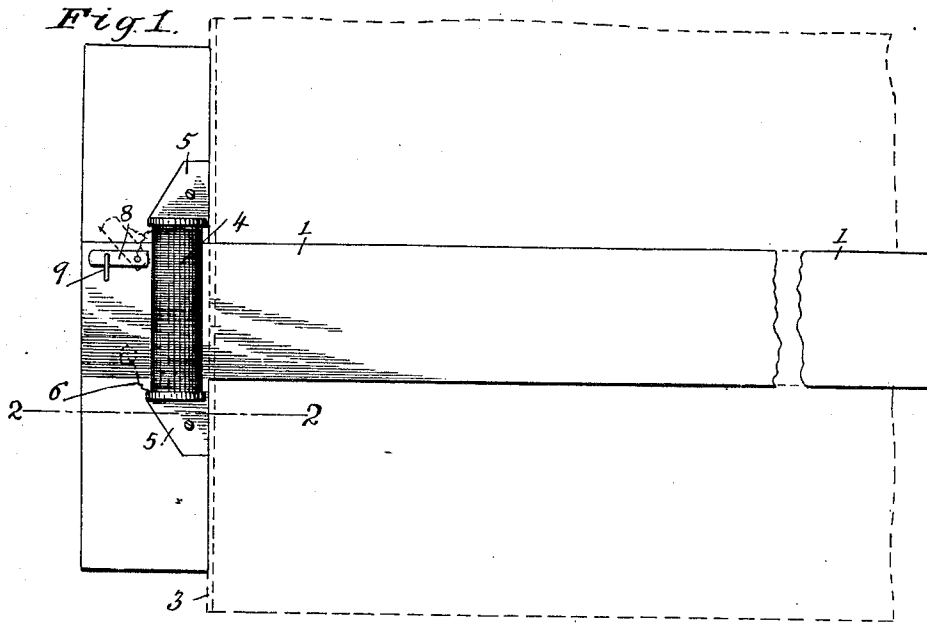
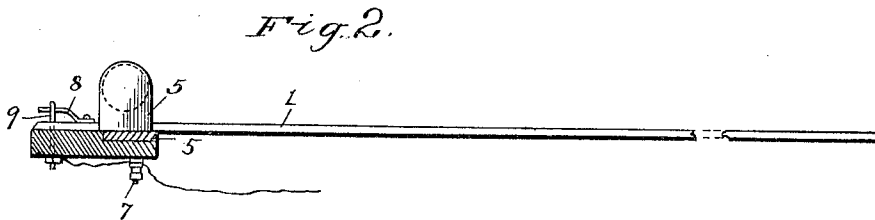
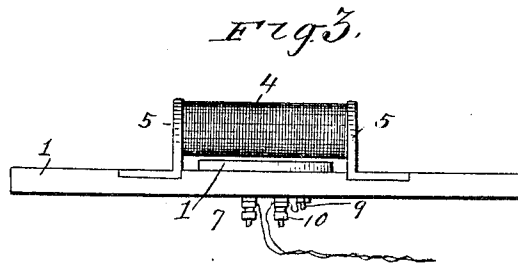
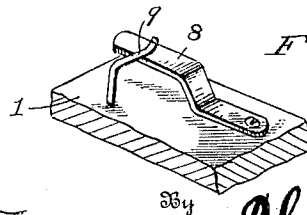


J. C. DRAPER & J. W. REID.
MAGNETIC T-SQUARE.
APPLICATION FILED FEB. 13, 1908.

926,247.

Patented June 29, 1909.



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UNITED STATES PATENT OFFICE.

JAMES C. DRAPER AND JOSEPH W. REID, OF MEMPHIS, TENNESSEE.

MAGNETIC T-SQUARE.

No. 926,247.

Specification of Letters Patent.

Patented June 29, 1909.

Application filed February 13, 1908. Serial No. 415,732.

To all whom it may concern:

Be it known that we, JAMES C. DRAPER and JOSEPH W. REID, citizens of the United States, residing at Memphis, in the county of Shelby and State of Tennessee, have invented certain new and useful Improvements in Magnetic T-Squares, of which the following is a specification.

This invention relates in general to drafting appliances, and more particularly to an improved T square embodying novel means whereby the same can be readily locked in any adjusted position upon the drawing board, thereby enabling the draftsman to utilize both hands in the manipulation of the triangles or other instruments.

The object of the invention is to design a T square of this character which is simple and inexpensive in construction and can be instantly locked in position upon the drawing board or released therefrom and manipulated the same as an ordinary T square.

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

Figure 1 is a top plan view of a T square embodying the invention, the drawing board to which the T square is applied being shown in dotted lines. Fig. 2 is a sectional view on the line 2—2 of Fig. 1. Fig. 3 is an end view of the T square. Fig. 4 is a detail view of the switch.

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

Broadly speaking, the invention comprises a T square embodying magnetic means whereby the same can be locked in an adjusted position upon the drawing board. The magnet is shown as mounted upon the T square 1, and is preferably of the electromagnetic type so that by breaking and closing the circuit the T square can be instantly locked in position, or released therefrom. The drawing board 2 is of the usual construction, and is provided at its edge with a strip 3 of iron designed to cooperate with the magnet upon the T square. This magnet 4 is mounted upon the upper surface of the head of the T square, and is disposed parallel and adjacent to the inner edge

thereof. The core of the magnet 4 is connected at its extremities to the pole pieces 5 which are designed to contact with the iron strip upon the drawing board when the T square is in use. In the present instance, it will be observed that each of the pole pieces 5 embodies a pair of wings arranged at right angles to each other, one of the wings extending upwardly and forming a head for the magnet, while the opposite wing is let into the head of the T square and extends flush with the inner edge thereof so as to engage the iron strip 3 when the T square is applied to the board. One of the terminals 6 of the magnet 4 extends through the head of the T square and is connected to a binding post 7, while the opposite terminal is connected to a spring strip 8 constituting one of the members of a switch, the opposite member 9 of the switch being connected to a second binding post 10 upon the lower face of the head of the T square. The spring strip 8 of the switch has a lateral swinging movement whereby it can be swung entirely away from the member 9 when desired, and also has a spring action causing it to normally contact with the member 9 when swung into operative position. In the present instance, this member 9 is formed with a lateral arm spaced from the T square, and when the free end of the spring strip is swung under this lateral arm, it has a tendency to spring outwardly and make contact therewith. However, by pressing inwardly upon the extremity of the spring strip, the contact may be broken and the current shut off from the magnet.

In the operation of the device, the terminals of an external circuit are connected to the binding posts 7 and 10, the current being derived either from batteries or from an electric light circuit, as may be found most convenient. Should it be desired to use the T square in the usual manner, the spring strip 8 is swung away from the switch member 9 so that no current passes through the magnet 4, and the pole pieces are not excited. However, when it is desired to utilize the magnet for locking the T square, in an adjusted position, the spring strip 8 is swung under the lateral arm of the switch member 9. By pressing inwardly upon the extremity of the spring strip with one of the fingers, the circuit is broken, and the T square can be adjusted in the usual

manner. However, when the pressure upon the spring strip is released, the circuit is closed, and the pole pieces 5 become excited and coöperate with the iron strip 3 upon the drawing board to lock the T square firmly in position. Both hands of the draftsman may then be utilized for manipulating the triangles or other instruments.

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

1. The combination of a drawing board, a T-square, and means for holding the T-square in position upon the drawing board, the said means comprising an iron strip applied to one of the members and an electro-magnet carried by the opposite member, the pole pieces of the electro-magnet being each formed with a pair of wings which are arranged at an angle to each other, one of the wings extending upwardly for the support of the electro-magnet while the opposite wing is secured to the member carrying the electro-magnet and is adapted to coöperate with the iron strip to hold the

T-square in position when the electro-magnet is energized.

2. The combination of a drawing board, an iron strip applied to the drawing board, a T-square, an electro-magnet mounted upon the T-square, pole pieces for the electro-magnet, each of the pole pieces being formed with a pair of wings which are arranged at an angle to each other, one of the wings extending upwardly while the opposite wing is secured to the T-square and is adapted to coöperate with the iron strip to hold the T-square in position, and a switch mounted upon the T-square for controlling the passage of current through the electro-magnet.

In testimony whereof we affix our signatures in presence of two witnesses.

JAMES C. DRAPER. [L. S.]
JOSEPH. W. REID. [L. S.]

Witnesses:

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