No. 703,140. Patented June 24, 1902.

G. M. LEES.

T-SQUARE.

(Application filed Jan. 21, 1902.)

(No Model.)

Fig. 1.

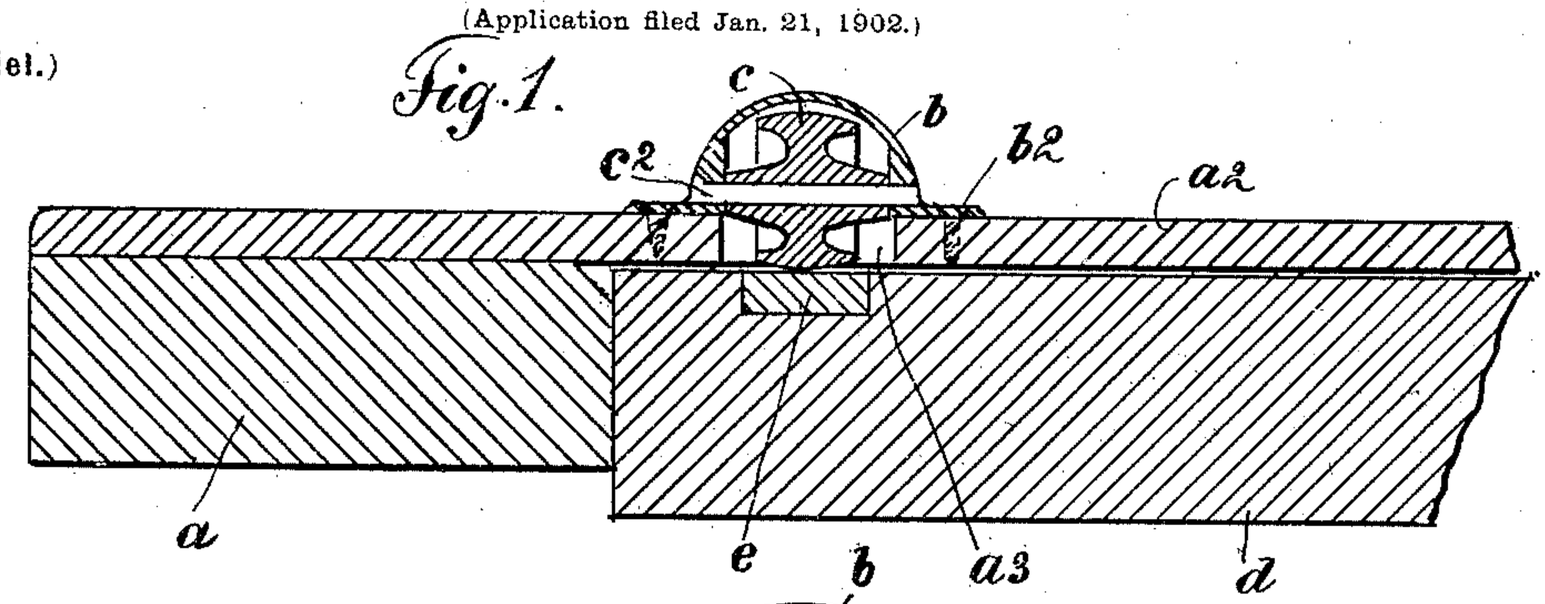


Fig. 2.

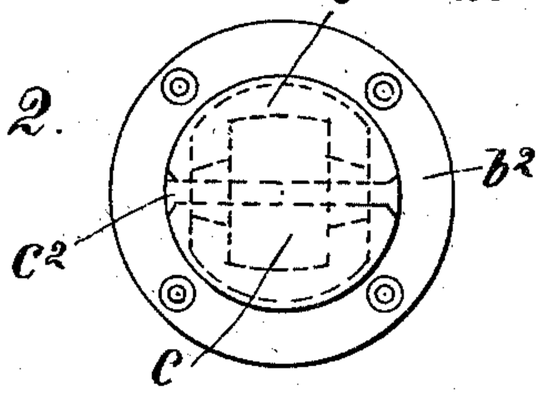


Fig. 3

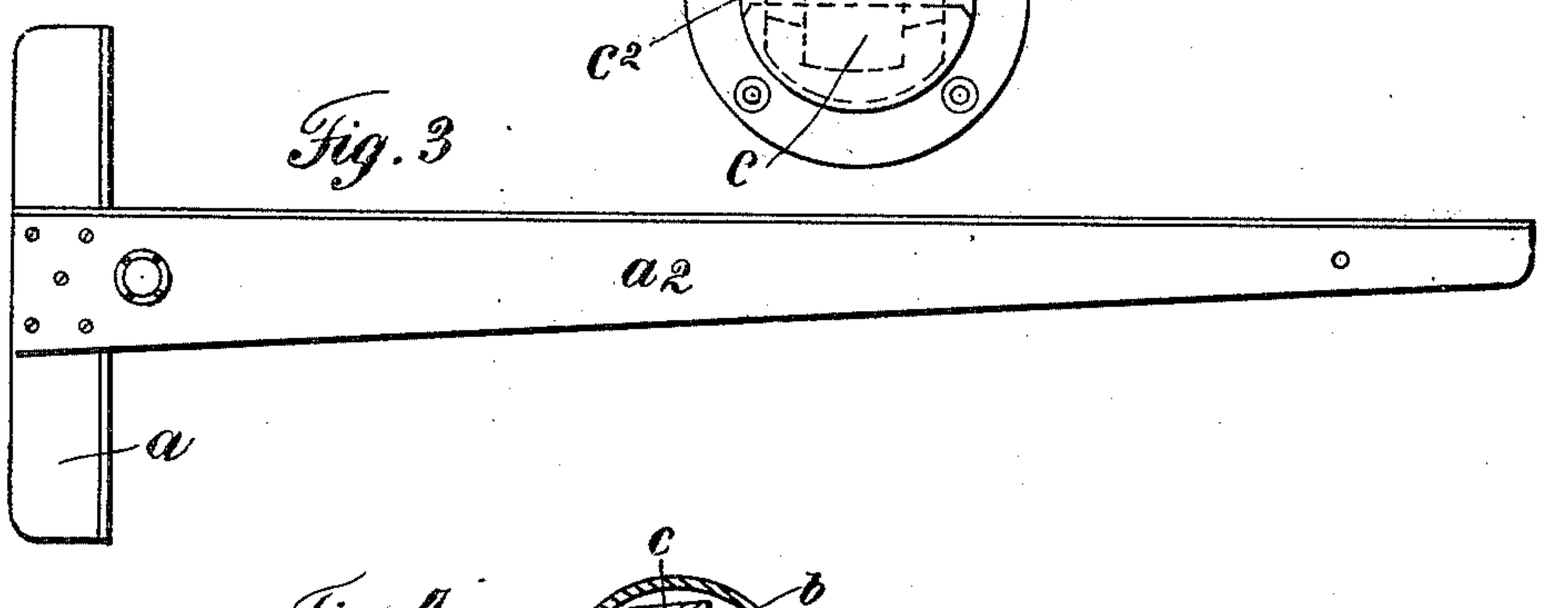


Fig. 4.

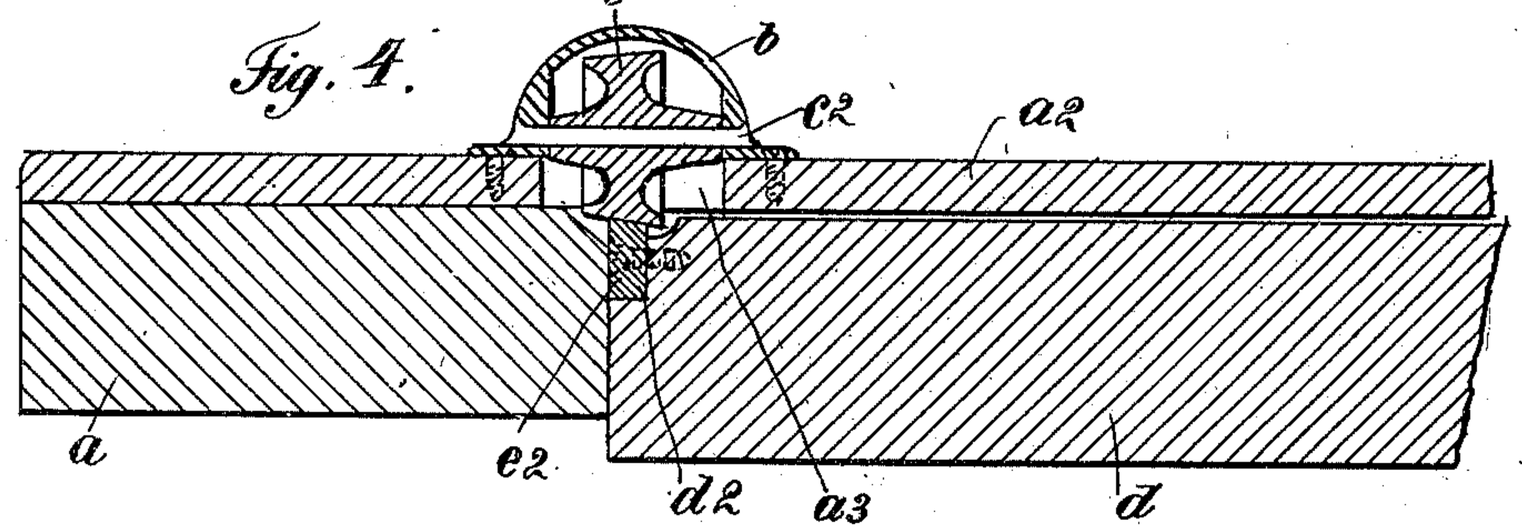
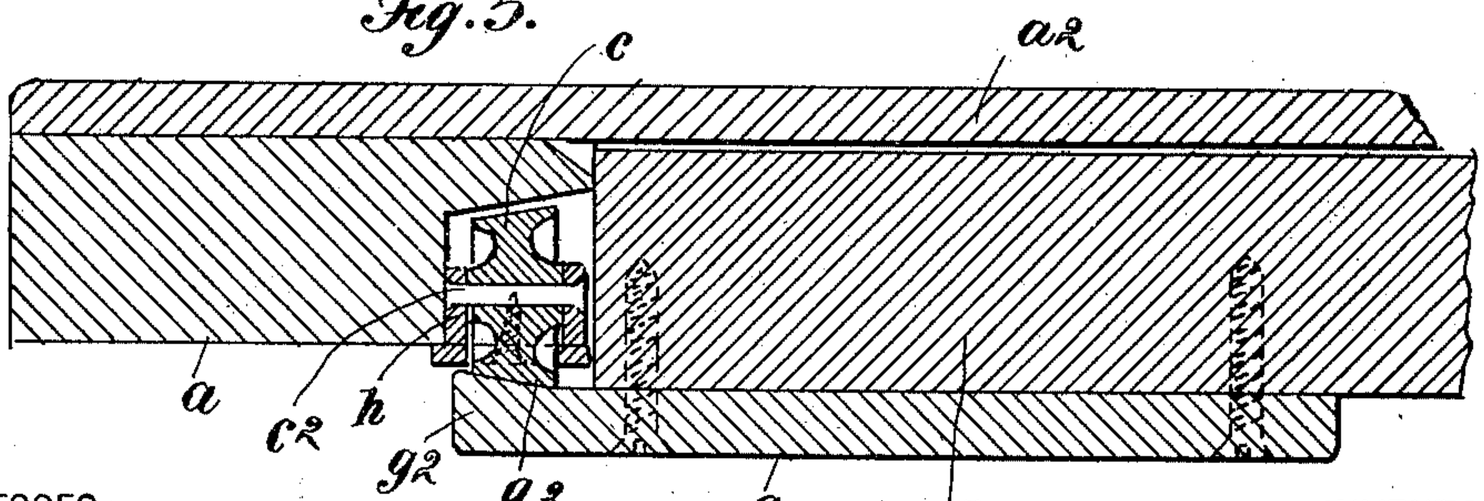


Fig. 5.



WITNESSES:

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GEORGE MURRAY LEES, OF DUBLIN, IRELAND.

T-SQUARE.

SPECIFICATION forming part of Letters Patent No. 703,140, dated June 24, 1902.

Application filed January 21, 1902. Serial No. 90,661. (No model.)

To all whom it may concern:

Be it known that I, GEORGE MURRAY LEES, a subject of the King of Great Britain, residing at Dublin, Ireland, have invented certain new and useful Improvements in T-Squares, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

The object of this invention is to provide a T-square with an antifriction device, which is brought into use when the T-square is placed on a drawing-board, table, or other support, so as to reduce friction and so as to facilitate the operation of the square; and with this and other objects in view the invention consists in a device of the class specified, constructed as hereinafter described and claimed.

In the drawings forming part of this specification, in which the separate parts of my invention are designated by suitable reference characters in each of the views, Figure 1 is a sectional side view of a T-square constructed according to my invention, showing also a section of a part of a drawing-board, table, or other support; Fig. 2, a plan view of the antifriction device which I employ in connection with the T-square; Fig. 3, a perspective view of a T-square with my improvement connected therewith; Fig. 4, a view similar to Fig. 1, showing a modification; and Fig. 5, a view similar to Fig. 1, showing another modification.

In the drawings forming part of this specification I have shown an ordinary T-square comprising a cross-head a and a projecting flat arm a^2, secured thereto in the usual manner, and in the practice of my invention I form in the arm a^2 adjacent to the cross-head an opening a^3, over which is placed a small hemispherical casing b, having a flange b^2, by means of which it is secured to the arm a^2 of the T-square, and within the casing b is mounted an antifriction-roller c, rotating on a shaft c^2, mounted in the opposite sides of the casing b, and the perimeter of the roller c projects slightly below the bottom surface of the arm a^2 of the T-square.

The foregoing construction is clearly shown in Figs. 1 to 3, inclusive, and in Fig. 1 I have also shown at d a section of a drawing-board, table, or other support, and I countersink in the top thereof, adjacent to the end or side against which the head a of the T-square works, a lateral metal strip e, on which the roller c moves, the object of this strip e being to prevent injury to the board, table, or other support. With this form of construction the arm a^2 of the T-square is held slightly above the board, table, or support, and the paper to be operated upon is placed on said board, table, or support in the usual manner, and the roller c operates on the strip e, which constitutes an antifriction-surface for the roller of the T-square, which supports the same and over which the square may be moved, as will be readily understood.

In Fig. 4 I have shown a modification in which an antifriction-strip e^2 is secured in a corresponding recess d^2 in the end of the table, board, or support d, and in this form of construction the antifriction-roller c is beveled, the side thereof adjacent to the board, table, or support being of much greater diameter than the opposite side, and the top surface of the strip e is beveled inwardly, as clearly shown, and by means of this construction the antifriction-roller c serves to draw the cross-head a of the T-square firmly against the table, board, or support and hold it in this position at all times.

In the construction shown in Fig. 5 the table, board, or support d is provided with a supplemental plate g, which is secured to the bottom thereof and which projects therefrom, as shown at g^2, and the upper side of the projecting portion is beveled inwardly and downwardly, as shown at g^3. In this form of construction the antifriction-roller c is countersunk in the front edge of the cross-head a of the T-square and is provided with suitable bearings or supports h, sunk into said cross-head and provided with a bottom plate or flange secured thereto, and said roller rests on the inclined portion of the plate g, and the perimeter of said roller is beveled, as in the construction shown in Fig. 4, and the operation thereof serves to draw the cross-head a of the T-square firmly against the corresponding edge, end, or side of the board, table, or support d.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A T-square the arm of which is provided adjacent to the cross-head thereof with an antifriction-roller mounted therein and the perimeter of which projects slightly below said arm, substantially as shown and described.

2. A T-square the arm of which is provided adjacent to the cross-head thereof with an opening, a casing secured to said arm above said opening and an antifriction-roller mounted in said casing and the perimeter of which projects slightly below the said arm, substantially as shown and described.

3. A T-square the arm of which is provided adjacent to the cross-head thereof with an opening, a casing secured to said T-square above said opening, and an antifriction-roller mounted in said casing and the perimeter of which projects slightly below the said arm, the perimeter of said roller being also beveled substantially as shown and described.

4. A T-square provided with an antifriction-roller which is adapted to bear on a board, table or other support in connection with which the T-square is used, said roller being provided with a beveled perimeter and the table, board or support being provided with a correspondingly-beveled strip on which the roller works, substantially as shown and described.

5. A T-square, the arm of which is provided adjacent to the cross-head thereof with an opening and an antifriction-roller mounted therein and the perimeter of which projects slightly below said arm, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 6th day of January, 1902.

GEORGE MURRAY LEES.

Witnesses:

GEORGE EDWARD MURRAY,

JAMES BARCLAY WALKER.