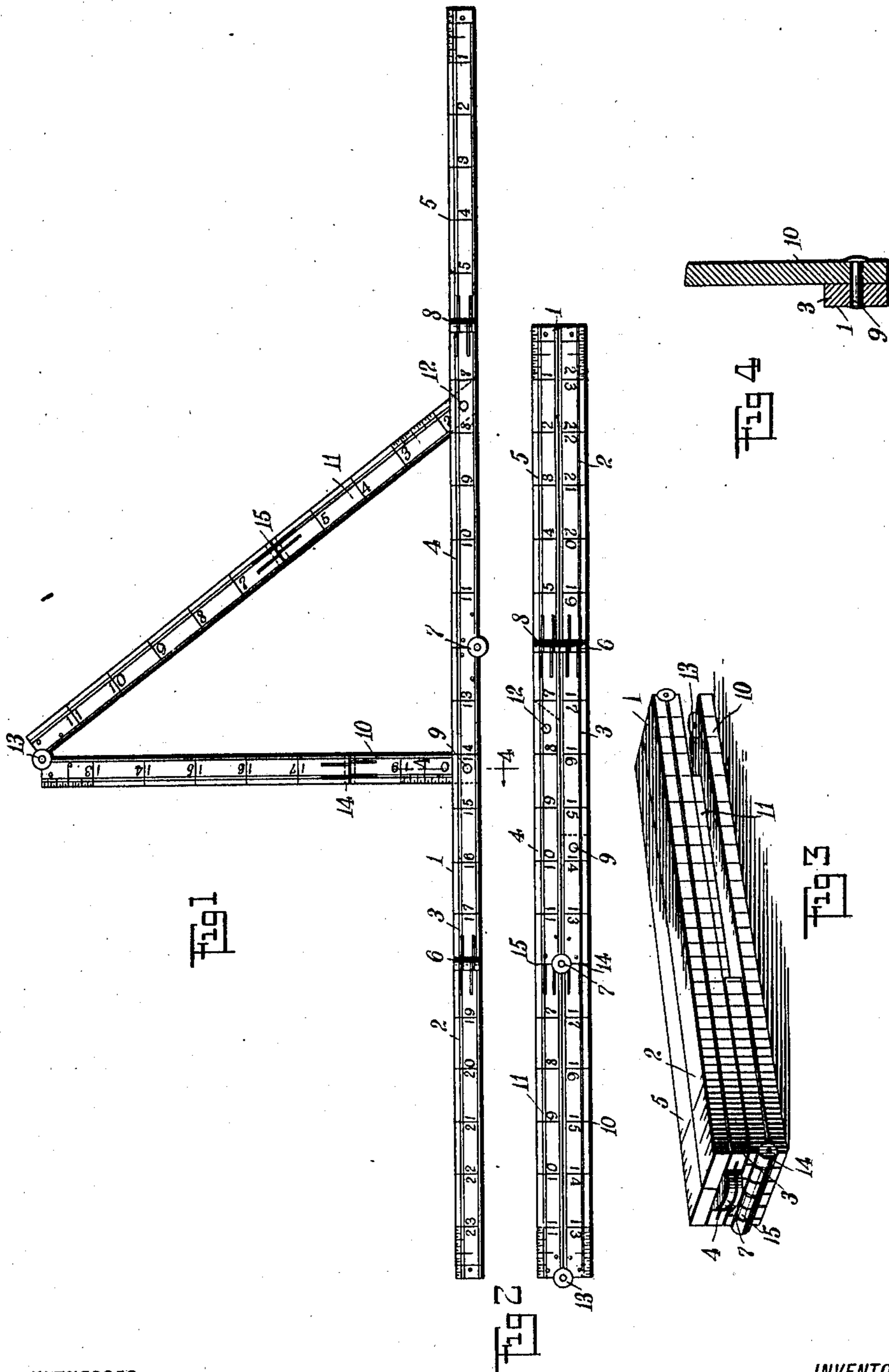


P. B. OATS.
 COMBINED SQUARE AND RULE.
 APPLICATION FILED APR. 29, 1910.

988,652.

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WITNESSES:
C. J. Hachenberg
H. Whiting

INVENTOR
Philomel B. Oats
 BY *Munroe*
 ATTORNEYS

UNITED STATES PATENT OFFICE.

PHILOMEL BUNYAN OATS, OF FORT TOWSON, OKLAHOMA.

COMBINED SQUARE AND RULE.

988,652.

Specification of Letters Patent.

Patented Apr. 4, 1911.

Application filed April 29, 1910. Serial No. 558,429.

To all whom it may concern:

Be it known that I, PHILOMEL B. OATS, a citizen of the United States, and a resident of Fort Towson, in the county of Choctaw and State of Oklahoma, have invented a new and Improved Combined Square and Rule, of which the following is a full, clear, and exact description.

This invention relates to a combination square and rule, and combine the advantages and features of a square and rule in one instrument.

An object of this invention is to provide a device which will be simple in construction, inexpensive to manufacture, strong, durable, readily manipulated, and collapsible into a small compass.

A further object of this invention is to provide a device having a rule portion, and a square portion adapted to extend at an angle to said rule portion when the parts are in their extended position, and to be collapsed parallel to said rule portion when the parts are in their folded position.

These and further objects, together with the construction and combination of parts, will be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a plan view, showing the rule completely extended, with the square portion also extended; Fig. 2 is a plan view showing the rule and square portions partly collapsed and extended in parallel relation; Fig. 3 is a perspective view showing the instrument entirely collapsed or folded up into its smallest compass; and Fig. 4 is a sectional view on the line 4—4 of Fig. 1, showing the pivotal connection of the square portion to the rule portion.

Referring more particularly to the separate parts of the device, 1 indicates the rule portion, which may be made of any suitable form and material, but preferably consists of four lengths 2, 3, 4 and 5, pivotally connected together by means of hinges 6, 7 and 8. This part of the device is similar to a common rule, such as those which are in everyday use, and the middle hinge 7 has an axis at right-angles to the axes of the outer hinges 6 and 8, so that the lengths 2 and 5 will fold on top of the lengths 3 and

4 respectively, and the lengths 2 and 3 will fold alongside of the lengths 5 and 4. Pivotal secured to one of the intermediate lengths, such as the length 3, in any well known manner, as by means of a pin 9, more clearly illustrated in Fig. 4, there is provided a leg 10, which is adapted to be extended at right angles to the length 3 and the rule portion 1 when the device is completely extended. This leg 10 is held in its extended position by means of a brace 11, which is pivotally connected to the other intermediate length portion 4 at one end by a pin 12, and is pivotally connected at its opposite end to the leg 10. The length of the leg 10 and the brace 11, and the distance between the pins 9 and 12 is such that the brace 11 forms the hypotenuse of a right triangle, so that the leg 10 extends at right-angles to the lengths 3 and 4 and the rule portion 1. It is to be noted that the point of pivotal connection of the brace 11 with the leg 10; that is to say, the hinge indicated at 13, has an axis parallel to the axis of the hinge 7, so that the leg 10 and the brace 11 may move together when the two halves of the rule portion 1 are swung together.

For the purpose of dividing the brace 11 and the leg 10 in small parts so that they may fold substantially the same length as the parts of the rule 1, they are provided with hinges 14 and 15 intermediate their ends, whose axes extend at right-angles to the axis of the hinge 13, so that these parts can fold over on top of each other.

It is to be noted that the point of connection of the leg 10 to the portion 3 is such that the distance from the point of connection to the hinge 14 is equal to the distance from the point of connection to the hinge 7. The same is true of the point of connection of the brace 11 to the portion 4; that is to say, the distance of the hinge 15 from the pivot point 12 is equal to the distance of the hinge 7 from the pivot point 12. The dimensions of the brace 11 and the leg 10 are so arranged that the distances of the hinge 13 from the hinges 14 and 15 are substantially equal to each other and to the lengths 2 to 5. The purpose of this is to permit the square portions of the instrument to fold within the same length and width that the rule portion folds in, so that the device will be compact and neat in structure.

Both the rule portion and the square portion of the device may be graduated in any

suitable manner and from any suitable point, so that the various distances may be measured in a simple and convenient manner.

It will thus be seen that there is provided
5 a combined rule and square which may be readily manipulated and extended into its operative position, and can likewise be quickly collapsed and folded into a small compass.

10 While I have shown one embodiment of my invention, I do not wish to be limited to the specific details thereof, but desire to be protected in various changes, modifications and alterations which I may make within
15 the scope of the appended claims.

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

20 1. A tool, comprising a rule divided into a plurality of portions, said portions being connected together by a hinge, a leg connected to one of said portions, a brace connected to another of said portions, and a hinge for pivotally connecting said leg to
25 said brace, the axes of said hinges extending parallel to each other, said leg and said brace being divided intermediate their ends and the portions thereof pivotally connected together by pivots extending at right-angles
30 to the axes of said hinges.

2. The combination with a rule, of a square connected to said rule, said square comprising a leg and a brace and a hinge pivotally connecting said leg to said brace,
35 said leg and said brace being divided intermediate their ends, and hinges connecting the parts of said leg and said brace together, the axes of said last-mentioned hinges extending at right-angles to the axis of said
40 first-mentioned hinge when in their folded positions.

3. The combination with a rule, divided

into a plurality of portions, of a hinge for connecting said portions, a brace pivotally
45 connected to one of said portions, a leg pivotally connected to the other of said portions, and a hinge pivotally connecting said brace with said leg, the distances of the points of connection of said leg and said
50 brace with said portions of said rule from said hinge connecting said portions of said rule together being proportional to the distances of said points from said hinge connecting said brace with said leg, whereby
55 said leg and said brace can fold together simultaneously with the folding together of said rule portions.

4. The combination with a rule, divided into a plurality of portions, of a hinge for connecting said portions, a brace pivotally
60 connected to one of said portions, a leg pivotally connected to the other of said portions, and a hinge pivotally connecting said brace with said leg, the distances of the points of connection of said leg and said
65 brace with said portions of said rule from said hinge connecting said portions of said rule together being proportional to the distances of said points from said hinge connecting said brace with said leg, whereby
70 said leg and said brace can fold together simultaneously with the folding together of said rule portions, said leg and said brace each being divided into portions pivotally
75 connected together at points equi-distant from their point of hinge connection with each other.

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

PHILOMEL BUNYAN OATS.

Witnesses:

W. S. MCKINNEY,
JOHN T. VICK.