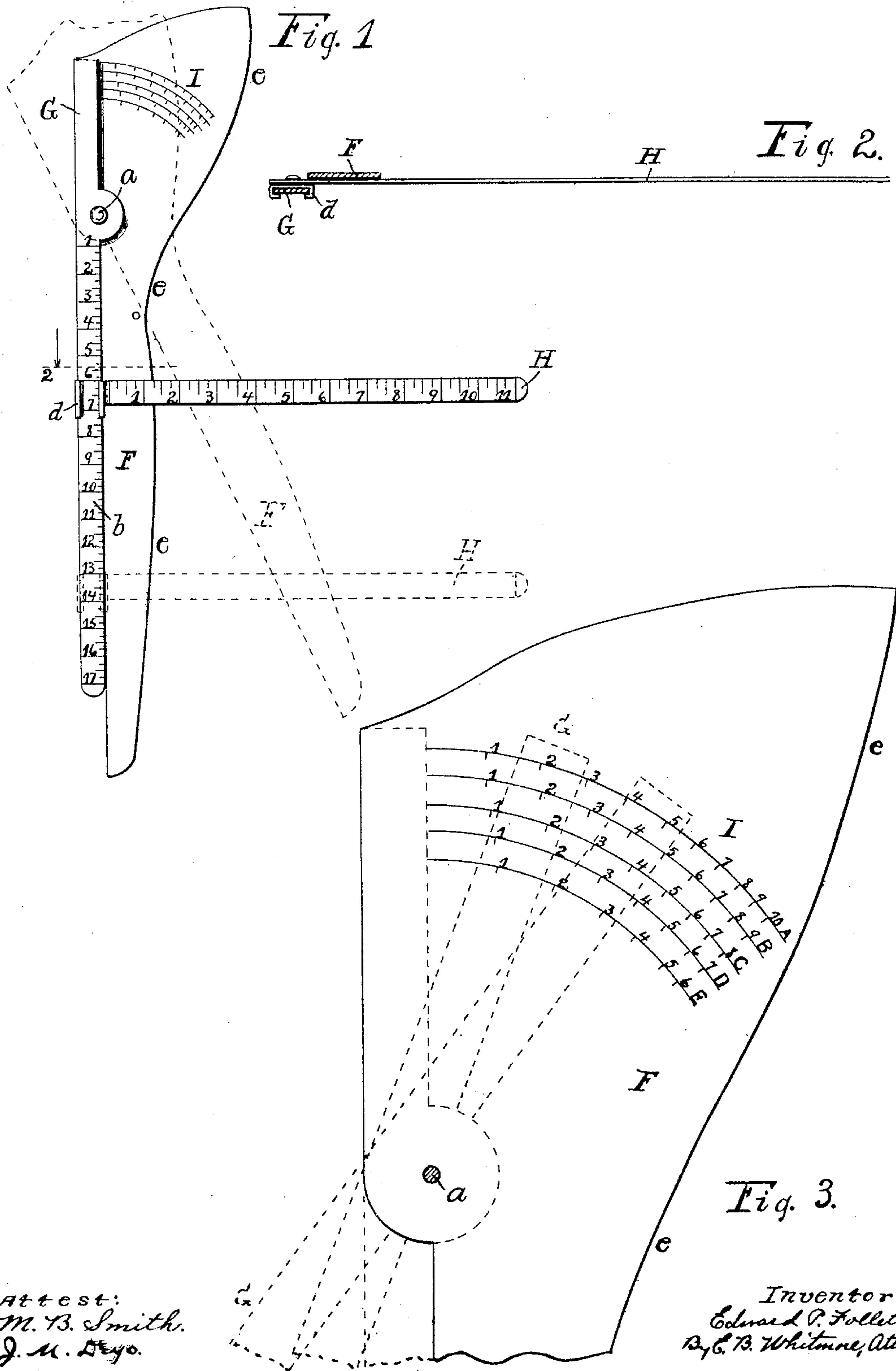


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DEVICE FOR GIVING LINEAR MEASURES OF FRACTIONS.

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UNITED STATES PATENT OFFICE.

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DEVICE FOR GIVING LINEAR MEASURES OF FRACTIONS.

No. 803,222.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDWARD P. FOLLETT, of Rochester, in the county of Monroe and State of New York, have invented a new and useful
5 Improvement in Devices for Giving Linear Measures of Fractions, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

My invention is a mechanical device for
10 quickly and conveniently showing in linear measures, as upon a scale of equal parts, fractions of fractions and fractions of mixed numbers of any given unit of measure, thereby avoiding tedious and troublesome calculations.

15 This invention, while applicable for general use in the matter of giving linear measures of fractions, is herewith shown as applied more particularly to the purpose of making corsets.

The invention is hereinafter fully described,
20 and more particularly pointed out in the appended claims, reference being had to the accompanying drawings, which, with the reference characters marked thereon, form a part of this specification.

25 Figure 1 is a plan of the device, parts being shown in various positions by full and by dotted lines. Fig. 2, drawn to a larger scale, is a horizontal transverse section of parts on the dotted line 2 in Fig. 1 seen as indicated by the associated arrow. Fig. 3 shows the head of the
30 graduated swinging or pivotal member enlarged.

In the drawings, F and G are two main parts or members of the device, usually made
35 of strips of sheet metal, partly overlapping and joined side by side by a pin *a*, common to both, so as to turn thereon as a pivot. The member or bar G, which may be regarded as the body of the device, is formed with straight
40 parallel edges, the right-hand edge being radial with the pivot-pin *a* and the bar being graduated at *b* below the pivot, as shown. The division-marks of the scale *b* indicating the units of measure and fractions thereof
45 extend transversely of the bar, the unit-marks being numbered in regular order downward from the pivot-pin *a*. These units of measure may be of any length convenient or as may be required for any particular work,
50 those shown on the part G being commonly three-fourths of an inch subdivided into halves and fourths, as shown. The broad bar or pivotal member F of the device is marked also with a series of curved scales I, (designated
55 A B C D E, respectively,) concentric with the pin *a*, each scale being formed of a series of

unequally-spaced radial marks *c*, numbered in the various scales from unity to "10, 9, 8, 7, 6," respectively, as clearly shown in Fig. 3.

H in the drawings is a graduated bar formed
60 with a clamp-head *d*, adapted to hold upon and slide in vertical directions along the body G, so as to occupy different positions thereon, as indicated in Fig. 1. The bars G and H are at right angles with each other, the latter be-
65 ing graduated, as in inches and fractions thereof, beginning at the adjacent edge of the bar or body G, the latter, with said sliding member H and the pivotal member F, carried by the body G, coacting to produce the results
70 required.

The edge of the pivotal member F adjacent to the body G is radial below the pivot *a*, and in using the device the linear distance sought in every case is found on the scale of the bar
75 H, reading from the right-hand edge of the body G to the opposing radial edge of the pivotal member F. If it be wished, for example, to obtain by this device in inches and fractions thereof two-sevenths of eight and
80 one-half inches, the sliding bar H would be adjusted to "8½" on the body G and the pivotal bar F turned on the pin *a* to bring the scale-mark "2" of scale D, ending with "7," to coincide with the adjacent edge of the body
85 G. The left radial edge of the bar F would then indicate on the bar H two and three-seventh inches, the linear distance required, or if five-ninths of thirteen be needed the bar H would be set at "13" on the body G and
90 the bar F turned to cause the mark "5" of scale B, ending with "9" thereon, to coincide with the edge of the body G, when a distance of seven and two-ninths would be indicated on the bar H as that required. Thus scale
95 measurements in linear distances corresponding to awkward compound fractions and to fractions of whole and mixed numbers may be readily and accurately obtained by means of this device.
100

In contemplating the curved scales I in every case the figure of the scale at the edge of the body G when set must be regarded as the numerator of a vulgar fraction and the terminal figure or number of the scale as the denominator—that is to say, if, for example,
105 "2" of scale A be regarded, it means two-tenths of some distance indicated by the scale *b* on the body G, or, likewise, "4" on scale D would mean four-sevenths of some measure
110 on scale *b* of the body G. It will be observed, further, that the length of the unit of measure

marked on the body G is immaterial and only a matter of convenience and is wholly independent of the length of a scale unit of the sliding bar H, it being only necessary that the scale 5 *b* be regarded and read in the same terms— inches, feet, yards, &c.—as the scale marked upon the bar H. Regarding the position of the bar F shown in dotted lines in Fig. 1, it is set to indicate one-third of six inches, the 10 scale-mark on the bar H, numbered "2" and indicated by the radial edge of the bar F, being two inches from the body G, and this wholly without regard to the distance the scale-mark numbered "6" on the body G is away from 15 the axial point *a*. If the scale marked on the bar H be a scale of feet or of yards or other intervals, the device as set would give the distance of one-third of a foot, yard, &c., with the same accuracy, and in determining this 20 position of the bar F it may be turned either to the scale-mark "3" of scale B, one-third of nine, or to "2" of scale E, two-sixths of six, these two marks being in the same imaginary radial line, and what is true of "6" 25 on the scale *b* is true of every other number on the scale. If the slide-bar H were, for example, set at "13" on the body G, as shown by dotted lines, the device would give one-third of thirteen upon the bar H, measured 30 between the opposing edges of the members G and F.

It is clear that the curved scales I may be continued both outward from the center *a* and inward toward said center should a greater 35 number of scales be needed in applying this device to different kinds of work and that the members F G H may be made of any length required.

In the device herewith shown the contour 40 of the bar F is that required for the curved seams of corsets.

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

1. A device for giving linear measures of 45 fractions, consisting of coacting parts, one having a broadened end with curved scales concentric with the pivot of the parts, two of said parts having pivotal motion upon each other and two being adapted to slide upon each other, 50 one of said sliding parts being disposed in a plane between the two pivotal parts.

2. A device for giving linear measures of fractions, consisting of coacting parts, one having a broadened end with curved scales concentric with the pivot of the parts, two of said 55 parts having pivotal motion, two of said parts being adapted to slide upon each other, and two of the parts crossing each other at varying acute angles, one of said sliding parts being disposed between two pivotal parts and 60 entirely disconnected from one of the latter.

3. A device for giving linear measures of

fractions, having two parts pivotally joined, one part having a broadened end with curved 65 scales concentric with the pivot of the parts and two of said parts adapted to slide upon each other, the sliding parts being disposed at right angles and one of said sliding parts being disposed between the pivotally-movable 70 parts and entirely disconnected from one of them, a sliding part and a pivotal part crossing each other to form an angle.

4. A device for giving fractions of linear units, consisting of a main part or body, a part having pivotal motion on said body one hav- 75 ing a broadened end with curved scales concentric with the pivot of the parts, and a part adapted to slide on said body, said pivotal part and said slidable part crossing each other and the sliding part being interposed between 80 the body and the pivotal part and entirely disconnected from the latter.

5. A device for giving fractions of linear units, consisting of two parts pivotally joined 85 and two parts held to slide upon each other, a pivotal part and a sliding part crossing to form angles, said sliding part being interposed between the two pivotal parts the adjacent edges of the pivotal parts being radial.

6. A device for giving linear measures of 90 fractions, having two parts marked with scales and pivotally joined, and two parts adapted to slide upon each other and marked with scales of equal parts, said sliding part being interposed between the two pivotal parts a sliding 95 part and a pivotal part crossing each other to form an angle.

7. A device of the kind described, having two members pivotally joined one being provided with a portion extended beyond the 100 pivot marked with a curved scale in position to coact with the other member, said scale being concentric with the pivot of the two parts and two parts held to slide upon each other one having a scale of equal parts, the member 105 with curved scale indicating distances on said scale of equal parts as said member is set by its curved scale.

8. A device of the kind described, consisting of three coacting parts, two having pivotal 110 motion upon each other, and two adapted to slide upon each other, all the parts being marked with scales and the edge of a pivotal part extended beyond the pivot and being curved, said scale being concentric with the 115 pivot of the parts.

In witness whereof I have hereunto set my hand, this 3d day of January, 1905, in the presence of two subscribing witnesses.

EDWARD P. FOLLETT.

Witnesses:

ENOS B. WHITMORE,
MINNIE SMITH.