May 9, 1933.

H. E. LEE

1,908,518

FOLDING SQUARE

Filed April 15, 1931

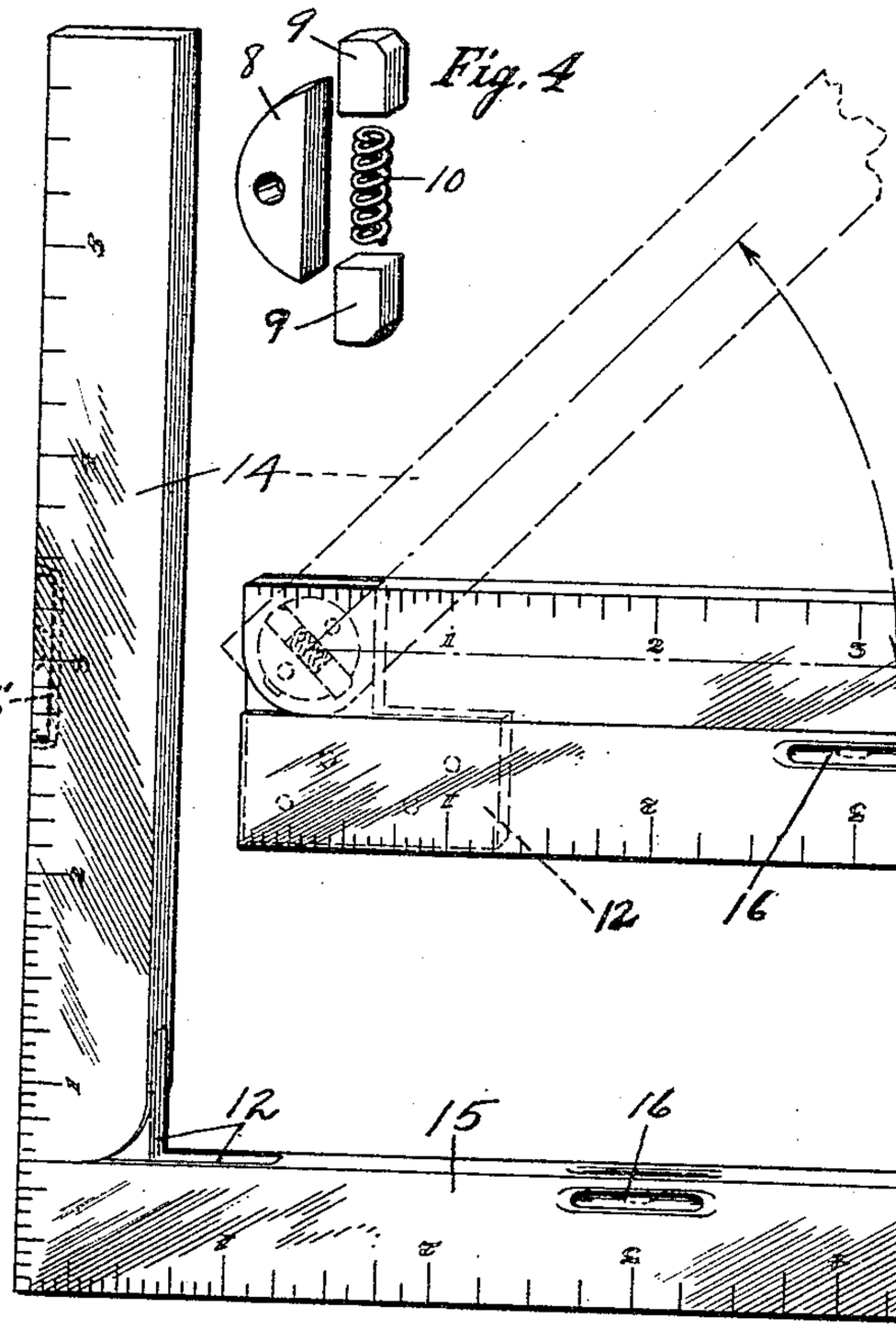

Fig. 4

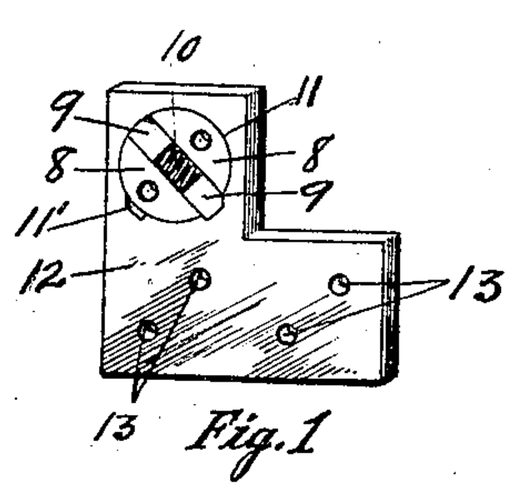

Fig. 1

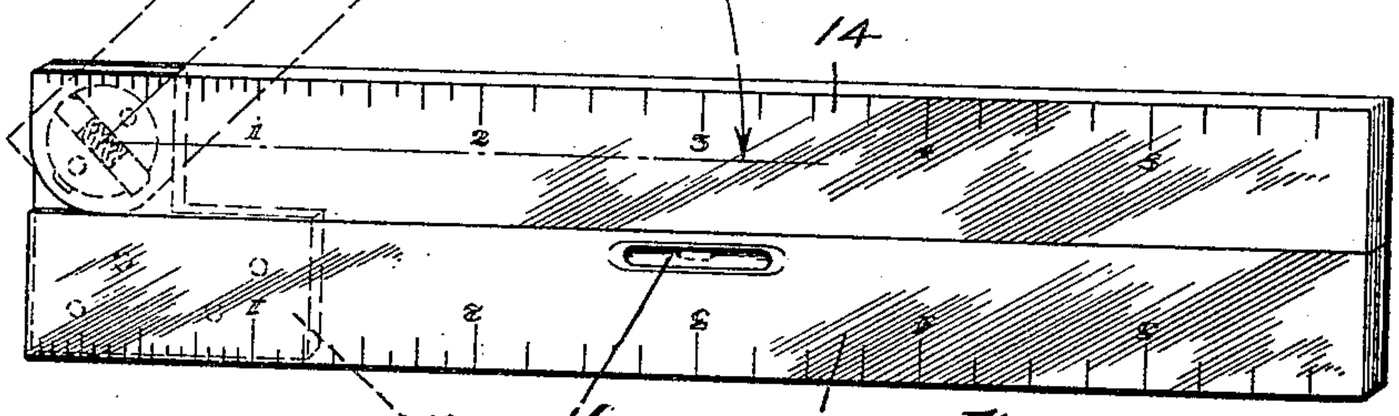

Fig. 2

Fig. 3

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UNITED STATES PATENT OFFICE

HARRY E. LEE, OF PASADENA, CALIFORNIA

FOLDING SQUARE

Application filed April 15, 1931. Serial No. 530,172.

My invention relates to folding squares, rules and the like, and has among its salient objects to provide an improved joint for folding squares and rules without projecting corners or portions to interfere with the fullest use of the square or rule as a straight edge when opened for use.

This invention is a further improvement on the rule shown and described in Letters Patent No. 1,150,277, issued to me August 17, 1915, whereby I am able to reduce the expense of manufacture and at the same time make a more practical and durable rule or square.

In order to explain my invention, I have illustrated the same on the accompanying sheet of drawing in which—

Figure 1 is a perspective view of a joint or connecting member for a folding square, showing the same detached from the members of the square.

Figure 2 is a perspective view of the complete square folded together, one part being indicated in light broken lines in a partly opened position.

Figure 3 is a perspective view of the complete square in open position.

Figure 4 shows certain details removed from the hinge or joint mechanism.

Referring now in detail to the drawing, I will describe the features embodying my invention and forming the important improvements over my other rule as shown in the patent referred to. Referring to Figs. 1 and 4 in particular, the hinge or joint feature consists of two semi-circular disc-like elements, as 8, 8, with two insert members, as 9, 9, with squared, solid ends adjacent or toward each other, with a coiled spring 10 inserted therebetween and bearing at its opposite ends against the square ends of said insert members 9, 9, said spring being in no way connected with or inserted therein, thus forming a simple assembly of co-operating parts adapted to fit flush within a round opening, as 11, in a suitable connecting member, as 12, Fig. 1. This particular connecting member is of L-shape, and is provided with only one hinge assembly for the folding arm of a square, one arm of the square being secured rigidly to the semi-circular elements 8, 8, by means of rivets, while the other arm of the square is riveted to the solid body part of the connecting member 12, in the holes 13, 13. The folding arm of the square is designated 14, and the fixed arm is designated 15, said fixed arm being also provided in its inner edge with a spirit level, designated 16. At one side of the round opening is an offset 11′ forming a placement seat into which one of said insert members 9 seats when said folding arm is moved from open to closed positions, as clearly illustrated, there being two of said offset seats 11′ and the insert members 9 having each one corner beveled to more readily move into said recesses or seats 11′, as will be readily understood from the drawing.

It will be seen that the square can be closed without any projections, and also that it can be opened up for use without any corners or projections which are not desired.

By using insert members 9—9 in the hinge combination without any drilling and without inserting the coiled spring into any bores, I have eliminated a great deal of time and expense in manufacturing my improved square and rule and have thus simplified it. I do not limit the invention except as I may be limited by the hereto appended claim.

I claim:

A folding square including a solid angle corner piece and two arms, one arm of said square telescoping over one part of said corner piece with its end flush therewith to form the corner, a portion of said corner piece having a circular hole therethrough, two substantially semi-circular members fitted into said hole and of the same thickness as said corner piece, two insert blocks of solid construction between said members, a coiled spring between said insert blocks and bearing at its op-

posite ends against the solid ends of said insert blocks to force them apart against the inside of said round hole, and means cooperative between the outer ends of said insert blocks and the inside of said hole to interlock said spring pressed insert blocks to different positions, one of said arms fitting over said corner piece and secured to said two semi-circular members, whereby said arm, said semi-circular members and said insert blocks can be turned together to different positions, substantially as illustrated.

Signed at Los Angeles, Los Angeles County, California, this 1st day of April, 1931.

HARRY E. LEE.