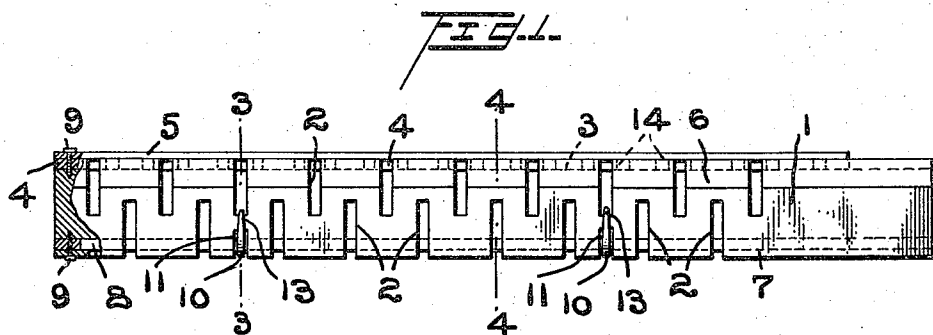
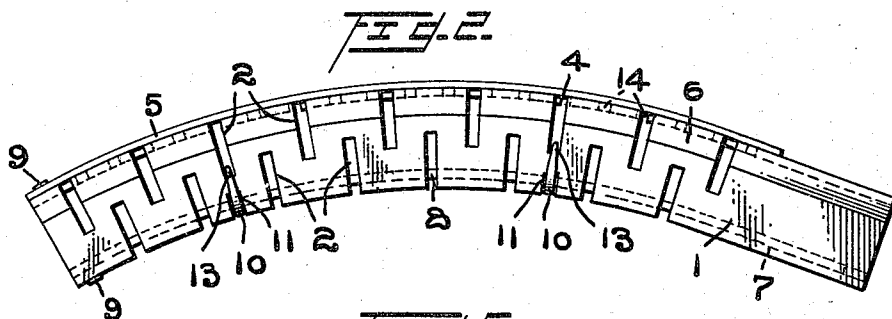
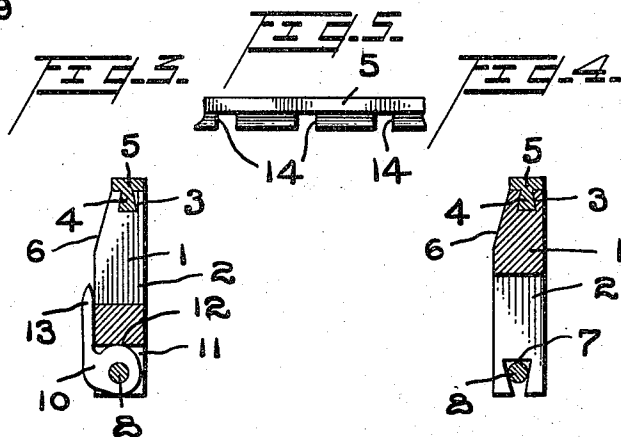


A. E. HEGARDT.
FLEXIBLE RULE.
APPLICATION FILED SEPT. 29, 1914.

1,147,722.

Patented July 27, 1915.



Inventor

Axel E. Hegardt,

Witnesses

L. R. Ziegler
C. R. Ziegler.

By *Joshua R. H. Potts*
Attorney

UNITED STATES PATENT OFFICE.

AXEL E. HEGARDT, OF PHILADELPHIA, PENNSYLVANIA.

FLEXIBLE RULE.

1,147,722.

Specification of Letters Patent.

Patented July 27, 1915.

Application filed September 29, 1914. Serial No. 864,021.

To all whom it may concern:

Be it known that I, AXEL E. HEGARDT, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Flexible Rules, of which the following is a specification.

My invention relates to improvements in flexible rules, the object of the invention being to provide a rule which may be positioned in any desired shape to give any curvature to the line.

A further object is to provide a flexible rule which may have equal flexibility in both directions and which may be securely locked in any shape.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings: Figure 1 is a plan view showing the rule straight, and having one end of the rule in section to illustrate details of construction. Fig. 2 is a plan view showing the rule curved. Fig. 3 is an enlarged view in transverse section on the line 3—3 of Fig. 1. Fig. 4 is a similar view on the line 4—4 of Fig. 1, and Fig. 5 is a fragmentary view in side elevation of the ruling strip 5.

1 represents a strip of hard rubber or other flexible material such for example as celluloid or other composition which is capable of bending without breaking. The strip 1 is provided in both edges with inwardly projecting recesses 2, the recesses in one edge having a staggered relationship to the recesses in the other edge. As the recesses 2 are of a length appreciably greater than one half of the thickness of the strip, the inner ends of the recesses of the two series extend beyond the longitudinal axis of the strip, and give great flexibility to the rule in bending in either direction.

The ruling edge of strip 1 is provided with a dove-tailed groove 3 to receive a dove-tailed flange 4 on a ruling strip 5. The body strip 1 is beveled or inclined on its upper face at its ruling edge as shown at 6, and the ruling strip 5 corresponds in width to the width of the body strip 1 at the ruling edge. The opposite edge of the body strip

1 is provided with a dove-tailed recess 7 in which a wire 8 is located, the wire being appreciably greater in diameter than the open end of the dove-tailed recess, so that it is held securely in the recess. The wire 8 is preferably of lead or other similar material which will remain in the position to which it is bent, and hence hold the rule in the curvature desired.

The ruling strip 5 and the wire 8, at one end, are secured by removable securing devices 9 which may constitute nails, screws, or other securing devices. These securing devices are projected through the strip 5 and wire 8 respectively, and into the main portion of the body strip 1. The securing devices are at one end only of the rule, the other ends of the ruling strip and the wire being free to move longitudinally of the body strip, and it will be noted that the end of the body strip opposite to the point of attachment of the strip and wire is formed without any recesses 2 for an appreciable distance. This permits the inclosure of the ends of the wire and the dove-tailed flange 3 of the strip, and allows the parts to be moved freely without any possibility of the ends of the strip or wire abutting against a shoulder. In order that the ruling strip 5 may be as flexible as desired, I provide recesses 14 in the dove-tailed flange 4.

To securely lock the rule in any position of adjustment, I provide cam levers 10 located in recesses 11 in the edge of body strip 1, and mounted to turn on the wire 8. These cam levers engage the inner walls 12 of the recesses 11, and securely bind so as to hold the wire against possibility of longitudinal movement, and hence maintain the rule as desired. Finger holds 13 are provided on the ends of the cam levers, which preferably lie against the upper surface of the rule when in clamped or operative position so as not to interfere with the ordinary use of the rule.

My invention is not limited to the particular construction of locking means, nor to the other details of construction, as I may resort to various modifications of detail, and hence I do not limit myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

Having thus described my invention, what

I claim as new and desire to secure by Letters Patent is:

1. A rule comprising a flexible strip having recesses in its opposite edges, a ruling strip movable longitudinally at one edge of the first-mentioned strip, and means for positively locking the rule in any position, substantially as described.

2. A rule comprising a flexible strip having recesses in opposite edges, a ruling strip movable longitudinally at one edge of the first-mentioned strip, and a locking wire at the other edge of the first-mentioned strip, substantially as described.

3. A rule comprising a flexible strip having recesses in opposite edges, a ruling strip movable longitudinally at one edge of the first-mentioned strip, a locking wire at the other edge of the first-mentioned strip, said ruling strip having a dove-tailed flange, and said first-mentioned strip having dove-tailed recesses in its edges, one recess receiving the dove-tailed flange and the other the wire, substantially as described.

4. A rule comprising a flexible strip having recesses in opposite edges, a ruling strip movable longitudinally at one edge of the first-mentioned strip, a locking wire at the other edge of the first-mentioned strip, and devices constructed to lock the wire against longitudinal movement and hold the first-mentioned strip in any position of adjustment, substantially as described.

5. A rule comprising a flexible strip having recesses in opposite edges, a ruling strip movable longitudinally at one edge of the first-mentioned strip, a locking wire at the other edge of the first-mentioned strip, said ruling strip having a dove-tailed flange,

and said first-mentioned strip having dove-tailed recesses in its edges, one recess receiving the dove-tailed flange and the other the wire, and devices constructed to lock the wire against longitudinal movement and hold the first-mentioned strip in any position of adjustment, substantially as described.

6. A rule comprising a flexible strip having recesses in opposite edges, a ruling strip movable longitudinally at one edge of the first-mentioned strip, a locking wire at the other edge of the first-mentioned strip, and devices at one end of the first-mentioned strip removably securing the ruling strip and the wire thereto, substantially as described.

7. A rule comprising a flexible strip having recesses in opposite edges, a ruling strip movable longitudinally at one edge of the first-mentioned strip, a locking wire at the other edge of the first-mentioned strip, said ruling strip having a dove-tailed flange, said flange having a longitudinal series of recesses therein, and said first-mentioned strip having dove-tailed recesses in its edges, one recess receiving the dove-tailed flange and the other the wire, and devices constructed to lock the wire against longitudinal movement and hold the first-mentioned strip in any position of adjustment, substantially as described.

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

AXEL E. HEGARDT.

Witnesses:

M. E. DITTUS,
CHAS. E. POTTS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."