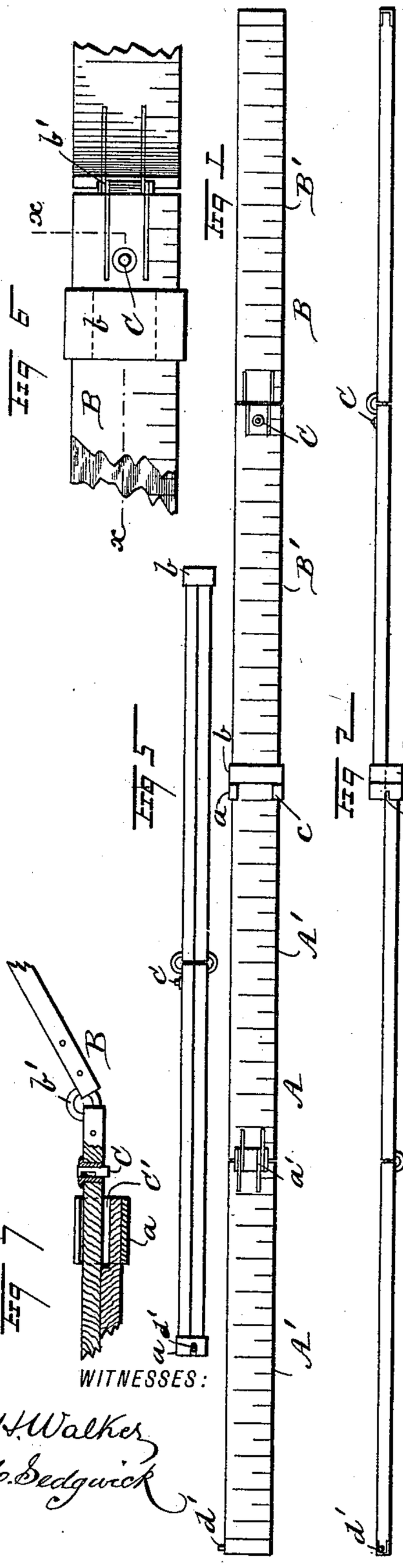
(No Model.)

E. T. BURROWES.

SCALE MEASURE.

No. 449,034. Patented Mar. 24, 1891.



UNITED STATES PATENT OFFICE.

EDWARD T. BURROWES, OF PORTLAND, MAINE.

SCALE-MEASURE.

SPECIFICATION forming part of Letters Patent No. 449,034, dated March 24, 1891.

Application filed October 11, 1890. Serial No. 367,787. (No model.)

To all whom it may concern:

Be it known that I, EDWARD T. BURROWES, of Portland, in the county of Cumberland and State of Maine, have invented a new and Improved Rule, of which the following is a full, clear, and exact description.

The object of the invention is to provide a rule capable of various adjustments, and which, though specially useful in the taking of inside measurements, such as the width and height of the interior of window-frames, will be serviceable for all purposes for which the ordinary rule is useful.

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 is a face view of a rule embodying my improvements, the same being shown in the extended position. Fig. 2 is an edge view thereof. Fig. 3 is an enlarged edge view showing the rule folded. Fig. 4 is a perspective view showing the sliding sections partly drawn out and the folding members of such sections partly unfolded. Fig. 5 is an edge view, to be hereinafter referred to. Fig. 6 is an enlarged detail face view, and Fig. 7 is a sectional edge view on the line *x x* of Fig. 5.

In constructing a rule in accordance with my invention the sections A B are held together by a sliding connection, each section carrying a guide, as *a b*, fixedly secured thereto and loosely embracing the opposite section. Each of the sections A B is composed of members A′ A′ B′ B′, united by a rule-joint *a′ b′*. A movable stop-pin C is fitted in one of the sliding sections adjacent to the rule-joint thereof, and is adapted to engage the slotted end C′ of the opposite section, as will best be understood from Fig. 7.

It will be observed that the rule-joints *a′ b′* are of less width than the rule-sections, and that the inner ends of the guides or keepers *a b* are open or cut away, as shown at *c* in Figs. 1 and 4, by reason of which the said guides are permitted to freely pass the rule-joints in their movements.

The rule-joints *a′ b′* are made large enough to cause the center of the hinge-pin to be thrown far enough from the end of the rule to prevent the close folding of the hinged members—that is, such members will be brought into parallelism without contacting with each other, as seen in Fig. 3, and thus a sufficient space is assured for accommodating the guides *a b*.

With such a rule it will be seen that the sections may be drawn out bodily and the members of such sections may be independently unfolded. Thus in obtaining inside measurements, such as distances between the several opposite beads and strips of a window-frame, the rule may be quickly adjusted to accurately indicate the distance from, say, one foot to the full length of the rule when extended, say four feet, and this desirable feature results from the sliding connection of the main sections and the hinging of the members composing such sections. Also, the two sections may be moved to a position to lie one upon the other with the hinged members unfolded, as illustrated in Fig. 5, and the slotted portion *d* of the guide *a* caused to engage the locking-pin *d′* on the outer end of the opposite section. In this position it will be seen the device affords a very convenient form of rule, and one of considerable length, say two feet. The members of the sections in this position are held against accidental folding by the guides or keepers. In adjusting the rule to this position the movable stop is moved out of the path of the opposing section, as in Fig. 2.

When the rule is not needed for use, it may be folded into small compass, as shown in Fig. 3.

I do not wish to be understood as claiming, broadly, a measuring device having sliding members; but the particular combination shown and claimed hereinafter forms a superior rule that may be readily adjusted to adapt it to the various requirements.

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

1. A rule comprising two sections, each consisting of two hinged members, the inner members of the two sections lying face to face and each provided with a guide loosely embracing the opposite member, and the distal ends of the outer members of the two sections being disconnected and free to swing in opposite directions, substantially as set forth.

2. A rule comprising sliding sections, each

carrying a guide that loosely embraces the opposite sections, and each of such sections consisting of hinged members the hinges of which space the sections apart for accommodating the sliding guides, substantially as described.

3. A rule comprising two sliding sections, one of said sections having a movable stop-pin for engaging the opposite section, substantially as described.

4. A rule comprising sliding sections, each composed of hinged members, one of said sections having a movable stop that engages the opposite section, substantially as described.

5. A rule comprising sliding sections, each having a guide or keeper that embraces the opposite section, and each of said sections being formed of hinged members having hinges of a width less than that of the rule members, and the above-named guides or keepers being formed with openings, enabling them to move past said hinges, substantially as described.

6. The combination, in a rule, of main sliding sections, each carrying a guide or keeper embracing the opposite section, said keepers having openings, and each of the sections consisting of hinged members the hinges of which are sufficiently narrow to pass the guides, and a stop-pin, as *d'*, at the end of one of the sections, adapted to engage a slot in the keeper on the opposite section, substantially as described.

EDWARD T. BURROWES.

Witnesses:
WARREN W. COLE,
HELO H. KING.