

C. E. KEEFER.
FOLDING RULE.

APPLICATION FILED DEC. 29, 1904.

Fig. 1.

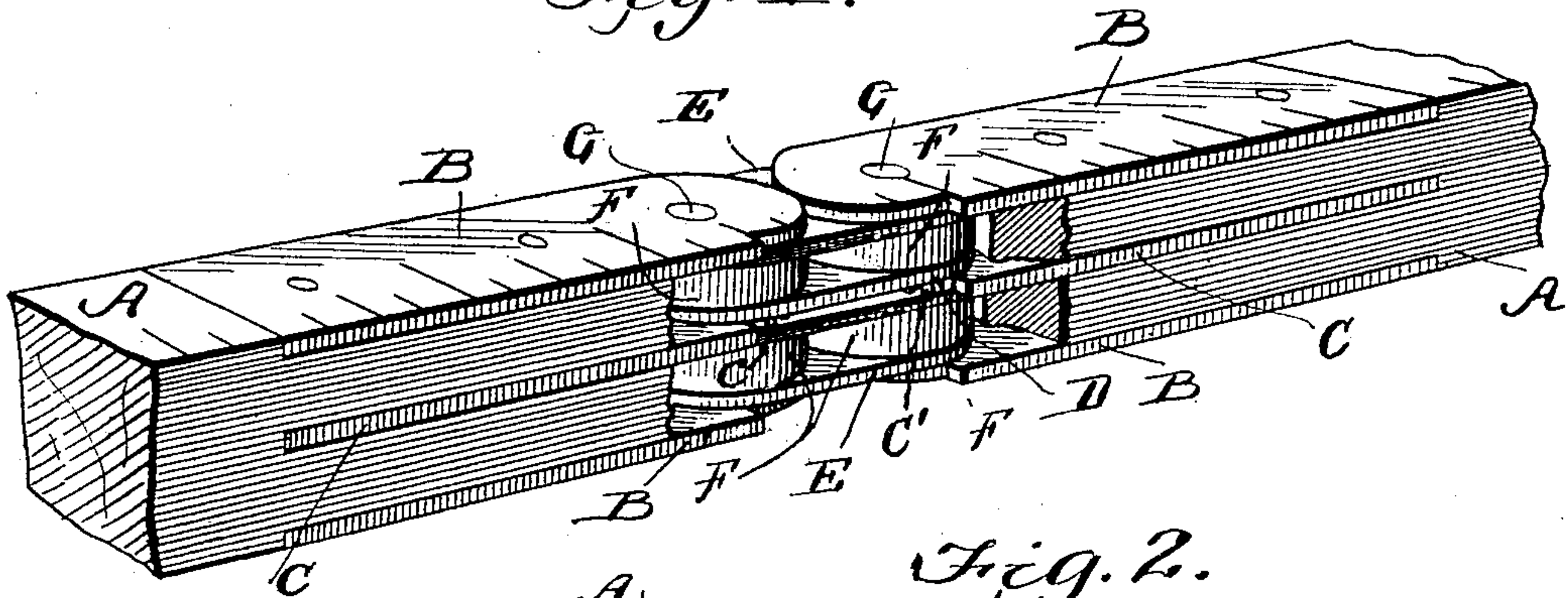


Fig. 2.

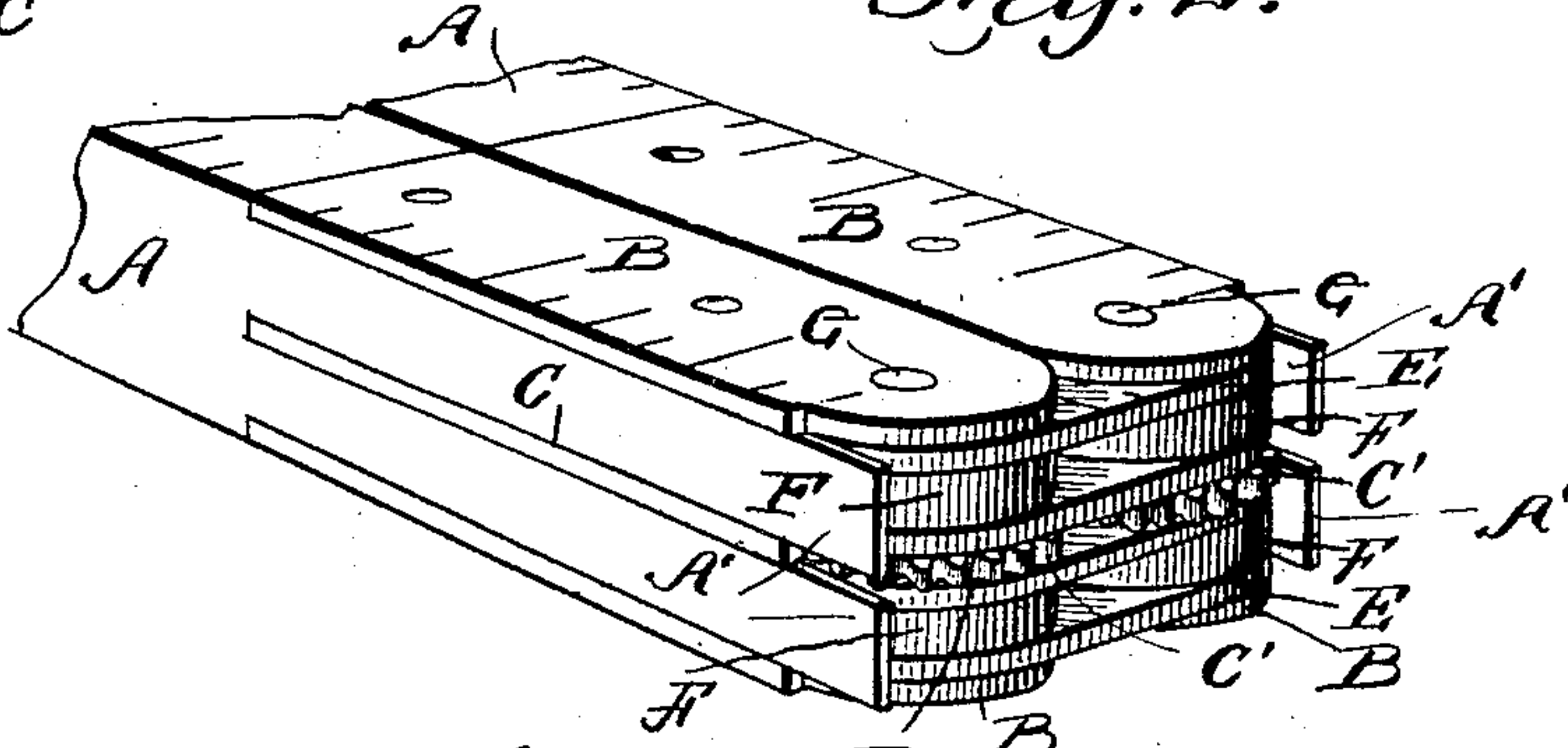


Fig. 3.

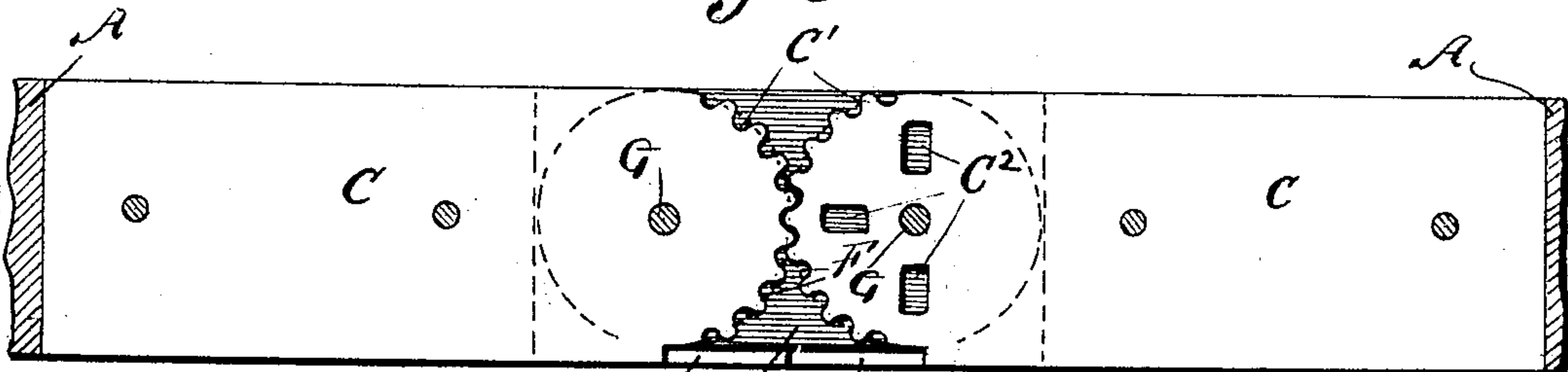


Fig. 4.

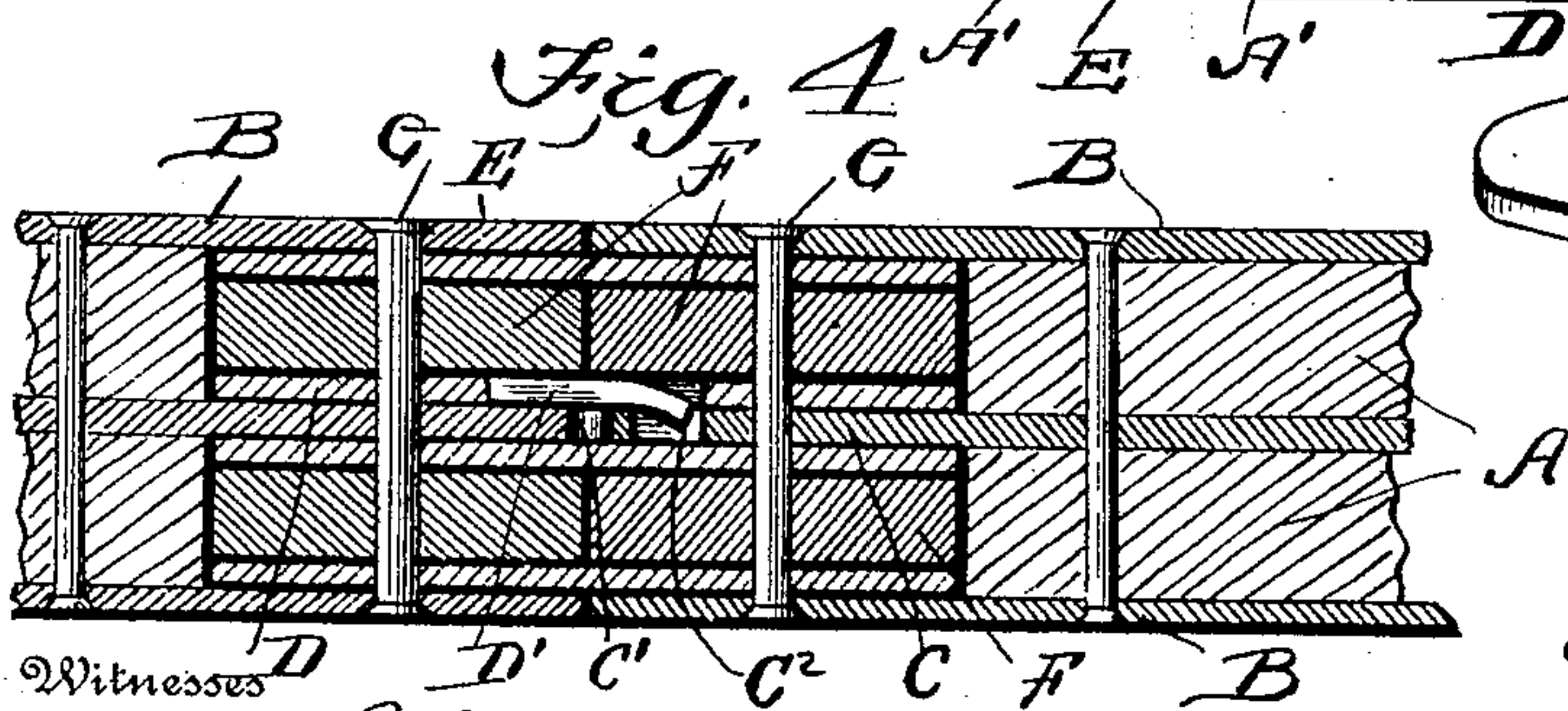
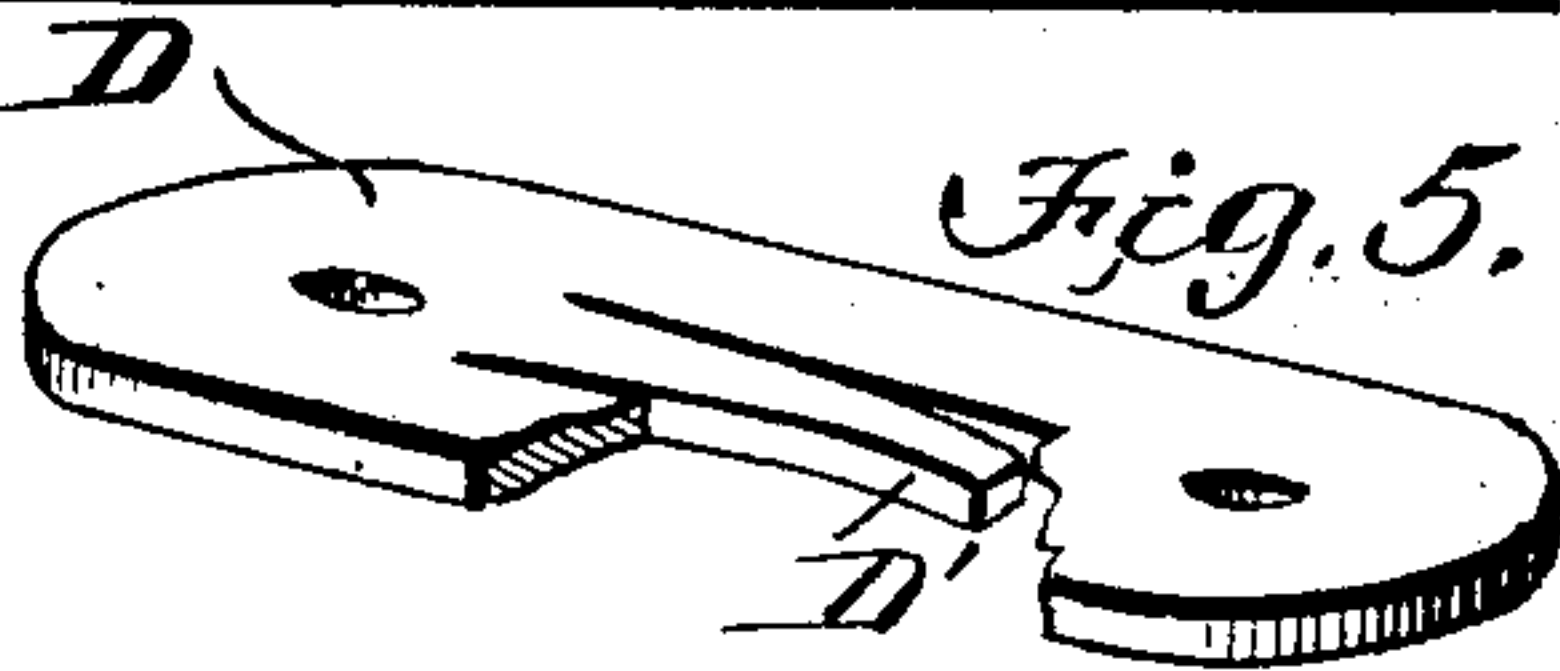


Fig. 5.



Inventor

C. E. Keefer.

Witnesses

W. B. Blundell,
E. B. McBath.

By

Marshall Brock
Attorney

UNITED STATES PATENT OFFICE.

CARL E. KEEFER, OF MORRELL, PENNSYLVANIA.

FOLDING RULE.

No. 803,292.

Specification of Letters Patent.

Patented Oct. 31, 1905.

Application filed December 29, 1904. Serial No. 238,755.

To all whom it may concern:

Be it known that I, CARL E. KEEFER, a citizen of the United States, residing at Morrell, in the county of Huntingdon and State of Pennsylvania, have invented a new and useful Improvement in Folding Rules, of which the following is a specification.

This invention relates to a joint for a sectional or foldable rule, and has for its object a rule adapted for use also as a square.

A further object is to provide the joint with an automatic locking device whereby the rule is locked with the sections in perfectly straight alinement or at right angles to each other.

The invention consists in providing the joint with a locking-plate having a tongue, said plate being carried by the meeting ends of the two sections, and with intermeshing segments, one carried by each section, one of said segments having a plurality of notches adapted to be engaged by the tongue of the locking-plate.

My invention also consists of the novel features of construction hereinafter described, pointed out in the claims, and shown in the accompanying drawings, in which—

Figure 1 is a perspective view of my device, the sections being shown in alinement. Fig. 2 is a detail perspective view, the rule being shown folded. Fig. 3 is a plan view of the center piece, the parts above being removed and the wooden portions being shown in section, the rivets and pivot-pins being in section. Fig. 4 is a vertical longitudinal section. Fig. 5 is a detail perspective view of the locking-plate detached.

In Figs. 1, 2, 3, and 4 only the meeting ends of the rule are shown, the remainder being broken away.

In the drawings, A represents the wooden portion of the two sections adjacent their meeting ends. These end portions are reduced in thickness and metal plates B are arranged on the sides of the rule, having rounded meeting ends extending beyond the wooden portion. A center piece C is inserted in each end portion A midway the side pieces B and parallel to them. These center pieces C have rounded meeting ends, in which are cut intermeshing teeth C', whereby a toothed segment is formed on the projecting portion of

each of the center pieces. Adjacent and on the inner sides of the plates B are plates E, which extend across the joint or overlap the same, and a similar plate E is also placed on one side of the center piece C. On the opposite side of the center piece C is placed a locking-plate D. (Shown in detail in Fig. 5.) This locking-plate D is similar in construction to the plates E, with the exception that a tongue D' is cut, stamped, or punched out of the longitudinal center of the plate. This tongue is of spring metal and curves normally toward the plates C and overlaps the segments C'. On one of the plates C adjacent the segment are cut three notches C², adapted to be engaged by the free end of the tongue D'. The plates E and D upon one side of the center piece C and the plates E upon the opposite side are spaced apart by disks F, four in number. The pivot-pins G pass through the rounded end portions of the plates B, through the centers of the disks F, and through the center of the arc described by the segments C', and each pin G passes through all of the plates E and the plate D.

The segments C' prevent the turning of one section at a greater speed than the other, the two sections moving uniformly in folding or unfolding the rule. When the two sections are moved so as to form a square, one section being at a right angle to the other, the tongue D' will engage one of the outer notches C², and when the two sections have been brought into perfect alinement, so as to form a continuous straight rule, the tongue D' will engage the intermediate notch or slot C².

The advantages of this construction will be obvious to those skilled in the use of instruments of this class.

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

1. A sectional ruler having toothed segments at its meeting ends adapted to intermesh, one of said segments being slotted, and a plate having a tongue adapted to engage said slots.

2. A ruler comprised of a plurality of sections, side plates at the meeting ends of the sections and extending beyond the said ends, the projecting ends of the said plates being

rounded, plates embedded in the ends of the sections and forming intermeshing segments, one of said segments being slotted, a plate arranged adjacent said segments and having a
5 tongue adapted to engage said slots, plates overlapping the segments, disks, and pivot-pins passing through the said plates, and

through the centers of the disks, as and for the purpose set forth.

CARL E. KEEFER.

Witnesses:

C. O. TEMPLETON,
ALLIE WALKER.