No. 694,389. Patented Mar. 4, 1902.

A. KLITSCHE.

ATTACHMENT FOR DRAFTING BOARDS AND T-SQUARES.

(Application filed Nov. 11, 1901.)

(No Model.)

Fig. 1.

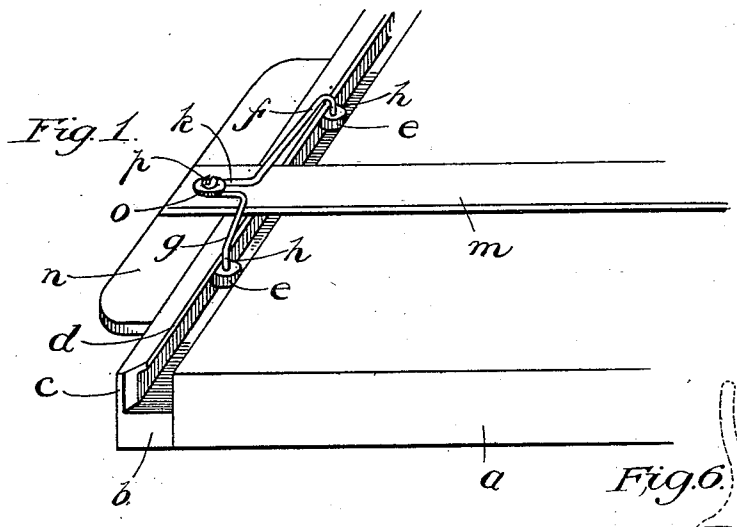


Fig. 6.

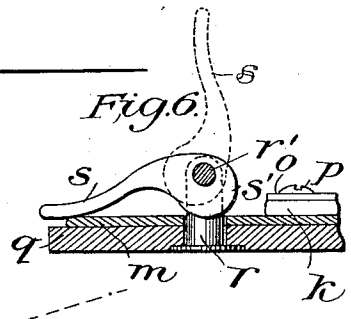


Fig. 5.

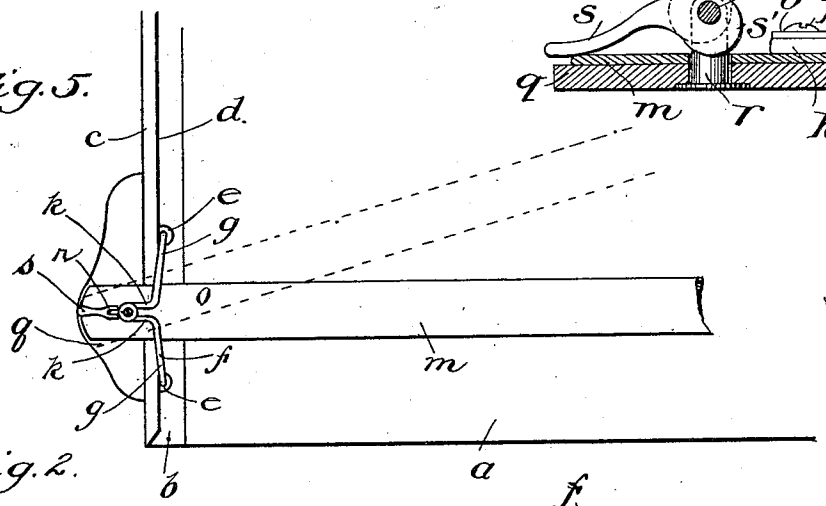


Fig. 2.

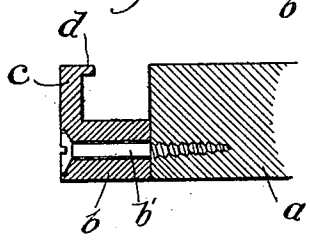


Fig. 4.

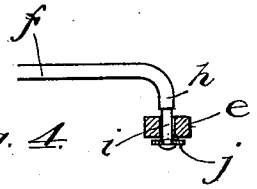
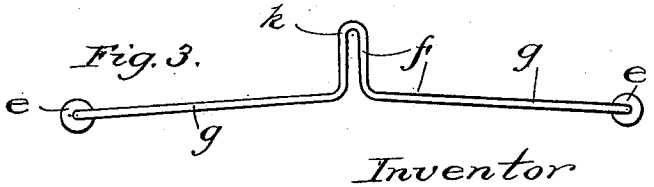


Fig. 3.



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UNITED STATES PATENT OFFICE.

AMANDUS KLITSCHE, OF CHICAGO, ILLINOIS, ASSIGNOR TO EUGENE DIETZGEN COMPANY, A CORPORATION OF ILLINOIS.

ATTACHMENT FOR DRAFTING-BOARDS AND T-SQUARES.

SPECIFICATION forming part of Letters Patent No. 694,389, dated March 4, 1902.

Application filed November 11, 1901. Serial No. 81,887. (No model.)

To all whom it may concern:

Be it known that I, AMANDUS KLITSCHE, a citizen of the United States, residing in the city of Chicago, county of Cook, and State of Illinois, have invented a new and useful Improvement in Attachments for Drafting-Boards and T-Squares, of which the following is a specification.

My invention relates to attachments for drafting-boards and T-squares; and the object of my invention is to provide a simple and readily-detachable attachment whereby the T-square may be held true upon the board at all times without requiring the attention of the draftsman and to provide means for retaining the T-square upon the board when the surface of the board is considerably inclined, at the same time permitting the free manipulation of said square. I attain this object by the device illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the complete attachment. Fig. 2 is a sectional fragmentary view showing the guide-strip in position upon the board. Fig. 3 is a view of the retaining-wire. Fig. 4 is a detail fragmentary view showing the mounting of the guide-rollers. Fig. 5 is a plan view of the complete attachment shown in connection with a swivel-head T-square. Fig. 6 is an enlarged view of the clamping mechanism shown in Fig. 5.

Similar letters refer to similar parts throughout the several views.

Referring to Figs. 1 to 4, inclusively, *a* represents the main body of the drawing-board, and *b* the guide-strip, designed to be secured thereto by means of screws *b'* or in any other suitable manner. Said strip has an outer wall *c*, which is provided at its upper edge with an inwardly-extending flange *d* for retaining in position the guide-rollers *e e* on the retaining-wire *f*. The configuration of said retaining-wire is clearly shown in the drawings, having branching arms *g g*, provided at their outer extremities with the depending portions *h* for carrying said rollers *e*. In order that said rollers may turn freely upon said wire and at the same time maintain their position thereon, said depending portions are provided with axles *i* of reduced diameter, which form bearings for said rollers. The ends of said axles are further reduced in diameter to form a shoulder, against which the washers *j* are held by riveting over the ends of said retaining-wire, as shown in Fig. 4. The said branches *g* are connected by means of the U-shaped bend *k*, which is adapted to lie upon the top surface of the T-square at the head thereof. In Fig. 1, *m* represents the blade, and *n* the head, of a fixed-head square, and the bend *k* of the wire is secured to said blade at the head of the square by means of the washer *o*, held in position by means of the screw *p*.

In operation the retaining-wire *f* is placed upon the T-square in the position shown, so that the rollers *e* lie in the channel between the board *a* and guide-strip *b*. The washer *o* is then placed over the bend *k* and the screw *p* caused to enter into the T-square. Since the sides of said bend *k* are approximately parallel, said bend may be drawn along the square beneath the washer before the latter is tightened until the wire is slightly sprung from its natural shape and the rollers *e* bear firmly against the outer wall *c*. When the washer has been screwed down tight, the rollers bearing upon the inner surface of the wall *c* will cause the head *n* of the T-square to come firmly to a bearing against the outer surface of the guide-strip and keep the square true upon the drafting-board. The resilience of the wire will permit the T-square to be moved freely along the board, and at the same time the friction between the head of the T-square and the guide-strip, due to the pressure of the rollers upon said wall *c*, will hold the T-square in place upon the board when the latter is inclined. The amount of friction of the square against the board may be regulated by moving the bend *k* to different positions under the washer *p* before said washer is tightened.

By employing my device it becomes practical for the draftsman to work with the board inclined at an angle, and moreover time is save by avoiding the necessity of continually ascertaining whether the head of the square is true against the edge of the board.

It is evident that my device is simple and readily attached to any T-square. In Fig. 5

the retaining-wire is shown attached to a swivel-head square wherein the head *q* is pivoted on the pin *r*, and is tightened in position by the cam-handle *s* on the pin *r* by means of the stud *r'*, and is tightened in position by the cam-handle *s* operating the cam *s'*. Said cam acts upon the blade *m* and tends to draw the head *q* into close contact therewith, so as to clamp said blade and head together at the desired angle. The resilience of the wire *f* will permit a slight turning of the blade *m* relatively to the head *q*, but any angle of said blade may be permitted by readjusting the bend of the wire beneath the washer *o*.

What I claim as new, and desire to secure by Letters Patent, is—

1. In combination, a T-square having a single head, a drafting-board, a guide-strip upon a single edge of said board, and a resilient wire for retaining the head of said T-square in engagement with said strip, said wire having a U-shaped bend intermediate of its extremities for attachment to said T-square at the head thereof, arms branching from said bend, and depending portions at the extremities of said arms for engaging said guide-strip upon said board, whereby said T-square is yieldingly connected to said board.

2. In combination, a T-square having a head at one end of the blade thereof, a drafting-board, an approximately L-shaped guide-strip secured at the outer edge of its base portion to one edge of said board, the standing portion of said L-shaped strip being thereby at a slight distance from the edge of the board, a resilient wire having a U-shaped bend for attachment to the top of the T-square at the head thereof, arms on said wire branching from said bend, and depending portions at the extremities of said arms for engaging the inner surface of the standing portion of said L-shaped strip, the head of said T-square contacting the outer surface of the standing portion of said guide-strip, whereby said T-square yieldingly engages said strip.

3. In combination with a drafting-board, a guide-strip for attachment to the edge of said board, an inwardly-projecting flange at the upper portion of said strip, a retaining-wire detachably attachable to a T-square, said wire having depending extremities; and rollers mounted upon the said depending extremities for traveling upon said guide-strip, beneath said flange, said flange thereby retaining said rollers in engagement with said guide-strip.

4. In combination, a guide-strip for attachment to a drafting-board, said strip having an inwardly-projecting flange at its upper edge, a one-piece retaining-wire having a U-shaped bend intermediate of its extremities, arms extending in opposite directions from said bend, depending extremities upon said arms, rollers mounted on said depending extremities of said arms and a washer for covering a portion of said U-shaped bend to thereby adjustably secure said retaining-wire to the T-square.

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