

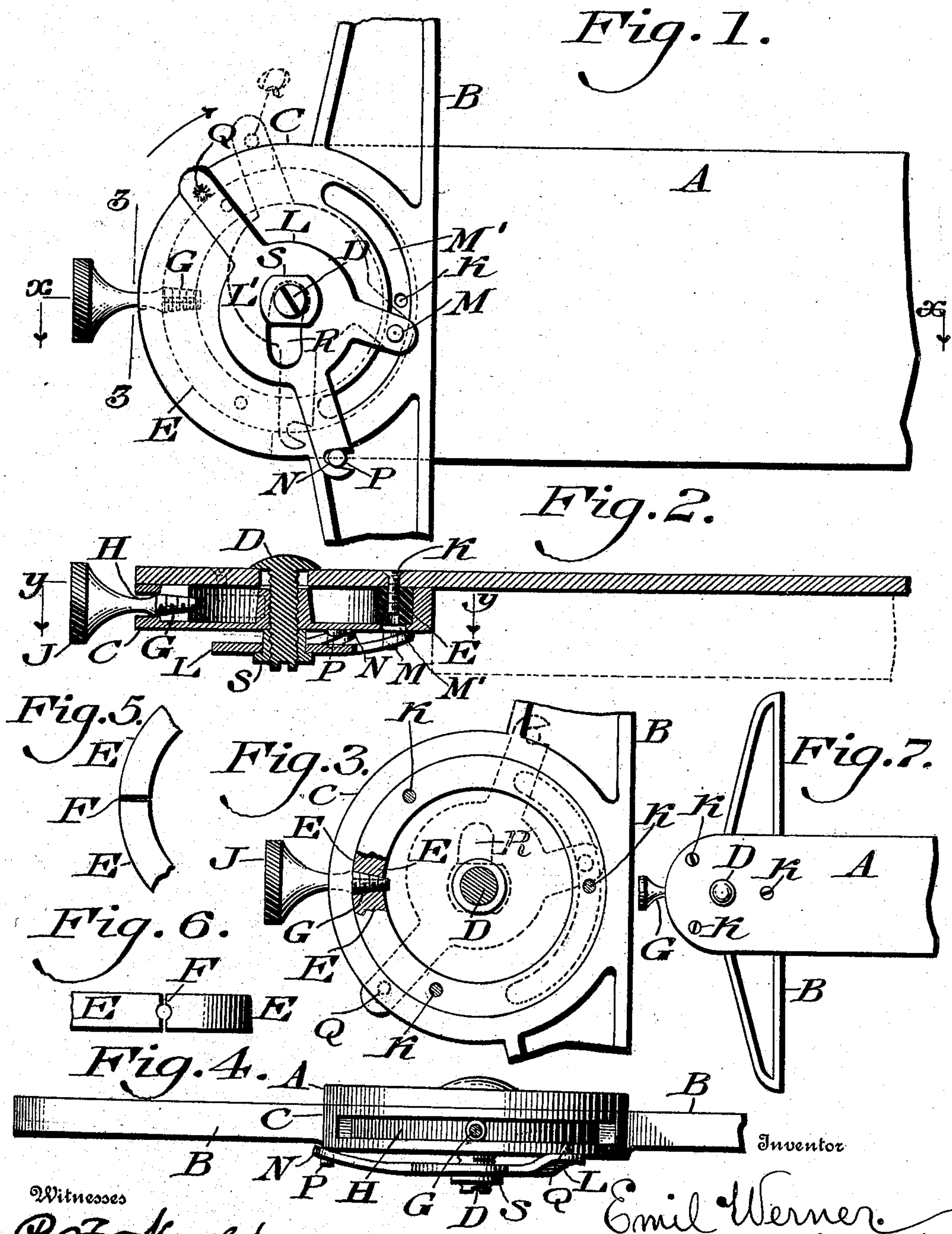
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E. WERNER.

T-SQUARE.

APPLICATION FILED MAY 25, 1907.



Witnesses
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UNITED STATES PATENT OFFICE.

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T-SQUARE.

No. 885,706.

Specification of Letters Patent.

Patented April 21, 1908.

Application filed May 25, 1907. Serial No. 375,630.

To all whom it may concern:

Be it known that I, EMIL WERNER, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful T-Square, of which the following is a specification.

My invention consists of a T-square embodying means for holding the blade of the square primarily at a right angle to the limb thereof, and at acute or obtuse angles thereto, the means employed being hereinafter described and the novel features thereof pointed out in the claims.

Figure 1 represents a bottom plan view of a T-square embodying my invention. Fig. 2 represents a section thereof on line $x-x$, Fig. 1. Fig. 3 represents a section thereof on line $y-y$, Fig. 2. Fig. 4 represents a section thereof on line $z-z$, Fig. 1. Fig. 5 represents a plan view of a portion of an expansible ring employed. Fig. 6 represents a side elevation thereof. Fig. 7 represents a plan view of a portion of the square on a reduced scale.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings: A designates the blade of a T-square, and B designates the limb of the same, said limb having centrally thereon, the head C, on which the adjacent portion of the blade is movably mounted by means of the screw or pivot D, which is firmly secured to said parts.

The head is of annular form and hollow, forming a chamber within which is the expansible ring E, it being divided as at F, and the resultant ends being engaged by a conical screw G, whose shank passes outwardly through the slot H in the periphery of the head C, and is provided with a milled or other head J on the exterior thereof, whereby the screw may be properly operated to expand the adjacent ends of the ring and force it into frictional contact with the inner periphery or wall of the head C, and thus control the motions of the latter and consequently of the limb B.

The body of the ring E is rigidly secured to the blade A by the screws K, so that the ring moves with the blade, while, however, leaving its ends free to be expanded, as has been stated, and to contract when relieved of the action of the screw G. It will be seen that when said screw is properly operated, the

ring contracts, when the blade may be moved to the right or left according to the acute or obtuse angle that it may be desired to set said blade; then the screw is rotated in reverse direction, whereby the ring is engaged with the head C, and the blade is interlocked with the same, and thus shifting or change of adjustment of the blade is prevented.

As the square is used more frequently with the limb at a right angle to the blade, in order to control the same at said angle, I employ the lock L consisting of a resilient plate L', which is placed on the head C and movably connected with ring E by the pivotal pin M on the latter, said pin passing freely through the segmental slot M' in the head C. In the edge of said plate is a tapering slot, forming a fork or bifurcation N, which is adapted to engage the pin or stud P on the limb B, thus interlocking the blade and limb when the latter are at a right angle to each other, as most plainly shown in Fig. 1, it being evident that the frictional contact of the resilient plate L' with the head C prevents improper motion of the former from the position in which it may be placed.

Near the edge of the plate L' is the teat Q, which is struck-up from said portion and is adapted to engage with the face and periphery of the head C, said plate having in its body portion the elongated slot or opening R, which receives the adjacent portion of the screw D and has its walls freely overhung by the flange of the nut S on said screw, the same permitting turning motions of the plate L', while assisting to retain the latter on the head and adjust the friction thereof, it being seen that the teat Q frictionally engages with the face of the head C, and so holds the plate L' in locked position.

It is evident that when the right angular position of the blade is not required, the plate L' is moved in the direction of the arrow, Fig. 1, when the bifurcation N leaves the stud P. The blade and limb are then unlocked, and the blade may be adjusted to other angles, as desired, and the screw G then operated to expand the ring E, and thus render the blade and limb immovable relatively to each other, it now being noticed that in the movement of the plate described from the pin M as a center, the teat Q rides over the head C towards the periphery of the same,

and owing to the resiliency of said plate, the teat drops into engagement with said periphery, and so holds the head C against improper movement, as will be apparent by the dotted position of the parts in Fig. 1.

While I have specified certain means for carrying out my improvements, I do not wish to be limited exactly to the same, but desire to make such changes as may come within the scope of the novelty involved.

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

1. In a T-square, a blade member, a limb member having a head, means for pivotally connecting said members and resilient means mounted for movement on the pivot of said members and extending across said head to lock said members in their right angled position.

2. In a T-square, a blade member, a limb member having a head, a divided expansible device within said head for locking the same in the different positions of the blade member, and means extending through the periphery of said head for expanding said device.

3. In a T-square, a blade member, a limb member, a pivot connecting said members, a radially divided locking device mounted on the blade member, means on the limb member adapted to be engaged by said locking device, and means disposed at right angles to said pivot and engaging the walls of said division of said device to expand the same.

4. In a T-square, the blade and limb members and the pivot thereof, and a locking device for said pivoted blade and limb members, comprising a resilient plate mounted on the pivot of said members, and means engageable by said plate beyond the periphery of the limb member.

5. In a T-square, a locking device for the blade and limb members composed of a plate, means for movably mounting said plate on one member, means on the other member with which said plate may detachably engage, and a projection on said plate adapted to freely ride over a contiguous

member and the periphery thereof respectively.

6. In a T-square, limb and blade members, a pivot connecting said members, a locking piece for said members, and a flanged tightening nut on said pivot, said pivot passing through an opening in said locking piece, the flange of said nut freely overhanging the wall of said opening.

7. In a T-square, limb and blade members, the former having a chamber, a divided expansible ring connected with the blade member and freely occupying said chamber, and means inserted from the outer periphery of said limb member and engaging in the slit of said expansible member to expand the same.

8. In a T-square, blade and limb members, a chamber in the limb member, a divided ring adapted to be expanded occupying said chamber and engaging the inner wall thereof, and an expanding device passed through the head and engageable with the ends of said ring and disposed at right angles to the axis thereof.

9. In a T-square, blade and limb members, a head centrally on the limb member, the same having a chamber therein, an expansible ring adapted to occupy said chamber and to engage the inner wall thereof, and a screw adapted to engage a separated portion of said ring and expand the same, said head having an opening in its periphery adapted to freely receive an adjacent portion of said screw.

10. In a T-square, a locking device for the blade and limb members composed of a resilient plate which is pivotally mounted on one of the members and adapted to be connected movably with the other member, and having a supplemental locking device which is adapted to engage respectively with the face and periphery of the last named member in the locked and unlocked positions of said plate.

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