

G. W. Schramm.
Ruler.

N^o 52,453. Patented Feb. 6, 1860

Fig. 1.

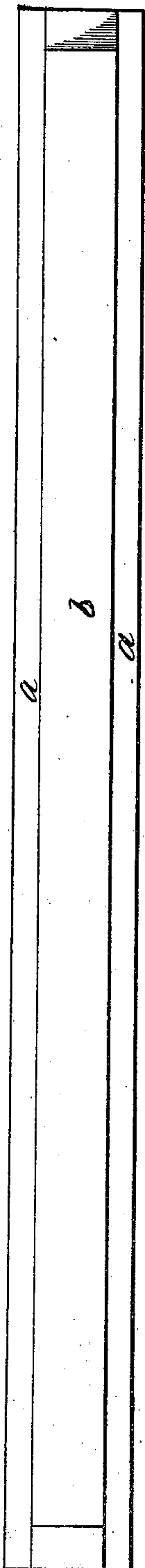
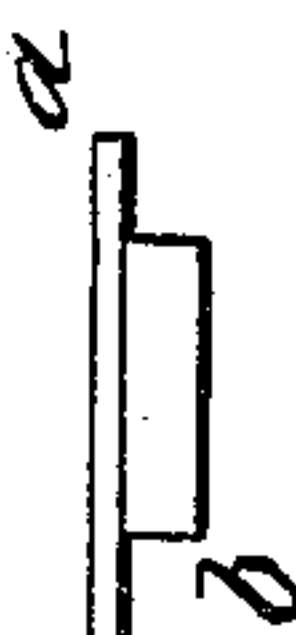


Fig. 2.



Fig. 3.



Witnesses

Wm H. Birbeck
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UNITED STATES PATENT OFFICE.

G. W. SCHRAMM, OF NEW YORK, N. Y., ASSIGNOR TO D. N. ROPES, OF
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IMPROVEMENT IN RULERS.

Specification forming part of Letters Patent No. 52,453, dated February 6, 1866.

To all whom it may concern:

Be it known that I, G. W. SCHRAMM, of the city, county, and State of New York, have invented a new and useful Improvement in Rulers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is an under face view of a ruler constructed in accordance with my invention; Fig. 2, a side view of the same, and Fig. 3 a cross-section thereof.

The same letters indicate like parts in all the figures.

The object of my invention is to produce a ruler which can be readily bent and adapted to any surface, however curved or undulating.

If made of any one of the substances possessing the property which may be termed "flexible elasticity," such as steel or the hard compound of india-rubber, the ruler, when made of the required thickness to give the bevels to prevent the ink from running onto the paper or other surface that is being ruled, will be too rigid to be readily adapted to curved surfaces, such as the pages of an account-book when open; and if made of a more flexible substance, such as soft vulcanized india-rubber, it will bend in all directions and fail to present an edge by which to rule a straight line.

The difficulties above pointed out are effectually overcome by my invention, which consists in making a ruler by the union or combination of two substances, one having the property of flexible elasticity, such as hard vulcanized india-rubber, called "vulcanite," or steel, or whalebone, and the other very flexible, such as soft vulcanized india-rubber. By

the union of two such substances the required thickness and flexibility are readily obtained.

The mode of application of my said invention which I have tried with success and deem to be the best is represented in the accompanying drawings, in which *a* represents the upper part of the ruler, made of the material known as "vulcanite," or the hard compound of india-rubber or gutta-percha. The two edges should be made straight and parallel. I prefer to make this part about one-sixteenth of an inch in thickness, so that it will readily spring to any curvature required. And to the under surface of this is secured a strip, *b*, of soft vulcanized india-rubber of about three-sixteenths of an inch in thickness and narrower than the upper part, *a*, so that the latter shall project about an eighth of an inch along both edges.

The two parts *a* and *b*, I prefer to unite by means of india-rubber or other cement, although they may be united by other means; and although I prefer the above mode of application of my said invention and believe it to be the best, yet I do not wish to be understood as limiting my claim of invention thereto, as other substances having the requisite properties and other modes of uniting them may be substituted.

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

A ruler formed by the union of two substances, one flexible and elastic and the other flexible, or one more flexible and elastic than the other, such as the substances well known as "hard" and "soft" vulcanized india-rubber, substantially as and for the purpose specified.

G. W. SCHRAMM.

Witnesses:

WM. H. BISHOP,
ANDREW DE LACY.