FITZ GERALD SHELBY & P. OLMSTED.

FOLDING COMBINATION POCKET SQUARE.

APPLICATION FILED MAR. 23, 1914.

1,238,832. Patented Sept. 4, 1917.

Fig. 1

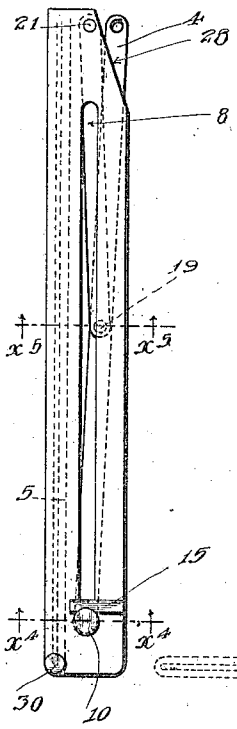


Fig. 2

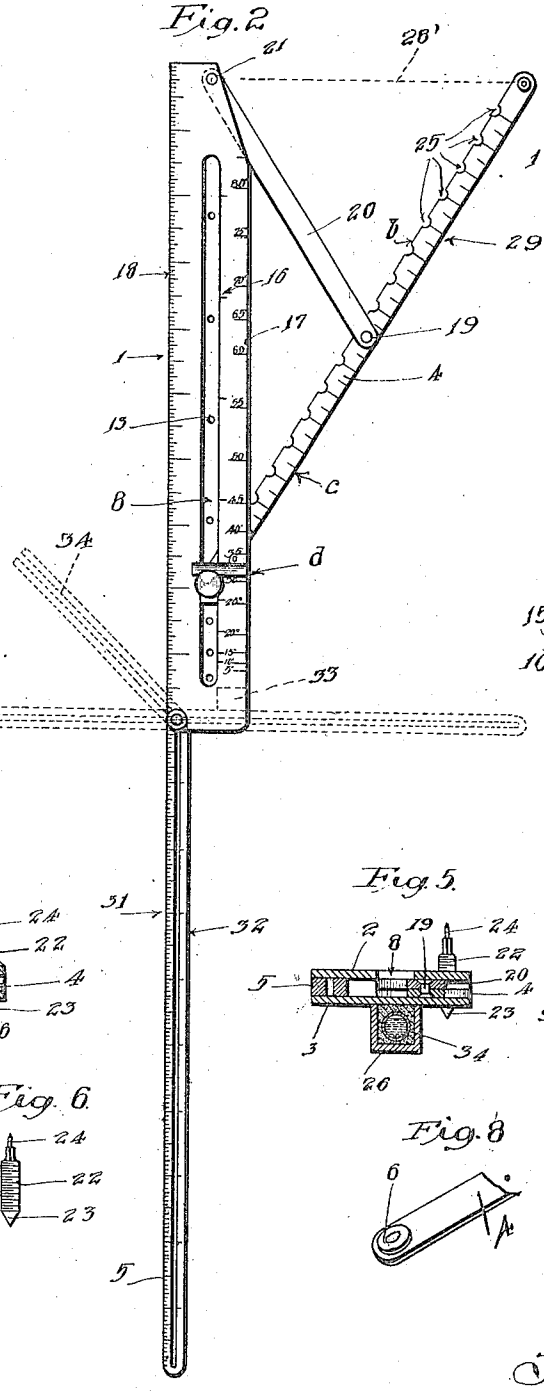


Fig. 3

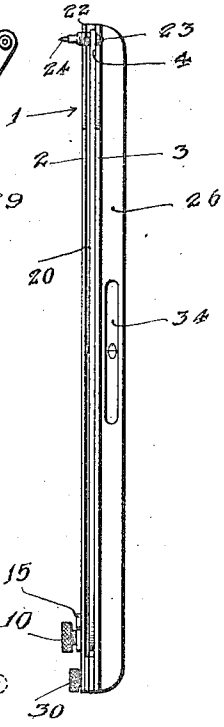


Fig. 4

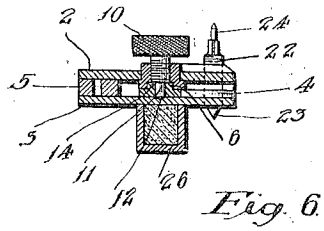


Fig. 5

Fig. 7

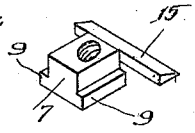


Fig. 6

Fig. 8

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UNITED STATES PATENT OFFICE.

FITZ GERALD SHELBY AND PERRY OLMSTED, OF LOS ANGELES, CALIFORNIA.

FOLDING COMBINATION POCKET-SQUARE.

1,238,832. Specification of Letters Patent. Patented Sept. 4, 1917.

Application filed March 23, 1914. Serial No. 826,567.

To all whom it may concern:

Be it known that we, FITZ GERALD SHELBY and PERRY OLMSTED, both citizens of the United States, and residents of Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Folding Combination Pocket-Square, of which the following is a specification.

This invention relates to folding pocket squares and angle dividers, and one object of the invention is to provide a measuring device of this character by means of which a line may be drawn or scratched across a board or other object at right angles to the edge thereof.

Another object is to enable a line to be drawn or scratched across a board or other object at any desired angle with respect to the edge thereof.

Another object is to enable the device to be used as a gage to mark a line along any surface parallel with the edge of such surface, and at any desired distance from the edge of such surface within the limits of the capacity of the instrument, or to find the degree of different angles.

Another object is to provide a blade slidably and pivotally supported by the beam of the device to enable the device to be used as a square in a corner or as a bevel square, or to form an extension of the beam at an angle thereto or in line therewith for use as a straight edge or for measuring.

Another object is to enable the device to be used as inside calipers.

Other advantages and objects will be brought out in detail in the following description.

Referring to the drawings:

Figure 1 is a plan view of the device folded up for carrying in the pocket.

Fig. 2 is a plan view of the device showing the blades extended in different positions.

Fig. 3 is a side view of the device.

Fig. 4 is an enlarged cross section on line x^4—x^4, Fig. 1.

Fig. 5 is an enlarged cross section on line x^5—x^5, Fig. 1.

Fig. 6 is a side elevation in detail of the marking pin.

Fig. 7 is a perspective view of the sliding block.

Fig. 8 is a perspective view of the pivoting portion of the marking arm.

The device comprises a beam 1, which consists of two plates 2 and 3, which are secured together in any desired manner, and spaced apart to form slots to receive a marking blade 4 and a slotted extension blade 5. Marking blade 4 has a circular boss 6 which is pivoted in the lower side of a block 7, which is slidable in a slot 8 in the upper plate 2, the block 7 having flanges 9 which project underneath the plate 2 to retain the block in position. A knurled thumb screw 10 is screwed into the block 7, and the thumb screw has a projecting pin 11, which extends through the blade 4 and has a pointed end 12 which is adapted to engage in any one of a series of conical depressions 13 formed in the lower plate 3. The thumb screw has a shoulder 14 which is adapted to bear against the boss 6 to exert a downward pressure on the same and clamp the blade 4 in the position in which it may be set. The conical depressions 13 are arranged at intervals corresponding with certain angular positions of the marking blade 4, to insure accuracy in setting at such angles. The object of these depressions is to obviate the necessity of a close reading of the scale by setting the blade for these definite positions, and positively insuring an accurate setting by acting to move the center of the pointed end of the pin 11 and connected parts into exact position as the screw 10 is tightened. Thus, by moving the block 7 with its attached blade to approximately the point desired, then the action of screwing down the thumb screw 10 to tighten the parts causes the pointed pin to center in the depression in which it engages and thus shift the parts in exact position. A beveled cross bar 15 is carried on the block 7 and slides along the upper surface of the plate 2 and acts to sharply define the position of the block with respect to the graduations on the plate 2.

The plate is provided with a series of graduations 16 for indicating the distance of the marker from the beam. There are certain distances from the marker to the beam at which the marker is very often used and the graduations I have shown in the series 16 are for these particular distances, but it will, of course, be understood that as many graduations as desired may be employed. The plate 2 is also provided with a series of graduations 17 for indicating intermediate positions of the block and corresponding angles of the marking blade 4. The plate 2 is also provided with a series of

graduations 18 for ordinary measuring purposes when the device is used as a rule.

The marking blade 4 is pivotally secured at 19 to a link 20, the link 20 being pivoted at 21 to the beam 1. The outer end of the marking blade may be equipped with any preferred form of marking device, for example, the reversible screw 22 having a pointed scratch end 23 and at its other end having a detachable pencil point 24. The marking blade 4 is also provided along its inner edge with a series of notches 25, which are adapted to be engaged by the point of the pencil or scratch to mark at other points than the regular marking screw 22, or for panel gaging parallel with the edge of the object.

On the lower side of the beam 1 is a flange 26 which serves to rest against the edge of the board or other object to hold the beam parallel with the edge of the board or object, and the beam 1 is cut away at 28 to receive the screw 22 and allow the marking blade 4 to be folded in to bring the marking point 23 as close to the flange 26 as possible, so that when the mark is made, it will extend practically to the edge of the board. This also permits an object with an acute corner to be received between the link 20 and outer portion of blade 4, as the corner of the beam, being cut away, does not protrude into the space between the blade and link. The length of the link 20 between its pivotal points corresponds to the distance between the point 19 and marking point 22, and also to the distance between pivotal point 19 and center of thumb screw 10 so that by moving the lower end of the marking blade 4 along the slot 8, the marking point 22 is always compelled to move in a line at right angles to the beam 1, this line being indicated by dotted line 28′, Fig. 2. Thus, when it is desired to mark a board or other object at right angles to its edge, the beam 1 is laid on top and at the edge thereof with the flange 26 bearing against the edge and then the marking point 22 is grasped, the thumb screw 10 having been loosened and drawn in a direction away from the beam, thus marking a line on the board or object at right angles to the edge thereof. If it is desired to mark a line parallel with the edge of the board, the blade may be adjusted to place the marking screw 22 at the desired distance from the edge of the board and then the thumb screw 10 tightened, and then the beam 1 may be moved longitudinally along the edge of the board to cause the marking screw 22 to mark the board on a line parallel with the edge thereof. In this latter operation the marking may be performed if desired by inserting the point of the pencil or scratch in one of the notches 25 in the blade 4 and then moving the beam along the edge.

If it is desired to draw a line at a certain angle to the edge of the board or object, the blade 4 may be adjusted to any position and the thumb screw 10 tightened, and then in marking, the device may be drawn along the edge 29 of the blade 4. This adjustment of the blade 4 may also be employed in determining the angle of a board or object already cut.

The blade 5 being slotted may be adjusted in any angular position with respect to the beam 1 and retained in such position by clamping screw 30, which is located at the corner of the beam so that it will bring the edge 31 of the blade 5 in perfect line with the edge of beam 1 when the blade 5 is extended as shown in Fig. 2, and when the blade is adjusted into the dotted line positions it brings the edge 32 against a block 33 which is between the plates 2 and 3 and acts as a stop to hold the blade perfectly at right angles to the beam, the blade 5 to be set at any angle as indicated in dotted lines 34 for use as a bevel square. The blade 5 is provided with graduations as shown to act as a continuation of the graduations 18 on beam 1.

The flange 26 is preferably made of sufficient width to receive a level 34′ as shown in Figs. 3 and 5. This enables the device to be used as a clinometer. Thus, by placing the beam so that the level indicates a level position and by then raising the marking blade 4 to the inclination of the surface or line to be measured, the angle is indicated on the blade by the position of the bar 15. The graduations 17 in this instance may serve for the reading.

By placing the outer edge of the link 20 and the inner edge *b* of the marking blade 4 against the respective edges of an angular object, the proper angle of the marking blade will then be produced for bisecting the said angle of the board, which bisecting line may then be marked along the outer edge of the blade after placing the instrument upon the board to be marked.

What we claim is:

1. In an instrument of the character described, a beam having a longitudinal slot, a slide movable along the slot, an extensible marker support comprising pivoted arms, including an arm connected at one end to the slide, and a second arm pivoted at one end to the beam adjacent one end of the beam and pivoted to said first named arm midway between the ends thereof, and a marker carried by one of the arms of the support and movable in a line at right angles to the beam when the support is extended or collapsed, said beam being composed of upper and lower plates which receive said support between them when the support is collapsed.

2. In an instrument of the character described, a beam composed of top and bot-

tom walls and spacing means between the two walls, the upper wall having a longitudinal slot, a slide movable along the slot between the upper and lower walls, an extensible marker support comprising pivoted arms including an arm extending into the space between the upper and lower walls and connected at one end to the slide, a second arm extending into the space between the upper and lower walls and pivoted at one end to the beam and pivoted to said first named arm midway between the ends thereof, and a marker carried by one of the arms of the support and movable in a line at right angles to the beam when the support is extended or collapsed.

3. In an instrument of the character described, a beam composed of upper and lower plates, and spacing means between the plates, said upper plate having a longitudinal slot, a slide movable along the same, an extensible marker support carrying a marker which moves at right angles to the beam when the support is extended or collapsed, said marker support being, when collapsed, received between said plates and including two arms, one pivoted to the beam and to the other arm, and the latter being pivoted to said slide.

4. In an instrument of the character described, a beam composed of upper and lower plates, and spacing means between the plates, said upper plate having a longitudinal slot, a slide movable along the same, an extensible marker support carrying a marker which moves at right angles to the beam when the support is extended or collapsed, said marker support being, when collapsed, received between said plates and including two arms, one pivoted to the beam and to the other arm, and the latter being pivoted to said slide, the upper plate having scale graduations for indicating the position of one of the arms with reference to the beam, and an indicator carried by the slide and coöperating with said scale graduations.

5. In an instrument of the character described, a beam composed of upper and lower plates, and spacing means between the plates, said upper plate having a longitudinal slot, a slide movable along the same, an extensible marker support carrying a marker which moves at right angles to the beam when the support is extended or collapsed, said marker support being, when collapsed, received between said plates and including two arms, one pivoted to the beam and to the other arm, and the latter being pivoted to said slide, the lower plate being provided with a longitudinal extension carrying a spirit level and adapted to form a shoulder parallel to the front edge of the beam.

In testimony whereof, we have hereunto set our hands at Los Angeles, California, this 2d day of March, 1914.

FITZ GERALD SHELBY.
PERRY OLMSTED.

In presence of—
GEO. T. HACKLEY,
LORRAINE E. DURROW.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."