

(No Model.)

P. A. ANDERSON & J. B. PETERSON.  
COMBINATION TOOL.

No. 556,297.

Patented Mar. 10, 1896.

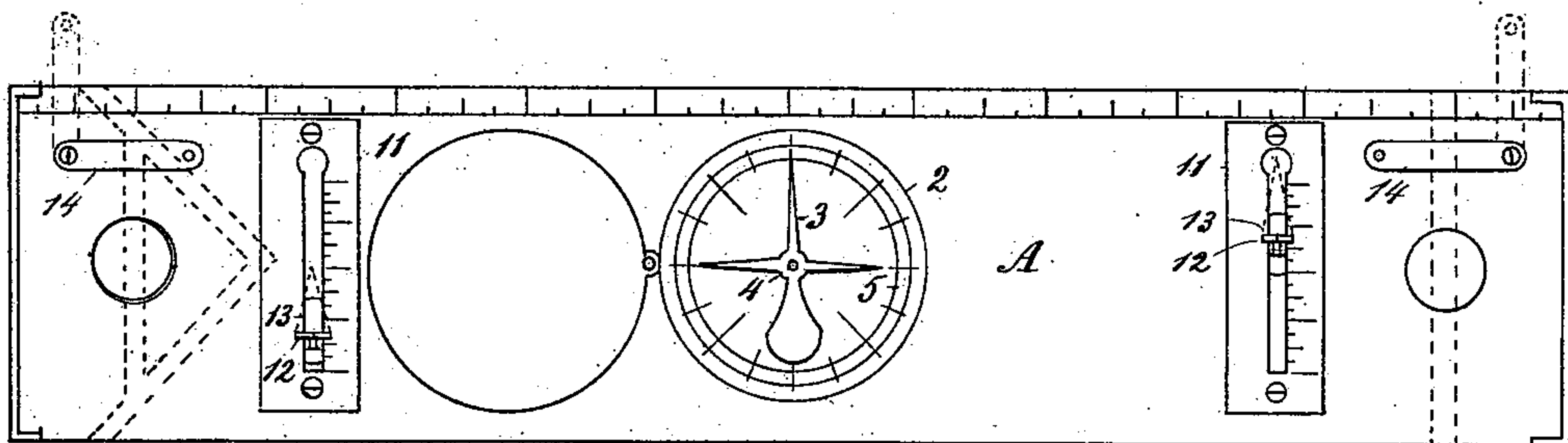


Fig. I.

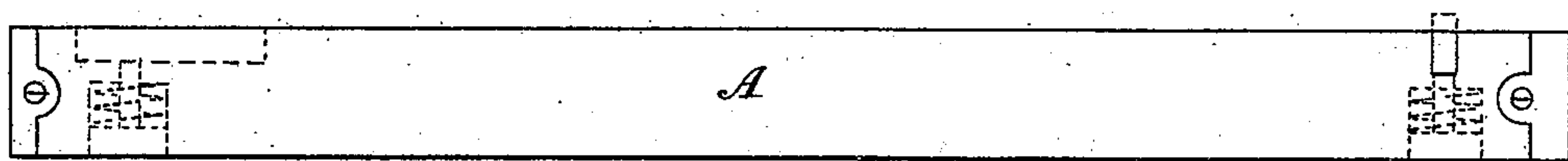


Fig. II.

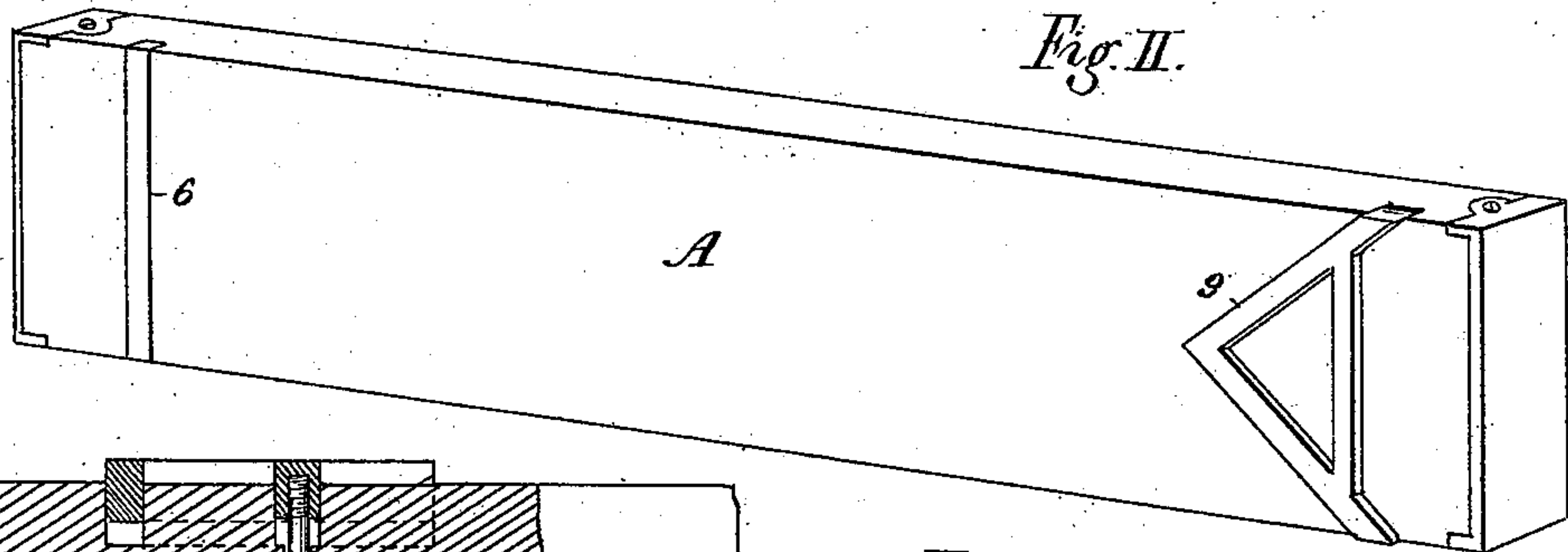


Fig. III.

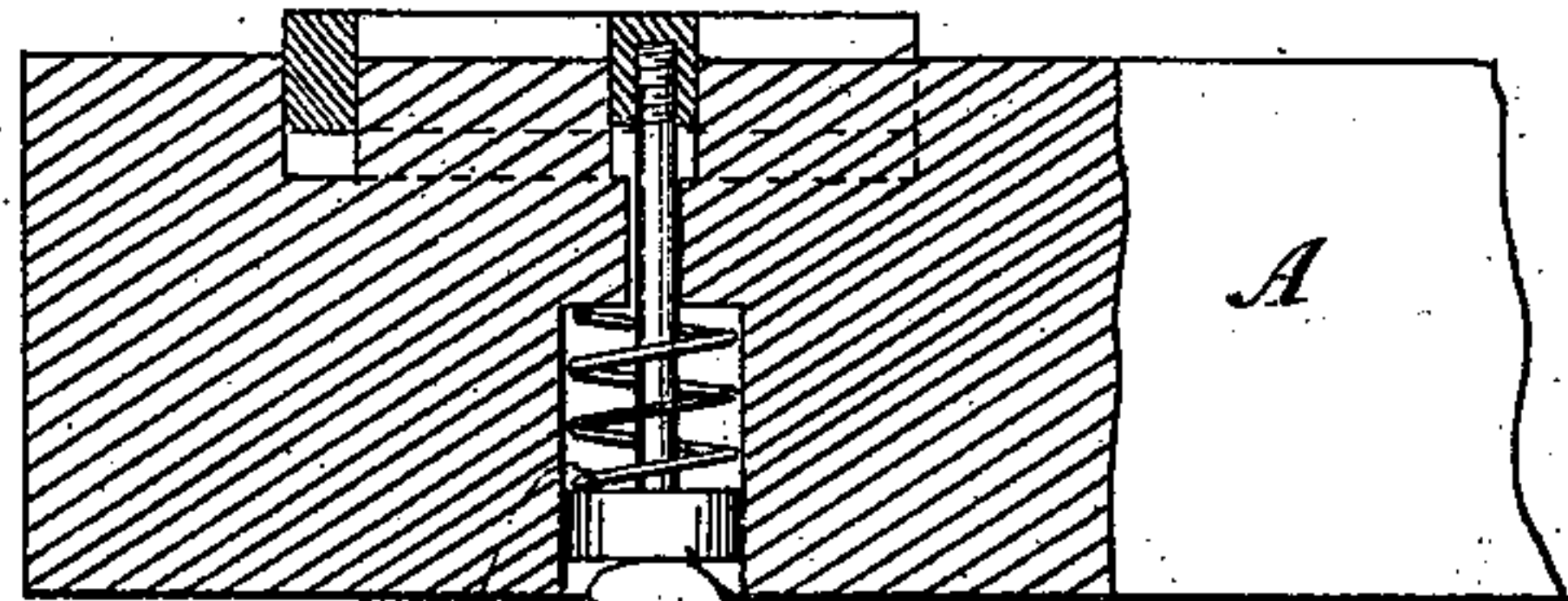


Fig. IV.

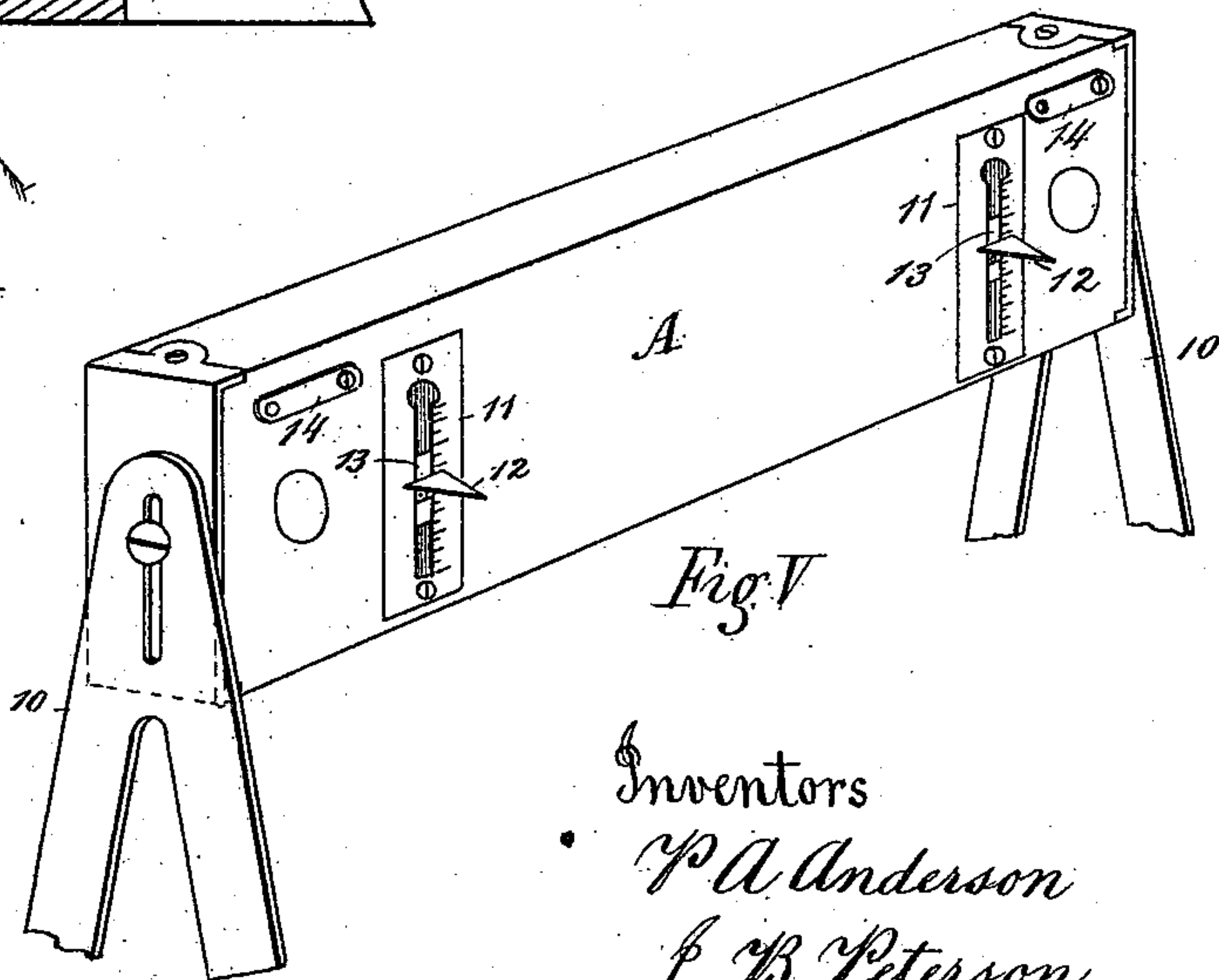


Fig. V.

Witnesses  
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By *O. Bailey* Atty.



# UNITED STATES PATENT OFFICE.

PER AUGUST ANDERSON AND JULIUS B. PETERSON, OF CHICAGO, ILLINOIS.

## COMBINATION-TOOL.

SPECIFICATION forming part of Letters Patent No. 556,297, dated March 10, 1896.

Application filed July 23, 1895. Serial No. 556,907. (No model.)

*To all whom it may concern:*

Be it known that we, PER AUGUST ANDERSON and JULIUS B. PETERSON, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Combination-Tools, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a view of the obverse side of our improved combination-tool; Fig. 2, a view of one of the edges of the same; Fig. 3, a perspective view of the reverse side, showing the miter and square lying in their respective recesses; Fig. 4, a detail view, partly in section, showing the manner of utilizing the miter and square; and Fig. 5, a view of the device mounted on removable feet and arranged in the form of a surveyor's level.

Our invention relates to sundry improvements in combination-tools, and its object is to provide a novel, convenient, and practical device comprising a level and plummet, a miter, a square, and other useful adjuncts, all of which are arranged and united in a compact and portable form.

The peculiar advantages of the invention will be apparent by reference to the accompanying drawings, in which—

A represents the body or stock of the device, which should be made of hard wood, having its ends and edges protected from wear by plates of suitable metal. For general purposes the tool is preferably one foot in length and is provided on one or both sides with a scale of inches and fractions. A circular recess 2 is formed centrally in the obverse side of the stock and contains a gravitating triple-pointed index 3, which swings freely within the circle on a pivot 4 and indicates the exact position of the instrument on a graduated scale 5.

It is evident that while the device is an efficient and complete level and plummet it may also be readily utilized as a clinometer, and when applied to an inclined surface will correctly indicate the angle of inclination. The square is formed by a bar 6, which is fitted to a transverse groove near one end of the

stock. When not in use the bar is retained in the groove by a screw 7 and a spiral spring 8, as shown in Fig. 4.

It will be observed that the head of the screw and the outer side of the bar are normally flush with the surfaces of the stock. When it is desired to form a square the operator grasps the stock and presses the screw inwardly with his forefinger. The bar 6 is thus forced out of its groove, and being at right angles with the stock forms a square therewith. When the pressure is removed the spring reacts and the bar is drawn back into the groove. The miter occupies the opposite end of the stock and consists of an angle-bar 9, which engages a corresponding groove. It is adjusted and manipulated in the same manner as the square.

The device may be easily converted into a substitute for a surveyor's level by mounting it upon an adjustable support formed by two pairs of folding legs 10, which are removably attached to the ends of the stock by screws. Slotted plates 11, provided with graduated scales, are attached to the side of the stock near its ends and form slides for adjustable sights or indexes 12, which are hinged to sliding bases 13, so that when not in use they may be folded flat upon the surface of the stock.

If it be desired to increase the length of the device and thereby facilitate the finding of the level or inclination of an object, the buttons 14 may be turned up and temporarily fastened to a straight-edged bar by screws.

What we claim as new is—

1. In a combination-tool, the combination with the body or stock, having a transverse groove on one side near the end thereof, of the rectangular bar seated in said groove, the headed screw connected with said bar and the spiral spring, substantially as described.

2. In a combination-tool, the combination with the body or stock having a groove near each end on one side, the bar and miter seated in said grooves, respectively, and flush with surface of the body or stock, the headed pin and coiled spring, substantially as described.

3. The combination with the body or stock

of the tool provided with a circular recess in  
the obverse side containing a gravitating  
triple-pointed index, of the outwardly-mov-  
able bar, and the outwardly-movable miter  
5 seated in grooves in said body, the headed  
pins connected with said bar and miter and  
the coiled springs, substantially as described.  
In testimony that we claim the foregoing

we have hereunto set our hands, this 5th day  
of July, 1895, in the presence of witnesses.

PER AUGUST ANDERSON.  
JULIUS B. PETERSON.

Witnesses:

HARVEY S. AMERSON,  
ED. J. AMERSON.