

(No Model.)

J. P. JOHNS.
SQUARE.

No. 567,832.

Patented Sept. 15, 1896.

Fig. 1.

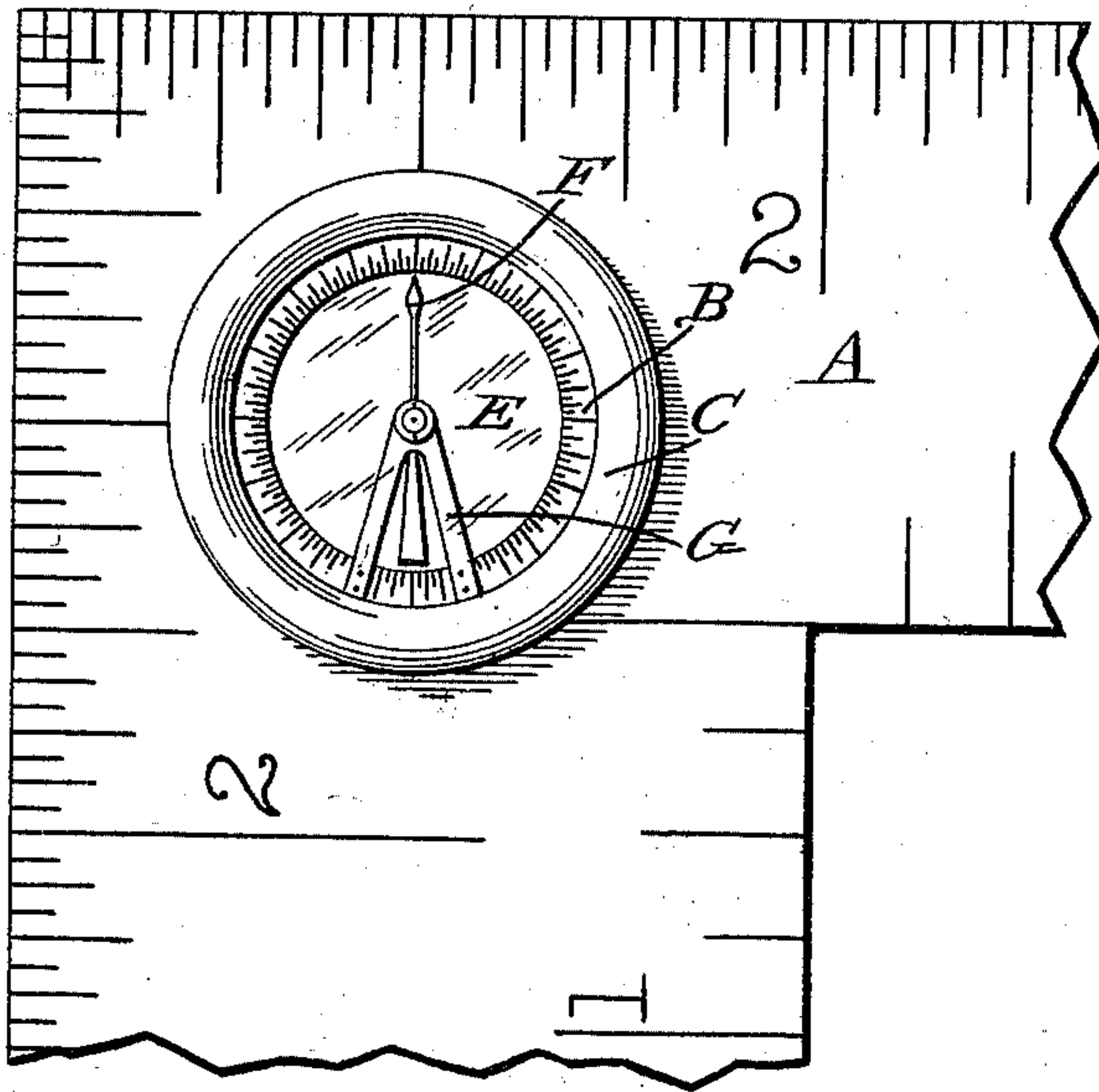
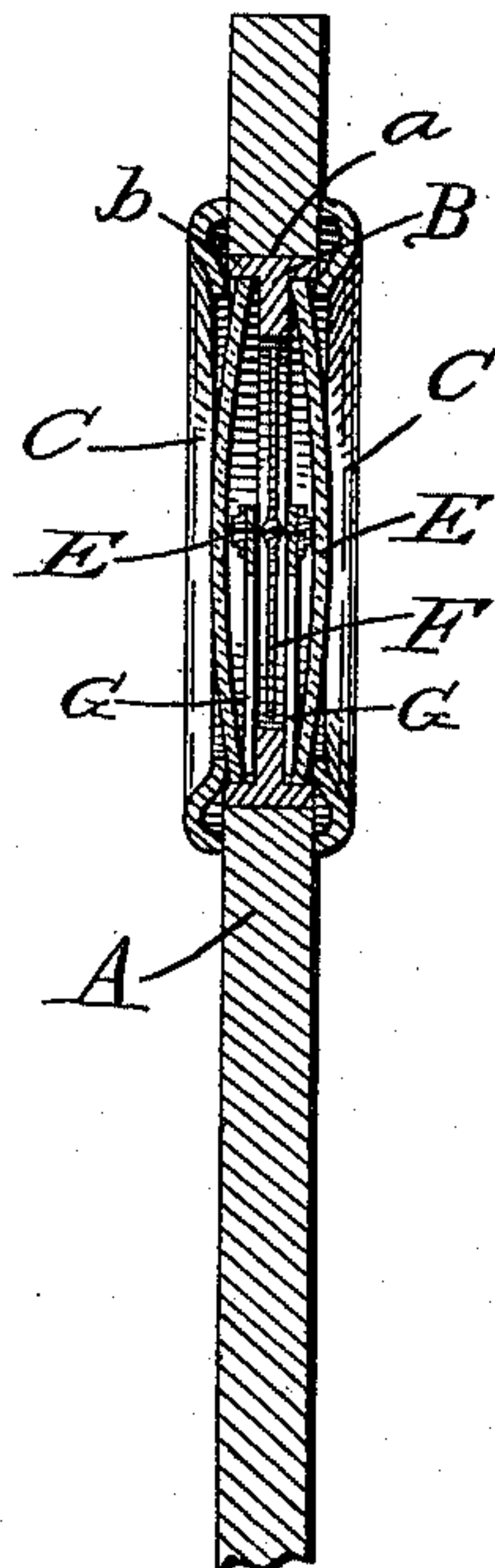


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN P. JOHNS, OF AUSTIN, TEXAS, ASSIGNOR OF THREE-FOURTHS TO
WILLIAM L. LUBBOCK, OF SAME PLACE.

SQUARE.

SPECIFICATION forming part of Letters Patent No. 567,832, dated September 15, 1896.

Application filed October 15, 1895. - Serial No. 565,751. (No model.)

To all whom it may concern:

Be it known that I, JOHN P. JOHNS, a citizen of the United States, residing at Austin, in the county of Travis and State of Texas, have invented certain new and useful Improvements in Squares; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it ap-
10 pertains to make and use the same.

This invention relates to certain new and useful improvements in squares; and it has for its object, among others, to provide a simple and cheap steel square embodying also a
15 level, an inclinometer, and mitrometer. At the angle of the square I form a circular opening in which is seated a ring graduated as shown and held within the thickness of the material of the square, the ring being held in
20 position in any suitable manner and inclosed between two transparent disks suitably supported and between which is arranged the needle, which is pivoted and jeweled the same as the balance-wheel of a watch. This needle
25 lies in the plane of the graduated ring, so as to be read from either side of the said square. Various means may be devised for pivoting the needle, but that herein disclosed is believed to be a very efficient construction for
30 this purpose.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claim.

35 The invention in this instance resides in the peculiar combinations and the construction, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the drawings, and then particularly pointed
40 out in the claim.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

45 Figure 1 is a plan view of my improved square. Fig. 2 is a section through the square at the angle, the section being taken in line with the needle.

Like letters of reference indicate like parts throughout both the views.

Referring now to the details of the drawings by letter, A designates a steel square of usual construction, except as hereinafter specified. At the angle it is formed with a circular hole *a*, in which is seated and secured
50 the ring B, which is graduated in degrees and fractions thereof upon opposite sides. This ring is formed with the flange *b*, extending at right angles therefrom upon its opposite
55 sides, and these flanges are soldered or otherwise secured within the hole in the square. Ornamental ring-caps C may be employed, as shown, for protecting the ring and for giving a finish to the device as a whole.

E are transparent disks, which are held upon
60 opposite sides of the ring B in any suitable manner, preferably as shown, that is, by resting upon the edges of the flanges of the said ring, and retained in such position by the cap-
65 pieces.

F is the needle. It is located between the transparent disks and in line with the graduated ring. Various means may be provided for pivoting the needle, but in this instance I have shown it as pivoted and jeweled in the
70 angular brackets G, which extend from the inner edge of the graduated ring and terminate at a common point at the center of the opening inclosed by the said ring, and at the
75 apex thereof the needle is pivoted, being, as above stated, jeweled the same as the balance-wheel of a watch.

The mode of use will be readily understood by those familiar with this class of devices. The needle can be readily seen from either
80 side of the square, so that the latter can be used either side up.

Modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

What is claimed as new is—

The square herein described, comprising the metallic square having a circular hole at its angle, a graduated ring seated and secured
85 in said hole and having a flange extending at right angles therefrom upon its opposite side
90

and secured within the hole in the square,
caps for protecting the ring, transparent disks
upon opposite sides of the ring, angular brack-
ets extending from the inner edge of the grad-
5 uated ring and terminating in a common point
at the center of the opening, and a needle piv-
oted in said brackets at the apex thereof, all
substantially as herein shown and described.

In testimony whereof I have signed this
specification in the presence of two subscrib- 10
ing witnesses.

JOHN P. JOHNS.

Witnesses:

B. W. HUNTER,
WM. T. JOHNS.