

E. H. BOWERS.  
 Joints for Carpenters' Rules.

No. 211,455.

Patented Jan. 21, 1879

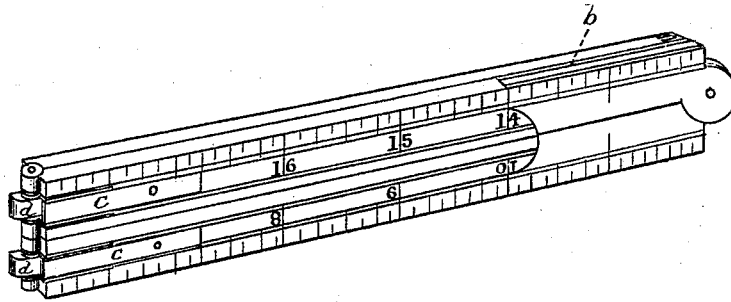


Fig-1.

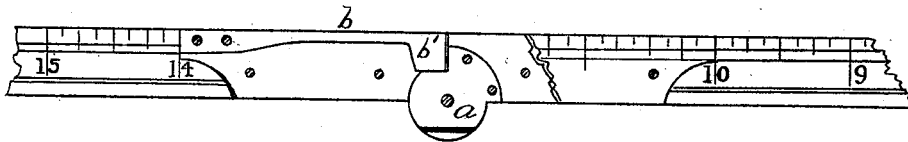


Fig-2.

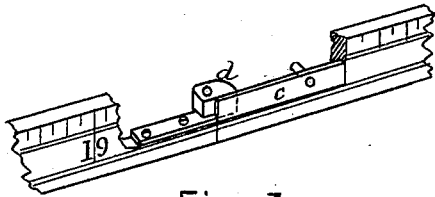


Fig-3



Fig-4

WITNESSES  
*John W. Reid Jr.* *Edward H. Bowers* INVENTOR  
*B. W. Williams* By his Atty.  
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# UNITED STATES PATENT OFFICE.

EDWARD H. BOWERS, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN JOINTS FOR CARPENTERS' RULES.

Specification forming part of Letters Patent No. **211,455**, dated January 21, 1879; application filed December 5, 1878.

*To all whom it may concern:*

Be it known that I, EDWARD H. BOWERS, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Rules, of which the following is a specification:

This improvement relates to that class of rules for linear measurements which are provided with joints in order that they may be folded into convenient length for carrying.

As is well known, the jointed rules now in common use have no provision for preventing them from folding up at any time unless they are held in a certain position. For example, if the user is measuring above his head, it is always difficult, and often impossible, to prevent the rule from folding, and thus destroying the opportunity for measurement.

The object of this invention is to obviate this difficulty by producing a rule which will retain its unfolded shape in any position until it is folded up by the user.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a perspective view of a rule embodying my improvement folded. Fig. 2 is a view of a portion of the same unfolded, a part being represented as broken out in order to exhibit the central joint. Fig. 3 is a view of one of the minor joints. Fig. 4 is a horizontal section of the rule at one of its minor joints.

*a* represents the hinge or joint at the center of the rule. This hinge, instead of being

made in a true circle, as is ordinarily the case, is made cam-shaped, as seen in Fig. 2. A stiff spring, *b*, is secured to the edge of the rule, and as the rule is opened the enlarged square end *b'* fits into a corresponding notch in the cam-hinge *a*. Once there, it requires the exercise of some force to lift the spring and close the rule.

The minor springs are similar in principle, as are also the hinges. These springs *c* are flat, fastened to the back of the rule, and the central portions, *d*, of the hinges are made flat upon their back side, so as to offer resistance to the spring when being folded up. The result is that the rule can be unfolded and held in any position without folding, and even used as a straight-edge.

I am aware that the spring is not new in itself considered, a somewhat similar spring and cam being found in the back of a jack-knife. I do not claim them broadly; but

What I claim, and desire to secure by Letters Patent, is—

As an improved article of manufacture, a rule for linear measurements provided with the cam-hinge *a* and spring *b b'*, fastened to the edge of said rule, and the cam-hinge *d* and spring *c*, fastened to the back of said rule, substantially as and for the purpose set forth.

EDWARD H. BOWERS.

Witnesses:

HENRY W. WILLIAMS,  
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