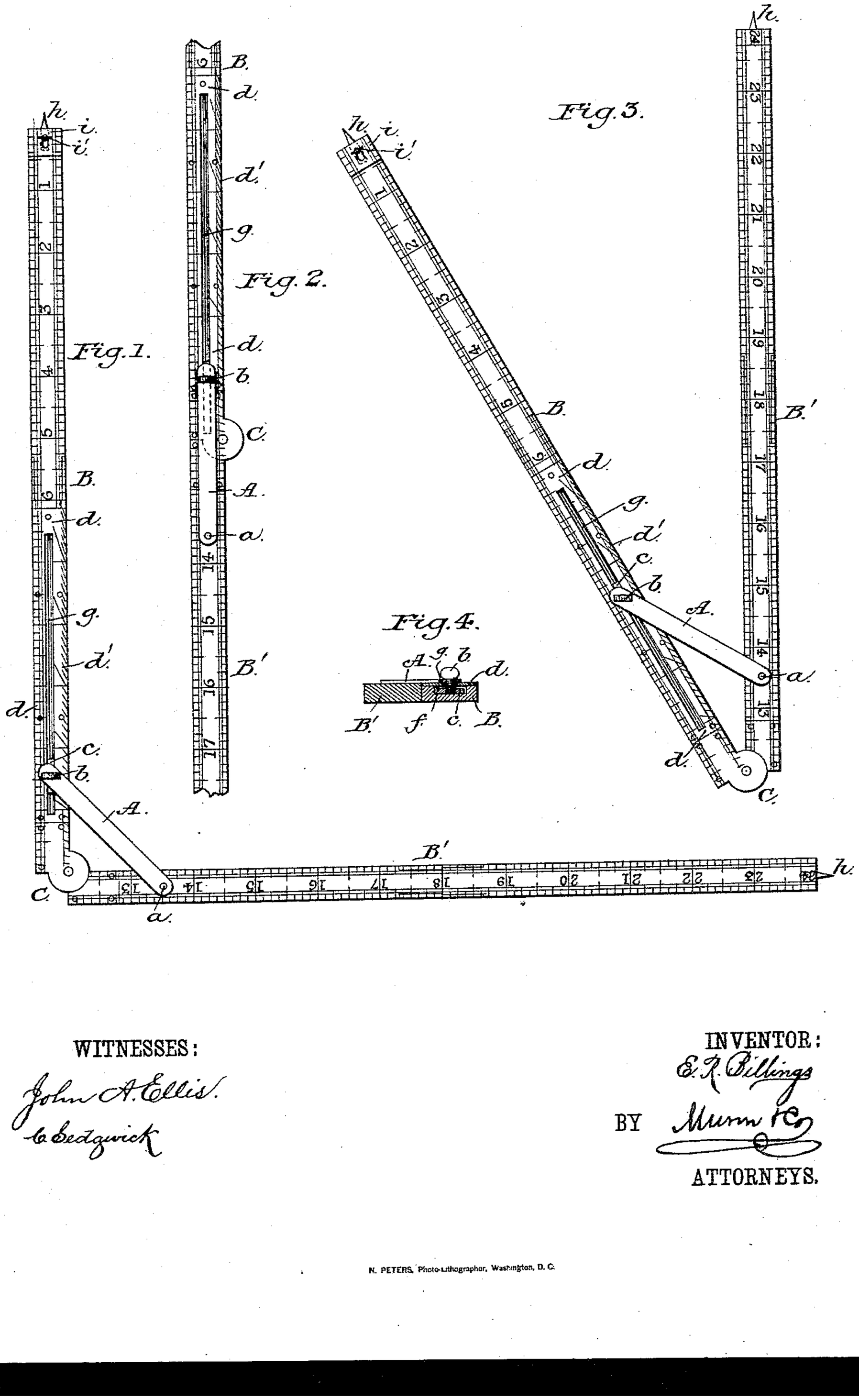
(No Model.)

E. R. BILLINGS.

POCKET RULE.

No. 369,499. Patented Sept. 6, 1887.



WITNESSES:

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EDWARD R. BILLINGS, OF NEW YORK, N. Y.

POCKET-RULE.

SPECIFICATION forming part of Letters Patent No. 369,499, dated September 6, 1887.

Application filed November 10, 1886. Serial No. 218,470. (No model.)

To all whom it may concern:

Be it known that I, EDWARD R. BILLINGS, of the city, county, and State of New York, have invented a new and Improved Pocket-Rule, of which the following is a full, clear, and exact description.

My invention relates to a pocket-rule provided with a pivoted plate connecting two sections of the rule, whereby the rule may be used as a protractor of angles; and the invention consists of the special construction of the rule and the connections of the sliding end of the pivoted plate with the rule, all as hereinafter described.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 shows my improved rule open at a right angle. Fig. 2 shows the central portion of the rule fully open. Fig. 3 shows the rule open at an acute angle; and Fig. 4 is an enlarged sectional view of the rule closed, taken through the sliding block, to which one end of the connecting-plate is attached.

A represents the plate connecting the two main sections or arms, B B′, of the rule near the central hinge or joint, C. One end of the plate A is attached by a pivot, *a*, to the arm B′ of the rule, while its opposite end is joined to the arm B by a sliding connection, which allows the plate to adapt itself to any angle at which the arms B B′ may be placed to each other, as indicated in Figs. 1 and 3, and adapts it to permit of the full opening and closing of the rule, as indicated in Figs. 2 and 4. The sliding end of the plate A might be variously connected to the arm B of the rule; but I prefer to connect it by means of a set-screw, *b*, to a sliding block or nut, *c*, which slides freely beneath a face-plate, *d*, secured to the arm B over a groove, *f*, formed in said arm to receive the block or nut *c*. A narrow slot, *g*, is formed over the center of the groove *f*, to form a way for the screw *b*. At the extremities of the arms B B′ are the points *h h*, so that when said arms are opened at any angle less than a right angle and secured by turning the screw *b* the rule may be used as a compass for marking and measuring circles. The face-plate *d* is graduated, as shown at *d′*, to indicate angles of different degrees, from zero up to a right angle, so that by adjusting the movable end of the plate A the rule may be accurately used as a protractor.

The points *h* are set in shallow recesses formed at the ends of the arms B B′, covered by small slotted plates *i* and held by small set-screws *i′*, that work in the slots of the plates, so that the points may be withdrawn within the ends of the rule when they are not required for use.

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

As an improved article of manufacture, a rule jointed at C, forming corresponding hinged arms B B′, the arm B having the groove *f* formed in it and covered by the attached plate *d*, having a slot, *g*, formed in it narrower than the groove *f*, and the sliding block *c*, held in the groove by the slotted plate *d*, in combination with the plate A, pivoted at one end to the arm B′, and connected at the other by the set-screw *b* to the block *c*, substantially as described.

EDWARD R. BILLINGS.

Witnesses:
H. A. WEST,
C. SEDGWICK.