

Other objects will in part be obvious and in part be pointed out hereinafter.

To the attainment of the aforesaid objects and ends the invention further resides in the novel details of construction, combination and arrangement of parts, all of which will be first fully described in the following detailed description, then be particularly pointed out in the appended claims, reference being had to the accompanying drawings, in which:—

Figure 1 is a face view illustrating the invention.

Figure 2 is an enlarged cross section taken on the line 2—2 on Figure 1.

Figure 3 is a longitudinal section taken on the line 3—3 on Figure 1.

Figure 4 is a cross section taken through the blade slide.

Figure 5 is an enlarged fragmentary face view of the blade slide, parts being broken away.

Figure 6 is a view similar to Figure 5 and illustrates a modified construction of slide lock.

Figure 7 is a cross section taken on the line 7—7 on Figure 6.

Figure 8 is a face view illustrating a modified form of the invention.

Figure 9 is a longitudinal section taken on the line 9—9 on Figure 8.

In the practical development of the invention I employ a pair of handle stock bodies 1 and securely bolt or rivet them together as at 2 in opposed spaced relation. At one end a blade 3 is secured between the bodies 1 to project therefrom in right angular relation and form a try-square blade.

The stock bodies 1 are preferably reduced as at 4 at one side of one end to form on each said body a pivot eye extension 5 through registering apertures in which a pivot bolt 6 is projected for a purpose to be described later.

A divider plate 7 is secured in centrally spaced relation between the bodies 1, suitable filler pieces 8 being interposed between the opposed faces of the plate and said bodies to suitably position the divider plate and to form a composite solid back edge at one side of the handle structure and open blade receiving spaces at the other side of the handle structure. For this purpose the filler pieces are approximately half as wide as the stock bodies, thus providing a handle structure solid through approximately half its width and having two separated blade receiving spaces in its remaining half which are of approximately the same width as the extensions 5. It will also be noted that the filler pieces 8 terminate short of the pivot eyes formed by the extensions 5 thus leaving said extensions resilient and free to be pressed toward each other and the divider plate for a purpose that will soon be apparent.

A securing head 9 is carried by the bolt 6 at each side of and in engagement with the divider plate 7 and these heads securely hold the bolt against any attempt to withdraw it from the pivot eyes.

A mitre square blade 10 is accommodated in each of the handle blade receiving spaces and each said blade is provided with a longitudinal slot 11 to receive the pivot bolt 6 and to enable the blade to be longitudinally ad-

justed on its pivotal mounting provided by said bolt. In addition to serving their usual purpose at least one of the blades 10 is constructed of such a length that it may be extended to engage the try-square blade and thus provide a complete hypotenuse arm that can be adjusted about its pivotal mounting to cooperate with said try-square blade in calipering operations.

A wing nut 12 is threaded onto each projected end of the bolt 6 and serves to force the respective resilient eye extension 5 into clamping engagement with the portion of the blade 10 interposed between it and the divider plate 7. The bolt 6 being secured to the divider plate 7, means is provided for individually and independently adjusting and securing the blades 10. Either blade may be readily adjusted and secured without disturbing the secured adjustment of the other blade.

The device is also adapted for use as a compass for describing arcs or circles. For this purpose one end of the bolt 6 may be pointed as at 13 to provide a fulcrum point, and one or both blades 10 may be provided with one or more pencil receiving notches 14. By adjusting the proper blade longitudinally to obtain the desired radius and securing the adjustment, the desired arc or circle may be described by placing the point on the surface to be marked and turning the device about the fulcrum point while holding a pencil point in the blade notch and in engagement with said surface.

To facilitate the adjustment of the blade to obtain the desired radius, said blade or blades may be provided with measuring scales 15 by which the distance of the selected pencil holding notch from the fulcrum point may be quickly determined.

By employing the pencil holding notches in cooperation with the handle body instead of with the fulcrum point, the device may be employed as a scriber.

The try-square blade may be made plain as in ordinary try-squares or it may be made thicker and provided with a longitudinal slot 16 to receive an adjustable pencil holding slide 17. The slide carries a cam member 18 which may be moved into engagement with a wall of the blade slot to secure the slide at adjusted positions. See Figure 5.

In Figure 6 I have shown a modified form of slide which is provided with a centrally positioned slide rod 19 having fixed thereto a light spring 20 which normally has its ends projected through side openings 21 in the slide into engagement with the milled walls 22 of the slot. By moving the rod longitudinally the spring ends may be retracted from engagement with the slot walls to permit the slide to be moved to a new adjustment, and when the rod is released the spring ends will again engage the slot walls to lock the slide to position.

Thus the slide 17 may be employed as an abutment against which to hold a pencil point or other marker for cooperating with the handle body in effecting scribing operations. The blade may also be apertured at 23 to receive a suitable removable fulcrum point 26 and thus enable the describing of arcs and circles. To facilitate these operations, and also to enable ordinary measuring, the blade 3 may be provided with suitable scale markings as indicated at 24.

One or both stock bodies 1 may be bevelled at 25 at the try-square blade receiving end to enable use of the blade for a bevel "try" as well as the usual right angle "try".

From the foregoing description, taken in connection with the accompanying drawings, it is thought that the novel details of construction, the manner of use and the advantages of the invention will be readily apparent to those skilled in the art to which the invention relates.

What I claim is:

1. In a device of the character described, a pair of stock bodies, means securing said bodies together in parallelism, a plate secured between said bodies and defining therewith a pair of blade receiving spaces, longitudinally slotted bevel blades mounted in said blade receiving spaces, means securing said bevel blades at one end of said stock bodies, a try-square blade rigidly secured at one end between said stock bodies at the other end thereof, and lying at right angles thereto, said try-square blade being of a thickness approximately that of the combined thickness of said plate and said blade receiving spaces, said try-square blade having a longitudinal slot, a slide operable in said slot, and means located within the slide and including a portion projecting through one end thereof for clamping the slide to the edges of the try-square blade at the slot for holding the slide in any place desired along the slot.

2. In a device of the character described, a pair of stock bodies, means securing said bodies together in parallelism, a plate secured between said bodies and defining therewith a pair of blade receiving spaces, longitudinally slotted bevel blades mounted in said blade receiving spaces, means securing said bevel blades at one end of said stock bodies, a try-square blade rigidly secured at one end between said stock bodies at the other end thereof, and lying at right angles thereto, said try-square blade being of a thickness approximately that of the combined thickness of said plate and said blade receiving spaces, said try-square blade having a longitudinal slot, a slide operable in said slot, and means located within the slide and including a portion projecting through one end thereof for clamping the slide to the edges of the

try-square blade at the slot for holding the slide in any place desired along the slot, said slide holding means including a slide rod and a light spring fixed thereto, the ends of which spring pass through slots in the edges of the slide to engage the blade.

3. In a device of the character described, a pair of stock bodies, means securing said bodies together in parallelism, a plate secured between said bodies and defining therewith a pair of blade receiving spaces, longitudinally slotted bevel blades mounted in said blade receiving spaces, means securing said bevel blades at the free end of said stock bodies, a try-square blade rigidly secured at one end between said stock bodies at one end thereof, and lying at right angles therto, said try-square blade being of a thickness approximately that of the combined thickness of said plate and said blade receiving spaces, said try-square blade having a longitudinal slot, a slide operable in said slot, and means located within the slide and including a portion projecting through one end thereof for clamping the slide to the edges of the try-square blade at the slot for holding the slide in any place desired along the slot, said slide holding means including a slide rod and a light spring fixed therto, the ends of which spring pass through slots in the edges of the slide to engage the blade, an end of said stock bodies to which said try-square blade is fastened being bevelled off, and a pivot point secured to said try-square blade in alignment with said slot thereof and located adjacent said bevelled off end, said pivot point comprising a mounting shank and a head, the latter being but slightly longer than the thickness of the adjacent bevelled end of said stock body whereby said bevelled end of said stock body will guard said head against being knocked off.

JESSE EDWARD MOSLEY.