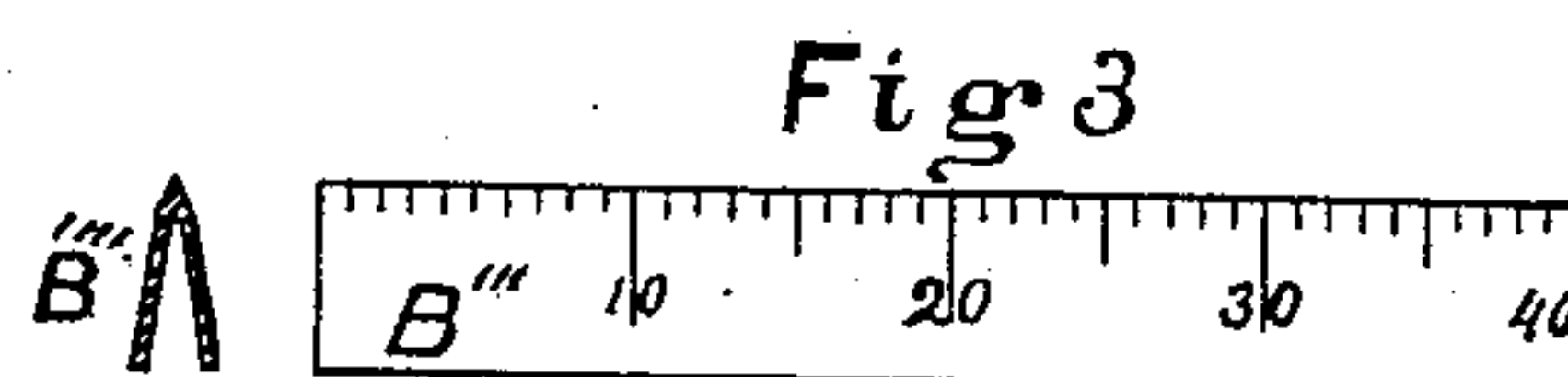
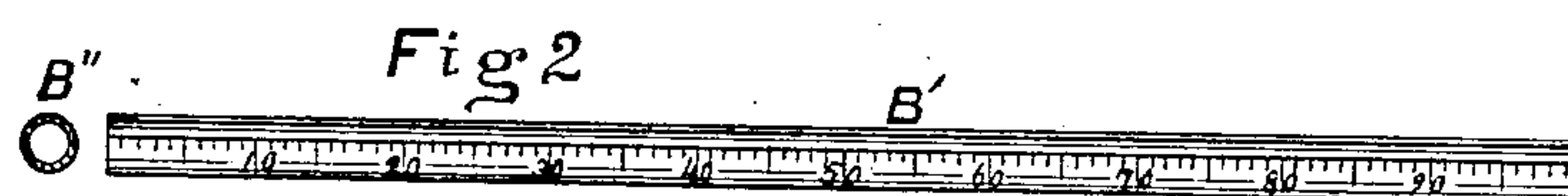
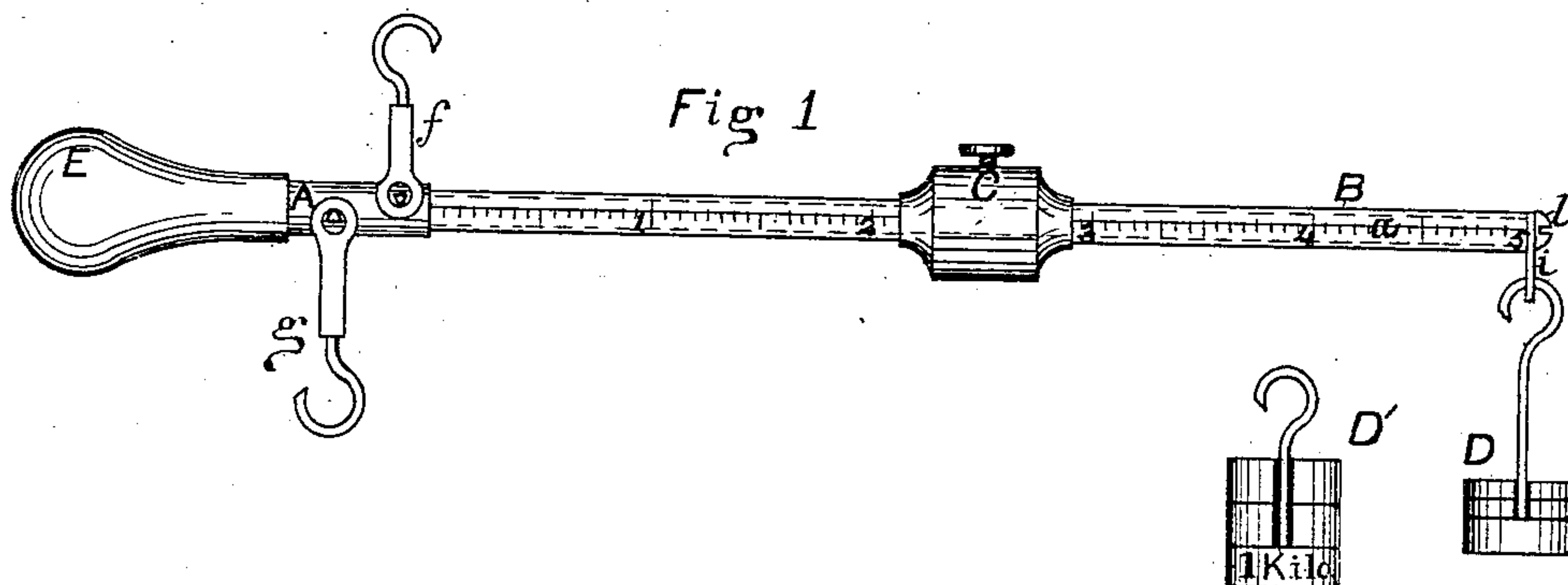


D. W. DAKE.  
Scale Beam.

No. 232,393.

Patented Sept. 21, 1880.



Witnesses.  
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# UNITED STATES PATENT OFFICE.

DANIEL W. DAKE, OF BELOIT, WISCONSIN.

## SCALE-BEAM.

SPECIFICATION forming part of Letters Patent No. 232,393, dated September 21, 1880.

Application filed January 31, 1880.

*To all whom it may concern:*

Be it known that I, DANIEL W. DAKE, of Beloit, in the county of Rock and State of Wisconsin, have invented certain new and  
5 useful Improvements in Beam-Scales; and I hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which my invention appertains to make and use the same,  
10 reference being had to the accompanying drawings, forming a part hereof, and in which—

Figure 1 represents a side view of a beam-scale embodying my invention. Fig. 2 represents a side and end view of an adjustable  
15 sleeve, graduated in this example for the metric standard of weights; and Fig. 3 represents a modification of the sleeve B, adapted to flat beams of scales, in which B''' represents a side view, and B'''' an end view, thereof.

20 My invention relates to that class of weighing-scales commonly known as "beam-scales;" and it consists in attaching to and upon the beam an adjustable sleeve having marked thereon one or more lines or scales of different  
25 systems or standards of weights, and so that the scale may be readily changed from one system to another, substantially as hereinafter described and claimed.

In the drawings, *a* represents the beam, as  
30 shown by dotted lines in Fig. 1, of an ordinary beam-scale or steelyard, upon which is attached a sleeve, B, graduated, as shown, for avoirdupois weight, and upon which slides the poise C, and at the end of the beam is hung the major poise D in the usual manner.  
35

When it becomes desirable or necessary to know the weight of a given body, after it has been ascertained in one denomination, in that of another, the sleeve B may be removed and  
40 the sleeve B', Fig. 2, substituted in lieu thereof, with the same poise C sliding upon it and the major weights D' substituted on the end of the beam *a* for those of D. In this example, as shown in the drawings, the change is  
45 made from the avoirdupois to the metric system.

The sleeve B may also be marked with two or more different standards of weight at different places along its length, so that any one of said standards may be used by turning the  
50 sleeve upon the beam to the desired position and substituting corresponding major weights for those of D.

In the example of beam-scale shown the beam *a*, upon which the sleeve B is adjustably  
55 fixed, consists of a round rod extending into the counterpoise E, and upon which is securely attached a short fixed sleeve, A, and upon said sleeve are attached the fulcrum and weighing hooks *f* and *g* in the usual manner. The counter-weight E is adjusted by turning it upon a  
60 screw-thread cut upon said rod.

The major weight is hung by a hook or loop, *i*, which is fastened to the end of the beam by a set-screw, *l*, and which also retains the sleeve  
65 upon the beam *a* in the desired position.

It is evident that the sleeve B may also be readily applied to the beam of platform or other beam scales.

I do not intend to limit my device to a round  
70 beam and corresponding sleeve, as the beam may be made in various forms that will admit of the sleeve being removed or adjusted upon the beam.

Having thus described my invention, what  
75 I claim as new, and desire to secure by Letters Patent, is—

1. In a beam-scale, the beam *a*, having adjustably attached thereon a sleeve, B, provided with one or more scales or systems of weights,  
80 substantially as shown and described.

2. In a beam-scale, the beam *a*, having adjustably attached thereon a sleeve, B, provided with one or more scales or systems of weights, in combination with poise C, loop *i*, set-screw  
85 *l*, and major weights D, substantially as shown and described.

DANIEL W. DAKE.

Witnesses:

WILLIAM ZIMMERMAN,  
N. COWLES.