

No. 627,406.

Patented June 20, 1899.

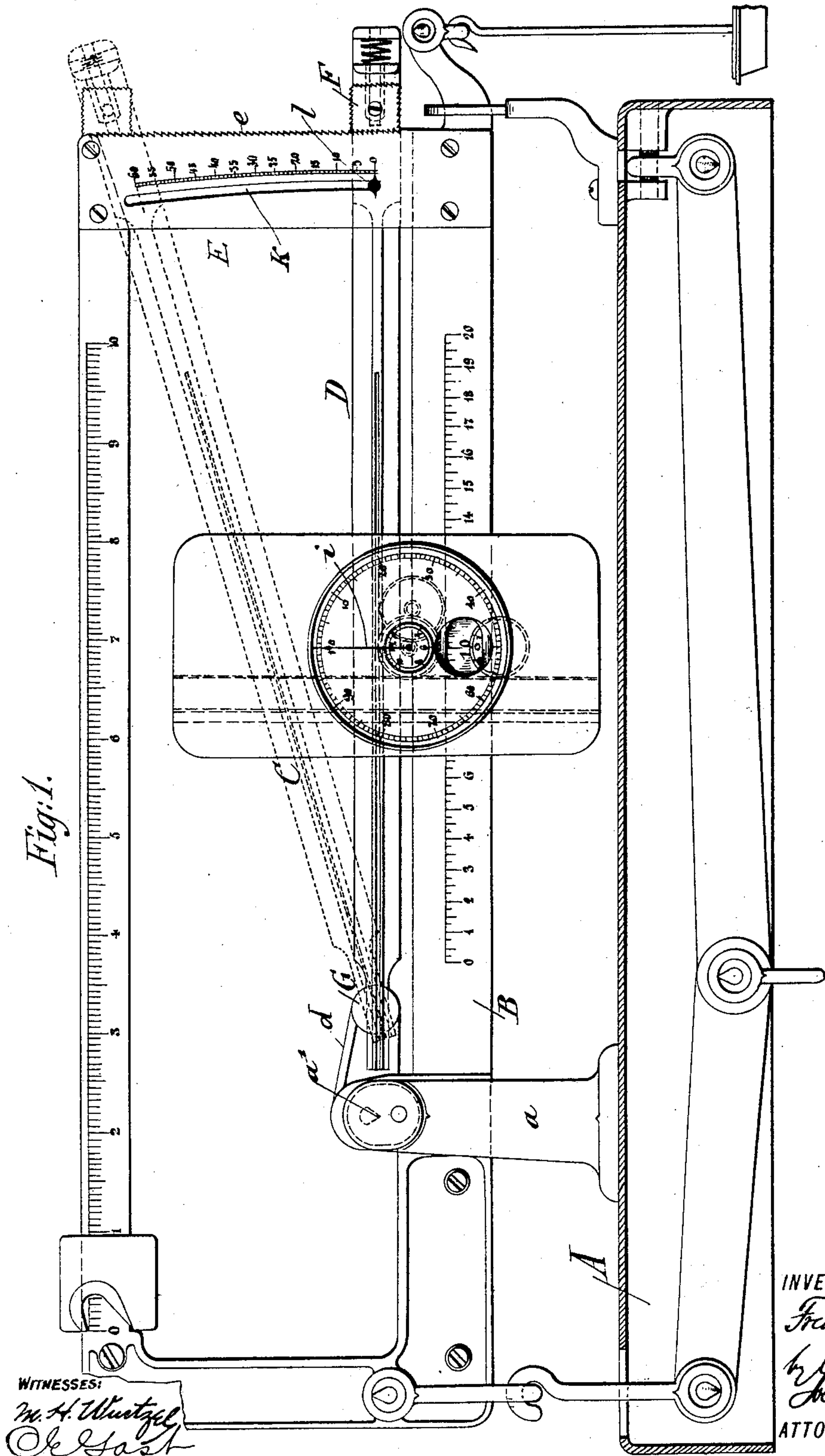
F. D. FOSTER.
COMPUTING SCALE.

(Application filed Nov. 18, 1898.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



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No. 627,406.

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2 Sheets—Sheet 2.

Fig. 2.

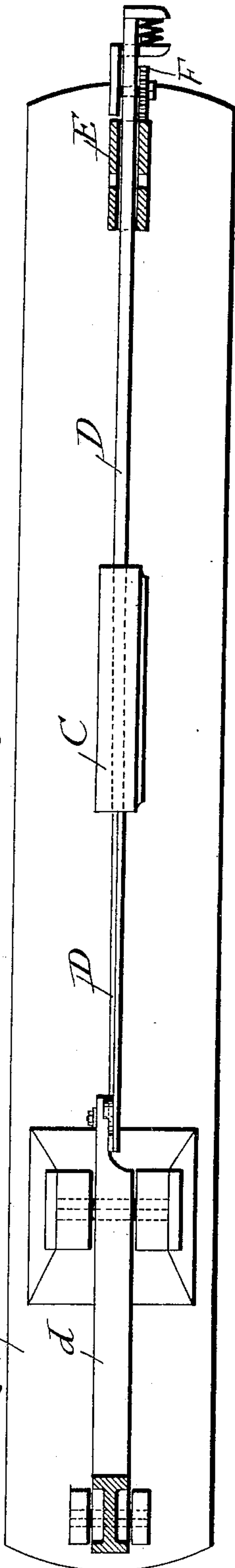


Fig. 4.

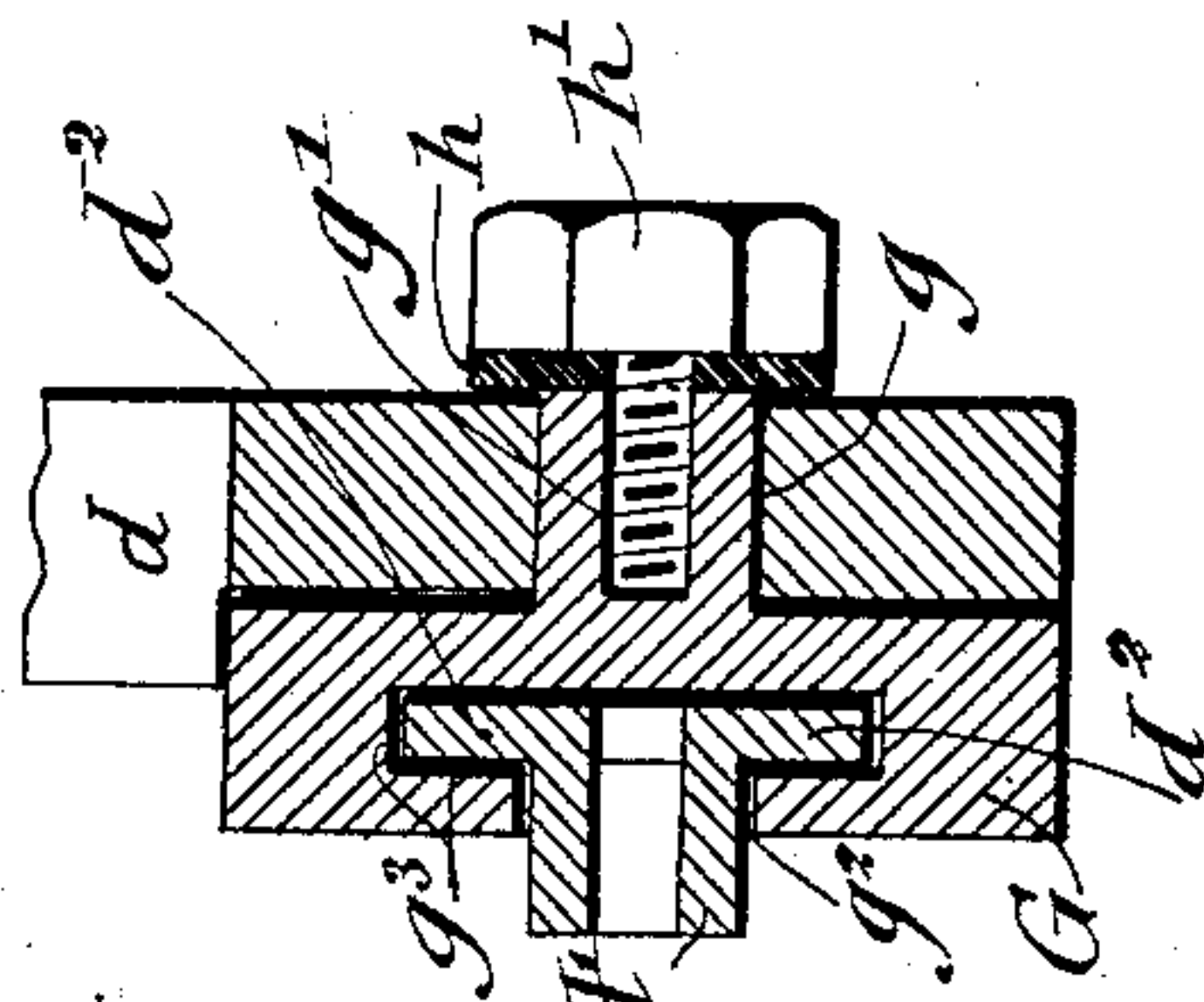
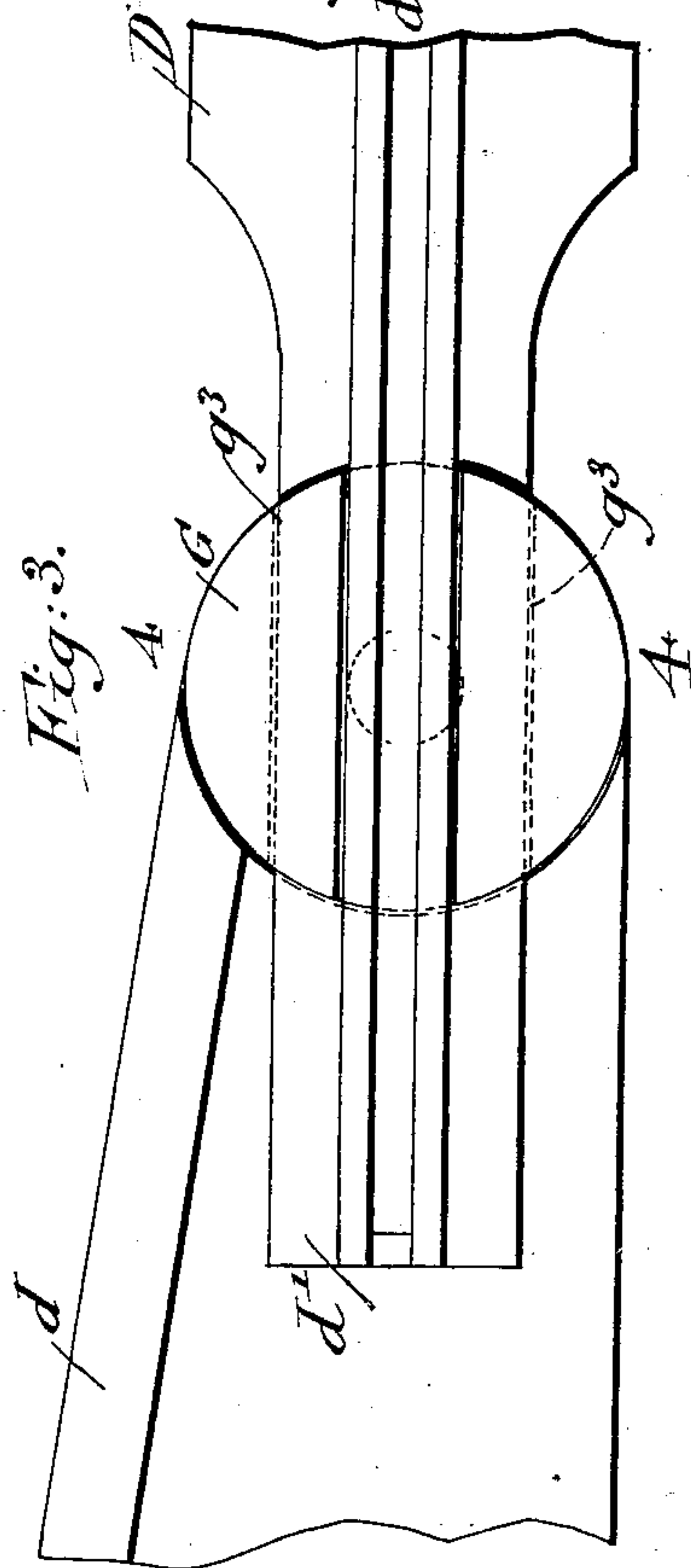


Fig. 3.



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UNITED STATES PATENT OFFICE.

FREDERICK D. FOSTER, OF JERSEY CITY, NEW JERSEY, ASSIGNOR TO THE
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COMPUTING-SCALE.

SPECIFICATION forming part of Letters Patent No. 627,406, dated June 20, 1899.

Application filed November 16, 1898. Serial No. 696,596. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK D. FOSTER, a citizen of the United States, residing at Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Computing-Scales, of which the following is a specification.

This invention relates to computing-scales for use by storekeepers or others, and the particular type of scale to which the invention relates is that of the patent of F. L. Fuller, No. 580,783, dated April 13, 1897. In said patent, as well as in the invention forming the subject-matter of my application filed March 23, 1898, Serial No. 674,859, what is termed the "angular member" always moves at its outer end in the arc of a circle concentric with the pivot on which the angular member swings. Owing to this fact the correct weight is not indicated, due to the fact that the more the angular member is moved upward and the nearer it tends toward the vertical the less is the leverage or counterbalancing effect exerted by said angular member upon those portions of the scale-beam and allied parts which are arranged at the opposite side of the knife-edge on which the scale-beam swings.

It is the object of the present invention to overcome such defect by so arranging and mounting the angular member as that it is self-adjusting, so as to compensate for the tendency referred to.

To this end the invention consists of a computing-scale comprising a fulcrumed scale-beam, an angular member movable relatively to said scale-beam, said angular member being self-adjusting relatively to the knife-edge or fulcrum on which the scale-beam moves, a poise provided with indicating mechanism controlled by the movement of the angular member relatively to the scale-beam, and means for setting the angular member at an angle to the scale-beam, as will be hereinafter described and then more particularly claimed.

In the accompanying drawings, Figure 1 is a side elevation of a computing-scale embodying my invention. Fig. 2 is a top view of the same. Fig. 3 is an enlarged detail view showing the pivotal connection of the angular member with the scale-beam, and Fig. 4 is a transverse section on line 4 4 of Fig. 3.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A indicates a bracket-arm or base-piece mounted and arranged in the well-known manner, so as to be connected with a poised weighing-scale, and *a* an upright extending from said bracket-arm.

C indicates the poise, which slides along the scale-beam, so as to act on the angular member D in a manner similar to that shown in the said Fuller patent. The operative mechanism, consisting of the toothed rack-bar and gear-wheels carried by the poise C, is indicated in dotted lines, and being of the well-known construction need not be described. Said operating mechanism acts upon the hands at *i* in the well-known way, so as to indicate the price of an article, depending upon the position to which the angular member is set relatively to the scale-beam. The angular member D is pivoted to a lug *d*, extending substantially parallel with the scale-beam B, which is fulcrumed at *a'* to said upright *a*.

E indicates the end plate or arm at the outer end of the scale-beam B, and against and in connection with which the angular member D is set by means of an adjustable setting member F, which is toothed on its periphery, so as to take against the teeth *e* on the outer edge of said end plate or arm E.

The construction so far described possesses no novelty and need not be further described in detail.

The novelty of the invention consists in so mounting and arranging the angular member as that the farther the same is moved away from the scale-beam the farther is it also moved away from the pivot *a'* of the scale-beam. The construction for effectuating this object is as follows: G is a pivot in the form of a button or disk provided with a contracted neck portion *g*, that swivels in a corresponding opening in the lug *d*, said pivot being held in position by means of a large washer *h*, through which passes a set-screw *h'*, that also screws into the central screw-threaded opening *g'* of said pivot. It is obvious that various other means of connection of the pivot with arm *d* may be resorted to. In the face of the pivot G is milled a transverse guide-

way g^2 , the side walls of which are undercut or provided with side grooves g^3 , this guideway receiving the correspondingly-shaped tail end d' of the angular member D, said tail end being further provided with ribs d^2 , that enter the side grooves or undercuts g^3 . It will be observed that by this construction the angular member is enabled to be slid in and out of the pivot G and that this does not in any way interfere with the axial rotation of said pivot.

The end plate or arm E is contradistinguished from my prior application, Serial No. 674,859, is not provided with a slot which is concentric with the pivotal point of the angular member, but on the contrary it is provided with a slot k , which is eccentric to the pivot of the angular member. The pointer l on the outer end of the angular member passes through the slot k , and it will be observed that as the angular member is moved up or down the side edges of the slot k , acting on the angular member through said pointer l , will move the angular member outwardly or inwardly toward the fulcrum of the scale-beam, thus compensating for inaccuracies in indicated weight which would otherwise result and throwing the same weight upon the scale-beam at that side of its fulcrum as upon the other no matter in what position the angular member may be. As the angular member is moved up its tail end slides outwardly in the pivot G, and as it is moved down it slides inwardly along said pivot. In Fig. 1 the highest position of the angular member is indicated in dotted lines.

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

1. The combination of a scale-beam, a poise, an angular member, indicating mechanism influenced by the position of the angular member and poise, means for setting the angular member in angular position relatively to the scale-beam, and means for moving the angular member to or from the fulcrum of the

scale-beam to compensate for any inaccuracies in weight indications which might otherwise result, substantially as set forth.

2. The combination of a scale-beam, a poise, an angular member, means for adjusting the angular member inwardly or outwardly relatively to the fulcrum of the scale-beam, and suitable indicating mechanism influenced by the position of the angular member, substantially as set forth.

3. The combination of a scale-beam, a poise, an angular member movable in or out relatively to the fulcrum of the scale-beam, an end plate or arm carried by the scale-beam and provided with means for shifting said angular member inwardly or outwardly relatively to the fulcrum of the scale-beam, and means for setting the angular member in position on said end plate or arm, substantially as set forth.

4. The combination of a scale-beam, a pivot journaled in a part of said scale-beam and provided with a guideway, an angular member guided at its inner end in said guideway, a poise provided with indicating mechanism influenced by the angular member, and means for setting the angular member in position relatively to the scale-beam, substantially as set forth.

5. The combination of a scale-beam, a poise, an angular member, a sliding and pivotal connection between the angular member and the scale-beam, indicating mechanism influenced by the angular member, and an end plate or arm carried by the scale-beam and provided with a slot for receiving a pin or stud on the angular member, said slot being arranged eccentrically to the pivot of the angular member, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

FREDERICK D. FOSTER.

Witnesses:

J. H. NILES,

M. HENRY WURTZELL.