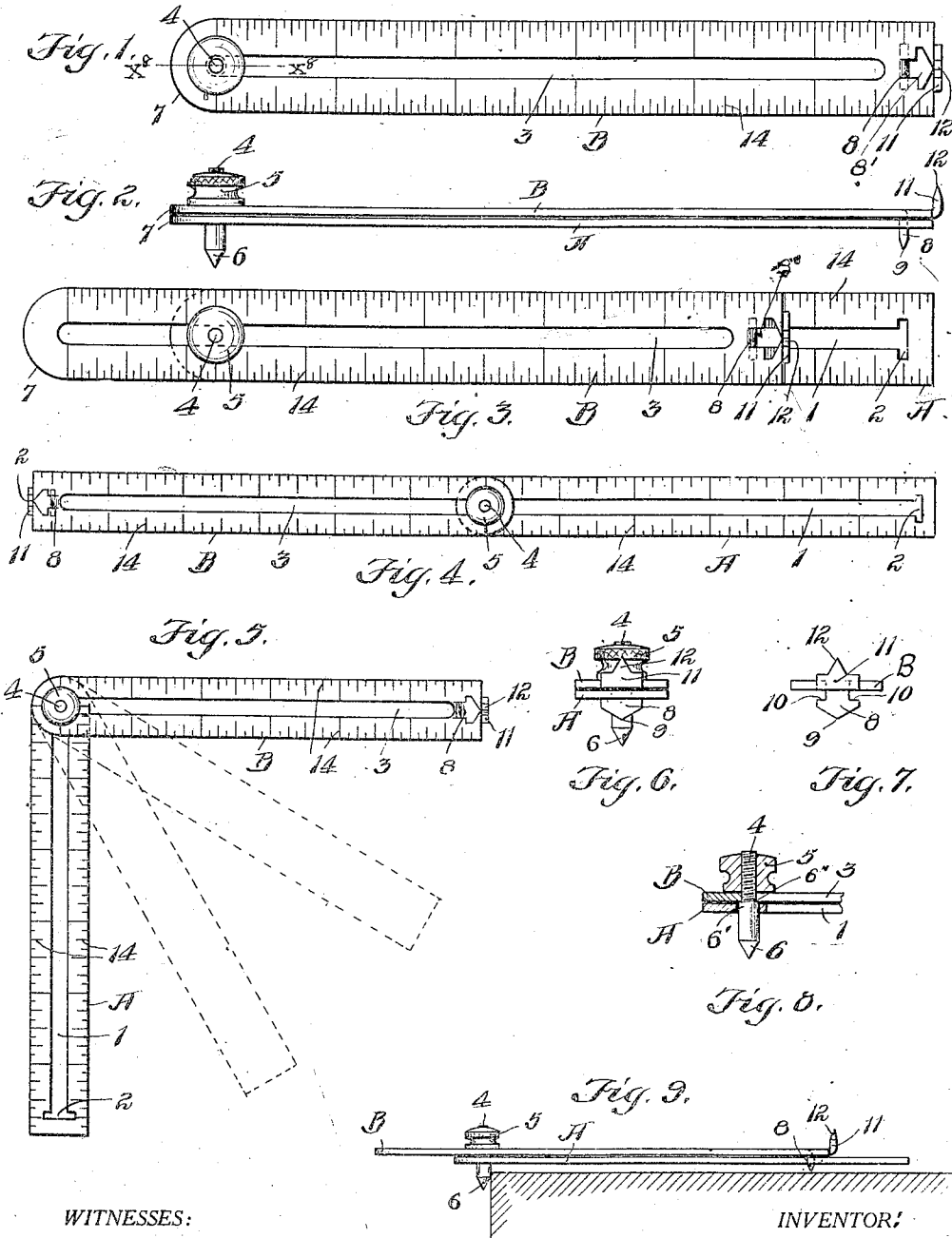


H. BACKSTROM.
COMBINATION RULE, BEVEL SQUARE, GAGE, AND COMPASS.
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HENNING BACKSTROM, OF CHICAGO, ILLINOIS.

COMBINATION RULE, BEVEL-SQUARE, GAGE, AND COMPASS.

1,009,214.

Specification of Letters Patent. Patented Nov. 21, 1911.

Application filed June 11, 1909. Serial No. 501,483.

To all whom it may concern:

Be it known that I, HENNING BACKSTROM, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in a Combination Rule, Bevel-Square, Gage, and Compass, of which the following is a description.

My invention relates to combination tools and particularly to a combination tool adapted for the use of carpenters or machinists.

The object of my invention is to provide a tool of the class mentioned adapted for various uses in measuring and marking out the work.

A further object of my invention is to provide a tool of the class under consideration which shall be of simple construction, of low cost to manufacture and durable.

Other objects will appear hereinafter.

With these objects in view my invention consists generally in a pair of graduated blades which are both pivotally and slidably connected whereby the device may be used as an extension rule, a square or a bevel, and equipped with suitable points and projections whereby the same is adapted for use as a gage or a compass.

My invention further consists in various details of construction and arrangements of parts all as will be fully described hereinafter and particularly pointed out in the claims.

My invention will be more readily understood by reference to the accompanying drawings forming a part of this specification and in which—

Figure 1 is a plan view of the tool in closed position, Fig. 2 is a side elevation of the same, Fig. 3 is a plan view of the device with the blades slightly extended longitudinally, Fig. 4 is a similar view with the blades swung to full extended position, Fig. 5 is a plan view with the blades arranged at an angle to each other as when used as a square or bevel, Fig. 6 is an end view of the device in closed or folded position, Fig. 7 is an end view of one of the blades, Fig. 8 is a section on the line *ac-ac'* of Fig. 1, and Fig. 9 is a side elevation of the device illustrating the same when used as a gage.

Referring now to the drawing A and B indicate the two blades of the device which will be mentioned hereinafter as the lower

and upper blades respectively as these are their relative positions when the device is in operative position. The blades are graduated upon their upper faces as indicated at 14 and if preferred may also be graduated on their opposite faces.

Rigidly fixed in one end of the blade A is a depending stud 6', the lower end of which is sharpened as at 6. Formed integrally with the stud 6' and projecting upwardly therefrom is a threaded stem 4 upon which is threaded a thumb nut 5.

The blades A and B are provided with longitudinally disposed slots 1 and 3 respectively which extend the greater portion of the length of the blades and the threaded stem 4 extends through the slot 3 whereby the blades A and B are both pivotally and slidably connected. By means of the thumb screw or binding screw 5 the blades may be secured in any position relative to each other and to avoid the danger of loosening the stud 6' from the blade A the portion 4 is reduced in diameter forming a shoulder 6'' against which the blade B impinges. The ends of the blades adjacent the stud 6' are preferably rounded as indicated at 7.

Adjacent the opposite end of the blade B from the rounded end is a depending, transversely disposed tongue 8 which projects through the slot 1 in the blade A and which is provided with a sharpened or pointed end 9. The tongue 8 is preferably struck out of the blade as will be seen by referring to Fig. 3. Said tongue is of greater width than the slot 1 but is reduced in width at its root or adjacent the blade to the width of said slot forming shoulders 10-10' which engage the under face of the blade A thereby preventing any movement of the blades other than relative longitudinal movement. The corresponding end of the slot 1 is transversely enlarged at 2 to the full width of the tongue 8 whereby when said tongue is brought in to register with the enlarged portion 2 it may be disengaged from the blade A and the blades swing to angular position.

Formed on the extreme end of the blade B adjacent the tongue 8 is an upwardly projecting ear 11 terminating in a pointed end 12 which may be used as a scribe or marker. The ear 11 serves as means for moving the blades relative to each other and to facilitate withdrawing the tongue 8 from the enlarged portion of the slot 1.

The use of the device as an extension ruler and as a bevel and square is obvious and does not need detailed description. When used as a gage the stud 6' abuts the edge 5 of the work, as shown, in Fig. 9 and the blade B is adjusted until the marking point is at the proper distance from the stud, after which the nut 5 is tightened and the device is ready for use. As a compass, the 10 point 6 serves as the center leg and the point 9 as the marking leg. If it is desired to use the device as a pencil compass, a pencil is held by hand in the end of the slot 3 or in the aperture 8' formed by striking out the 15 tongue 8. The point 6 serves as the center leg and the proper radius may be obtained by adjusting the blade B on the blade A.

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

1. In a device of the class described, a pair of blades each provided with a longitudinally disposed slot, a stud extending through one of said blades adjacent the end 25 thereof, one end of said stud projecting below the blade and pointed and the other end projecting upwardly and threaded, said threaded end extending through the slot in the other blade, a thumb nut threaded on 30 said upwardly projecting end, and a pointed tongue projecting downwardly from the op-

posite blade from that to which the stud is secured and extending through the slot in the latter substantially as described.

2. In a device of the class described, an 35 upper blade and a lower blade each of said blades being provided with a longitudinally disposed slot, a stud fixed in the lower blade adjacent one end thereof and provided with a depending pointed end, a reduced up- 40 wardly extending stem on said stud projecting through the slot in the upper blade, a binding nut threaded on said stem, a downwardly extending tongue adjacent the end of the upper blade normally remote from 45 said binding nut and projecting through the slot in the lower blade, said tongue being of greater width than said slot and reduced in width at its upper end to snugly fit the same, the slot in the lower blade being pro- 50 vided with a widened portion to permit passage of said tongue and an upwardly extending ear on the end of the upper blade, substantially as described.

In testimony whereof I have hereunto 55 signed my name to the specification in the presence of two subscribing witnesses.

HENNING BACKSTROM.

Witnesses:

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