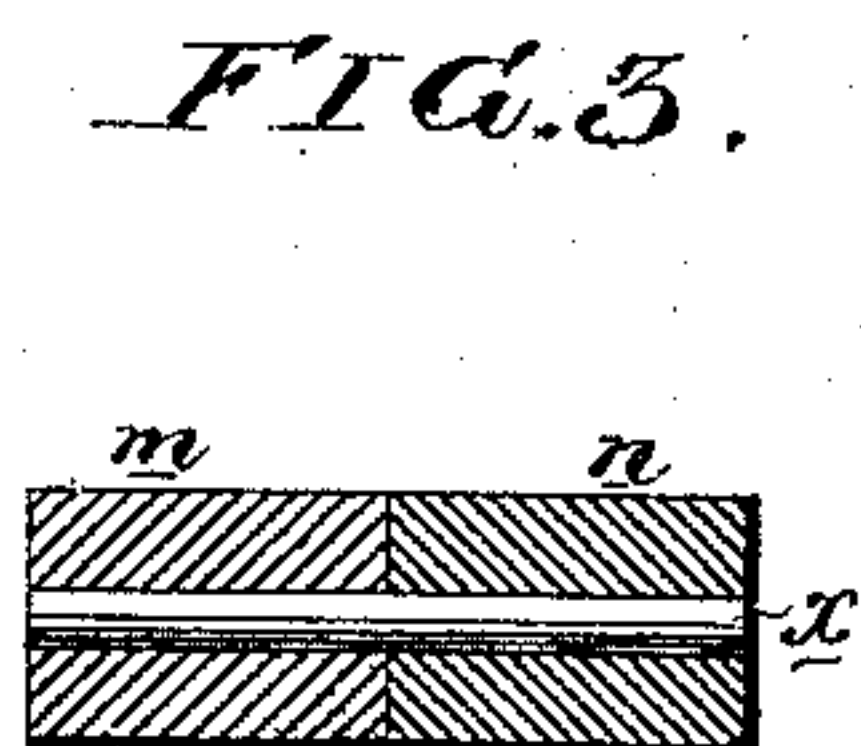
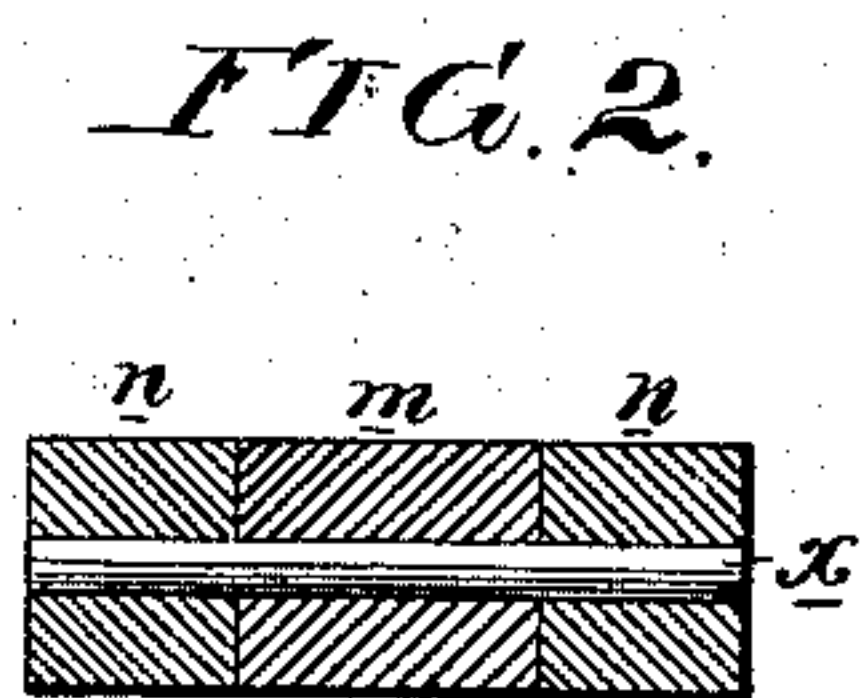
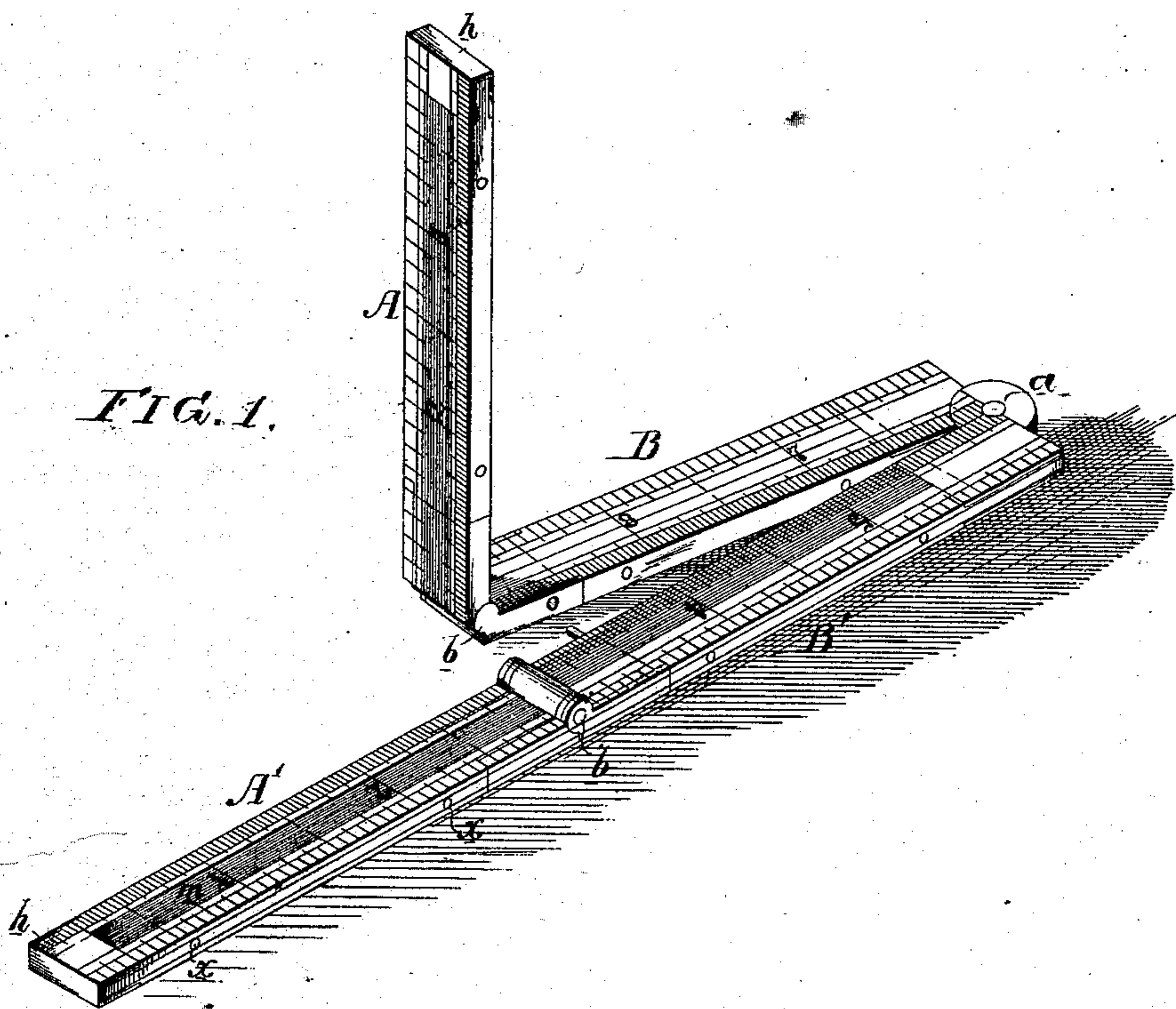


G. S. HASTINGS.  
Measuring-Rule.

No. 160,904.

Patented March 16, 1875.



Witnesses, Harry Smith  
Thomas M. Swain

G. S. Hastings  
by his Atty,  
Horsus and Son.



# UNITED STATES PATENT OFFICE.

GLOVER S. HASTINGS, OF GRANBY, ASSIGNOR TO HIMSELF AND FRANK S. JOHNSON, OF PLAINFIELD, CONNECTICUT.

## IMPROVEMENT IN MEASURING-RULES.

Specification forming part of Letters Patent No. **160,904**, dated March 16, 1875; application filed July 2, 1874.

*To all whom it may concern:*

Be it known that I, GLOVER S. HASTINGS, of Granby, Hartford county, Connecticut, have invented an Improved Measuring-Rule, of which the following is a specification:

The object of my invention is economy in the consumption of ivory in the manufacture of measuring-rules, an object which I attain by so uniting comparatively narrow strips of that material, or by so combining such narrow strips with suitable hard wood, or hard rubber, that the rule, while it is much cheaper than one made entirely of single wide strips of ivory, possesses all the advantages of the same as regards distinctness of the graduations and figures, and hardness at the parts most liable to be worn.

Figure 1 of the accompanying drawing represents, in perspective, a twelve-inch rule made in accordance with my invention; Fig. 2, a transverse section of one of the legs of the rule drawn to an enlarged scale; and Fig. 3 a transverse section illustrating a modification of my invention.

The rule is made, in the present instance, in four sections, A A' and B B', connected together in the usual manner by one main central joint, *a*, and joints *b b*; but each section, instead of being made entirely of a single strip of ivory, consists of narrow strips of that material; or the said strips may be partly of wood and partly of ivory. For instance, each of the sections A and A' consists of a central strip, *m*, and two exterior strips, *n n*, (see Fig. 2,) the three strips being connected together and further secured by two or more transverse rivets, *x*, and the section being provided at its outer end with the usual metal tip *h*. The section B' consists of but two strips, *m* and *n*, both of ivory, or the former being of wood and the latter of ivory, as shown in Fig. 3.

When each section is thus composed of but two strips, one of wood and the other of ivory, the latter should be on the outside, as the most important graduations are at the outer edge, and can be exhibited more distinctly on ivory than on wood. The outer edge, moreover, is more liable to be worn than the inner edge, and should therefore be of the hardest material.

Heretofore strips of ivory of the size required in making my improved rule have been discarded as of little use for manufacturing purposes, and have been converted with other scrap-ivory into ivory-black to be used as a pigment.

The utilizing of these narrow strips in the manner described results in cheap measuring-rules possessing the advantages of those made of single wide strips of ivory, as regards hardness and distinctness of the graduations.

Although ebony and other hard wood, as well as hard rubber, may be combined with ivory in the manner described, I prefer, when materials other than ivory are used, to employ box-wood as the most appropriate material for the purpose.

I claim as my invention, and as a new manufacture—

A measuring-rule composed of strips of ivory secured permanently together, or of strips of ivory and wood or rubber, so combined that the ivory shall be on the outside for receiving the graduations, all as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GLOVER S. HASTINGS.

Witnesses:

R. C. USHER,  
JOHN CALLEN.