V. A. RIGAUMONT.

DRAFTING IMPLEMENT.

APPLICATION FILED JUNE 17, 1911.

1,145,922.

Patented July 13, 1915.

2 SHEETS—SHEET 1.

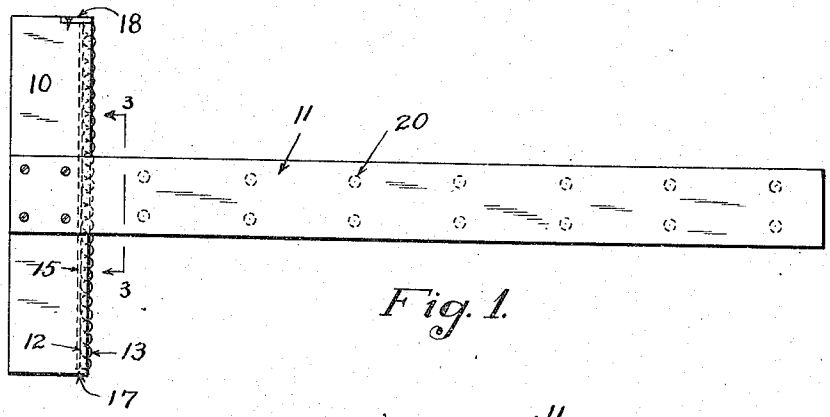


Fig. 1.

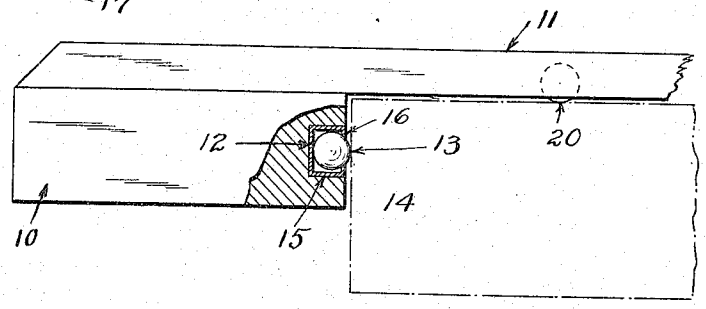


Fig. 2.

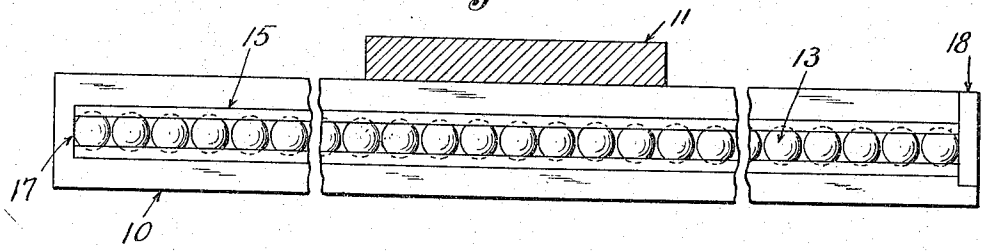


Fig. 3.

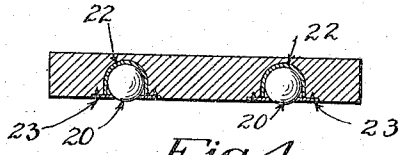


Fig. 4.

WITNESSES

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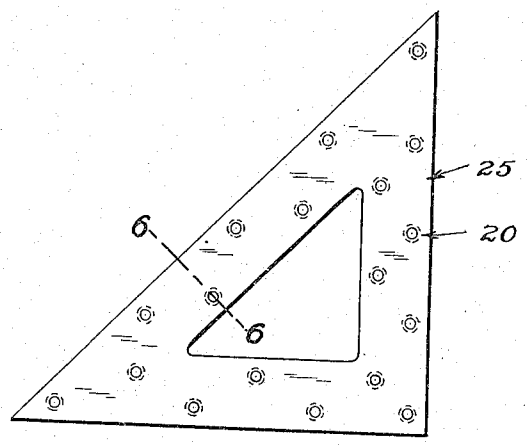


Fig. 5.

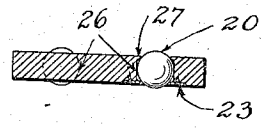


Fig. 6.

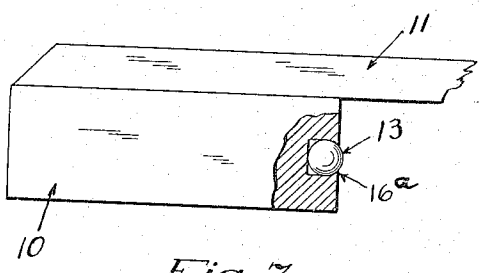


Fig. 7.

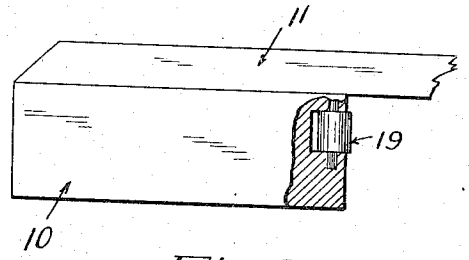


Fig. 8.

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DRAFTING IMPLEMENT.

1,145,922. Specification of Letters Patent. Patented July 13, 1915.

Application filed June 17, 1911. Serial No. 633,714.

To all whom it may concern:

Be it known that I, VICTOR A. RIGAUMONT, a resident of Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Drafting Implements, of which the following is a specification.

This invention relates to drafting implements and devices such as T-squares, triangles, straight edges, irregular curves and like implements which are used as a guide for the pen. Certain features thereof may also be applied to a drawing board or table.

The object of the invention is to provide an implement or device of this character which may be moved over the paper or other surface on a drawing board or table more easily than such devices as heretofore constructed, and which also prevents to a considerable extent the paper from becoming soiled by friction, and also prevents the ink from flowing or being drawn underneath the edge of the implement.

In certain lines of drafting, such for instance as architectural, civil engineering, and other drafting where large boards or tables and very large T-squares and other implements are employed, it requires some force to move the large T-squares back and forth, and in the course of the day the hand of the drafstman is liable to become fatigued merely from the exertion of moving the implement back and forth over the board.

One object of the present invention is to lessen the amount of force necessary to move a T-square or other implement over the drawing board or table.

Ordinary T-squares or other implements provided with a flat face resting directly against the paper also have a tendency to soil the paper in being moved back and forth. Furthermore there is a liability of the ink being drawn out of the pen and flowing by capillary attraction underneath the edge of the T-square or other implement and producing a blot which not only mars the work but requires considerable time to correct. All draftsmen have experienced this difficulty.

The purpose of the present invention is to overcome the above difficulties and provide a drafting implement or device with anti-friction devices, which may be rollers but preferably are balls, arranged to bear against the coöperating straight edge which guides the implement upon the table, thereby reducing the friction and rendering the movement of the implement more easy and less fatiguing; such roller or ball members in the blades of the implement also serving to slightly space the blade from the paper to prevent the formation of blots in case ink is drawn out of the pen and flows by capillary attraction along the lower face of the blade, and also permitting the implement to be moved to the extreme edge of the board without obstruction from thumb tacks, etc.

The invention comprises the construction and arrangement of parts hereinafter described and claimed.

In the accompanying drawing, Figure 1 is a plan view of a T-square with the improvements applied thereto; Fig. 2 is an edge view on an enlarged scale with the head partly broken away; Fig. 3 is a transverse section through the blade on the line 3—3, Fig. 1, looking at the inner edge of the head; Fig. 4 is an enlarged sectional detail through the blade showing the mounting of the rollers; Fig. 5 is a plan view of a triangle having the invention applied thereto; Fig. 6 is a detail sectional view through the same on the line 6—6, Fig. 5, on an enlarged scale; Fig. 7 is a broken away view similar to Fig. 2 showing a modification; and Fig. 8 is a similar view showing still another modification.

In the drawing the numeral 10 indicates the head of a T-square and 11 the blade attached to said head in the usual or any preferred way. The inner edge of the head, *i. e.* the edge which slides along the edge of the drawing board or table, is provided with a longitudinal groove, 12, preferably having a perfectly straight bottom and in which are mounted a series of anti-friction devices, shown in Figs. 1, 2, 3 and 7, as balls 13. These balls are of such size that they bear against the rear portion of groove 12 and project slightly beyond the inner edge of the head, as shown clearly in Fig. 2, so as to bear against the edge of the drawing board, indicated at 14. As shown in Figs. 1, 2 and 3, the groove is provided with a metallic lining 15 of general trough form having its outer edges turned inwardly, as at 16, to prevent the escape of the balls 13, and the back or bottom of this lining preferably being perfectly straight and forming a common bearing plate against which all of the

balls 13 rest. By thus inserting in the lining 15 a plurality of balls all of the same size, contact of all of the balls with the drawing board is assured. The groove in the head is not cut for the entire length thereof, so as to leave at one end the portion 17 which closes the groove at that end to prevent the escape of the balls. The other end of the groove is closed by a small countersunk plate 18, secured by means of a screw or the like to the end of the head. It is not necessary to have the groove lining 15, as the wood itself can be so cut as to provide the inturned portions or lips, as shown at 16a, Fig. 7. In lieu of balls, the anti-friction members may be in the form of rollers, as shown at 19, Fig. 8. The anti-friction members described bear against the edge of the drawing board or table and reduce the friction when moving the T-square back and forth as will be readily apparent, thereby reducing the exertion necessary to move the T-square. These anti-friction devices extend substantially the full length of the head so that there is no danger of the head pivoting about the end-most rollers and throwing the blade of the T-square out of line. Such rollers or balls are placed sufficiently close together so that when working toward the end of the drawing board or table, there is no tendency for the implement to move irregularly. The blade 11 is also preferably provided with anti-friction members shown in the form of balls 20, which also serve to slightly space the blade from the paper. As shown in Figs. 1, 2 and 4 the lower face of the blade is provided with a series of sockets 22 in which the balls 20 are placed, the sockets being of such a depth that the balls project slightly below the bottom face of the blade to space the blade from the paper, as above stated, to prevent formation of blots and also prevent soiling of the paper and permitting the blade to pass over thumb tacks and the like. The balls are held in the sockets by means of plates 23, countersunk into the lower face of the blade and secured in place by means of screws or the like, and provided with openings of sufficient size to permit the balls to project the necessary distance therethrough. These balls serve the two-fold function of reducing the friction in the movement of the blade as well as preventing the soiling of the paper and the formation of blots. The latter feature can be applied to any pen guiding implement, such as triangles, irregular curves, straight edges or the like.

Figs. 5 and 6 illustrate a triangle having the invention applied thereto. The blade 25 of the triangle is provided with a series of such balls 20, these balls being located in openings 26 in the blade. The openings on one side of the blade are smaller than the balls to provide the lips 27 which prevent the balls from escaping on that side. On the opposite face the balls are prevented from escaping by the countersunk plates 23. With implements such as triangles, irregular curves and the like, which are used sometimes one face up and sometimes the other face up, it is desirable to have the balls project from both faces, as shown in Fig. 6. In the case of triangles and like implements, these balls have the same functions as the balls in the blade of the T-square.

What I claim is:

1. A drafting implement comprising a T-square or the like having a head and a thin blade provided with an uninterrupted flat upper face and pen guiding edges, said blade being also provided with a plurality of recesses or sockets in its lower face, anti-friction members in said recesses or sockets and projecting beyond the lower face of the blade, the diameter of each of said members being no greater than the thickness of said blade, and said members substantially filling said recesses or sockets and being rotatable but bodily immovable therein.

2. A drafting implement of the character described comprising a blade or the like provided with an uninterrupted flat upper face and a pen guiding edge and a plurality of sockets in said blade, balls in said sockets arranged to project beyond the lower face of said blade, and plates countersunk in the face of the blade at said sockets and serving to confine the balls therein, said balls substantially filling said sockets and being arranged to permit free sliding movement of said blade in any direction upon a support.

3. A T-square or like device comprising a head provided on its inner edge with a series of closely spaced anti-friction members adapted to contact with the edge of a drawing board or table, and a thin double edged blade provided with two series of anti-friction members projecting below the lower face of said blade and spaced along the length thereof, the diameter of each of said members being no greater than the thickness of said blade, and each of said series of members being spaced inwardly from an adjacent edge of the blade.

4. A T-square comprising a head and a blade, said head having its inner edge provided with a groove, a series of closely spaced anti-friction members mounted in said groove and projecting beyond the edge of said head, said blade being provided with a plurality of sockets, and balls mounted in and substantially filling said sockets and projecting below the bottom face of the blade, the top face of the blade having an uninterrupted flat surface.

5. A drafting implement comprising a blade or the like provided with an uninterrupted face and with a plurality of straight edges, such blade being also provided with

a plurality of spaced sockets along the edges thereof, balls in said sockets projecting beyond the lower face of the blade and arranged to hold the same out of contact with a support, said balls substantially filling said sockets and being arranged to permit free sliding movement of said blade in any direction upon said support.

6. A drafting implement comprising a thin blade or the like having a pen guiding edge and provided with a series of recesses or sockets spaced at intervals along the length of said blade and inwardly from the edge thereof, anti-friction members in said recesses or sockets and projecting beyond the face of the blade, said members substantially filling said sockets and being rotatable but bodily immovable therein, and plates countersunk in said blade and retaining said members in said recesses or sockets.

7. A drafting implement comprising a thin double edged blade, provided with two series of anti-friction members projecting below the lower face of said blade and spaced along the length thereof, the diameter of each of said members being no greater than the thickness of said blade, and each of said series of members being spaced inwardly from an adjacent edge of the blade.

In testimony whereof, I have hereunto set my hand.

VICTOR A. RIGAUMONT.

Witnesses:
MARY E. CAHOON,
IDA STAVER.

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