

(No Model.)

M. H. WIENER.

SCALE BEAM AND POISE.

No. 312,779.

Patented Feb. 24, 1885.

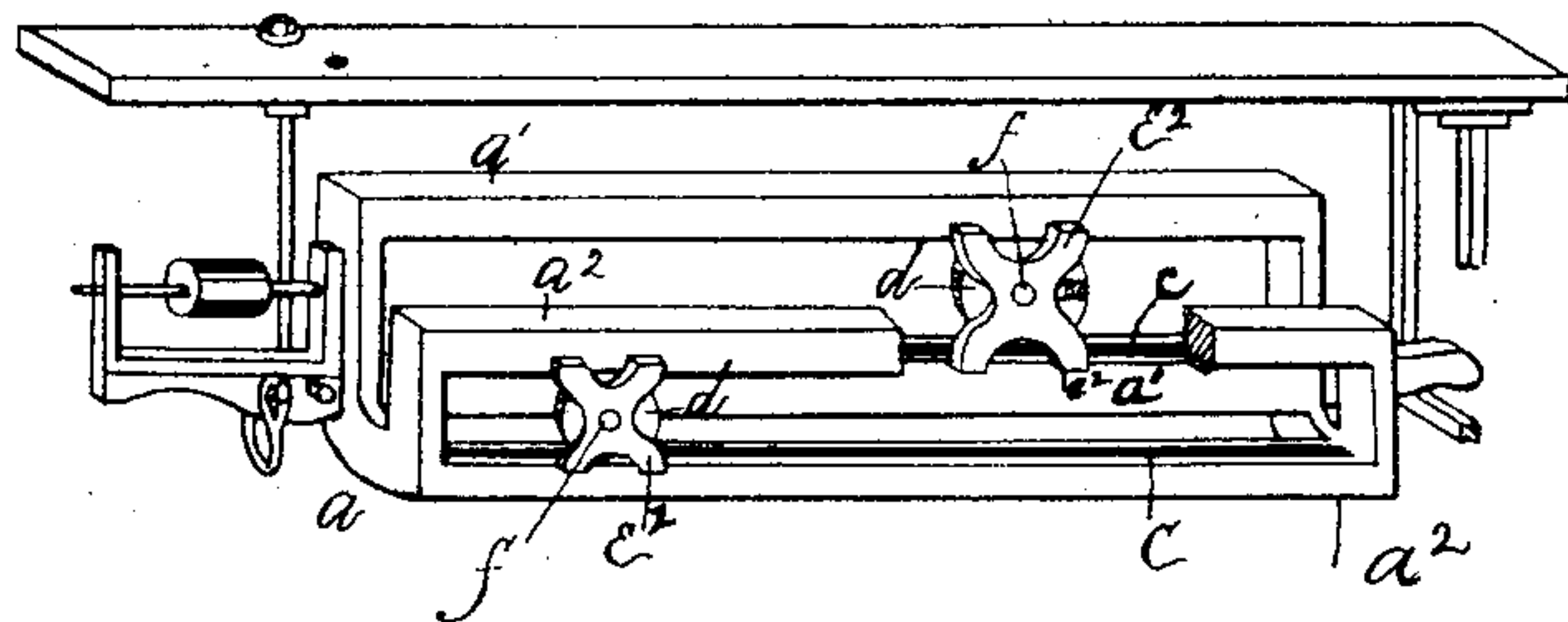


FIG. 1.

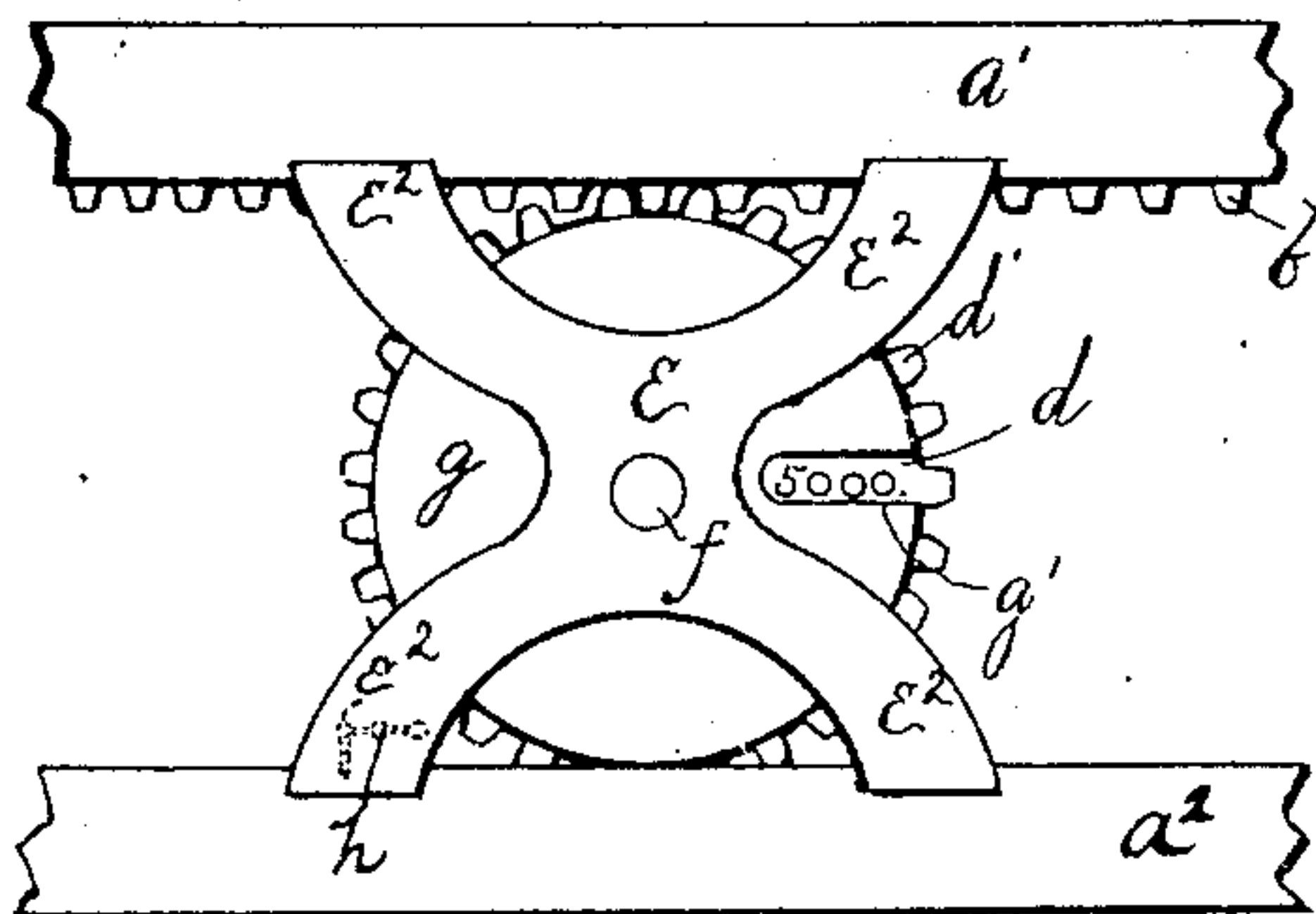


FIG. 2.

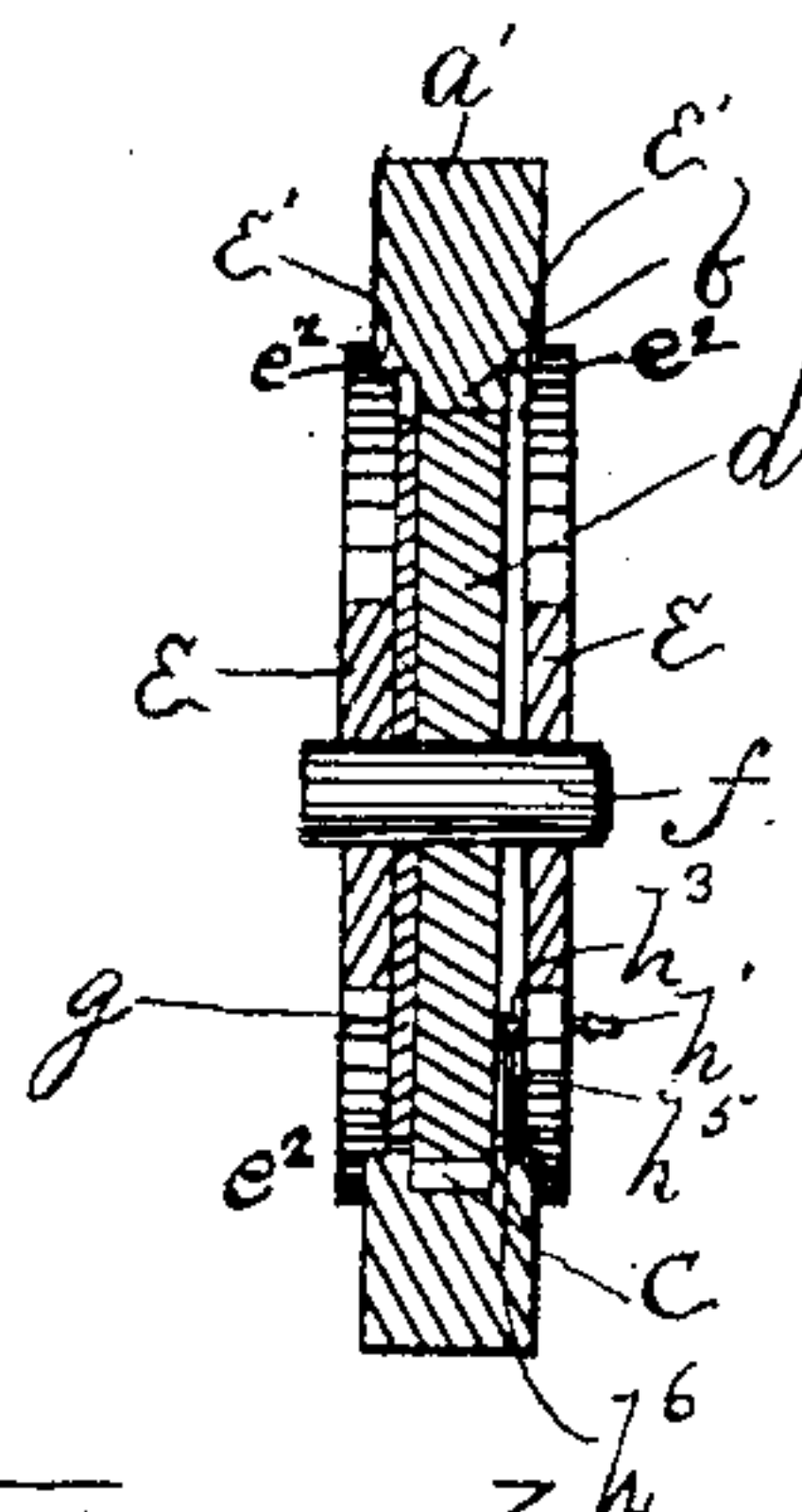


FIG. 3.

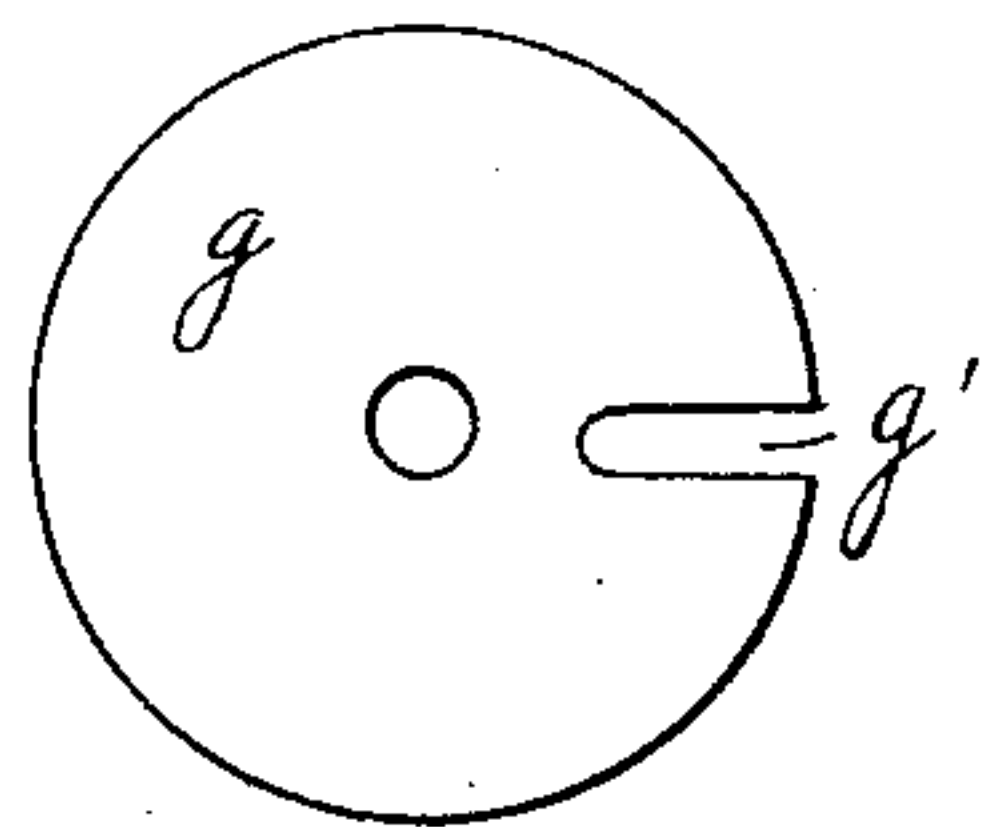


FIG. 5.

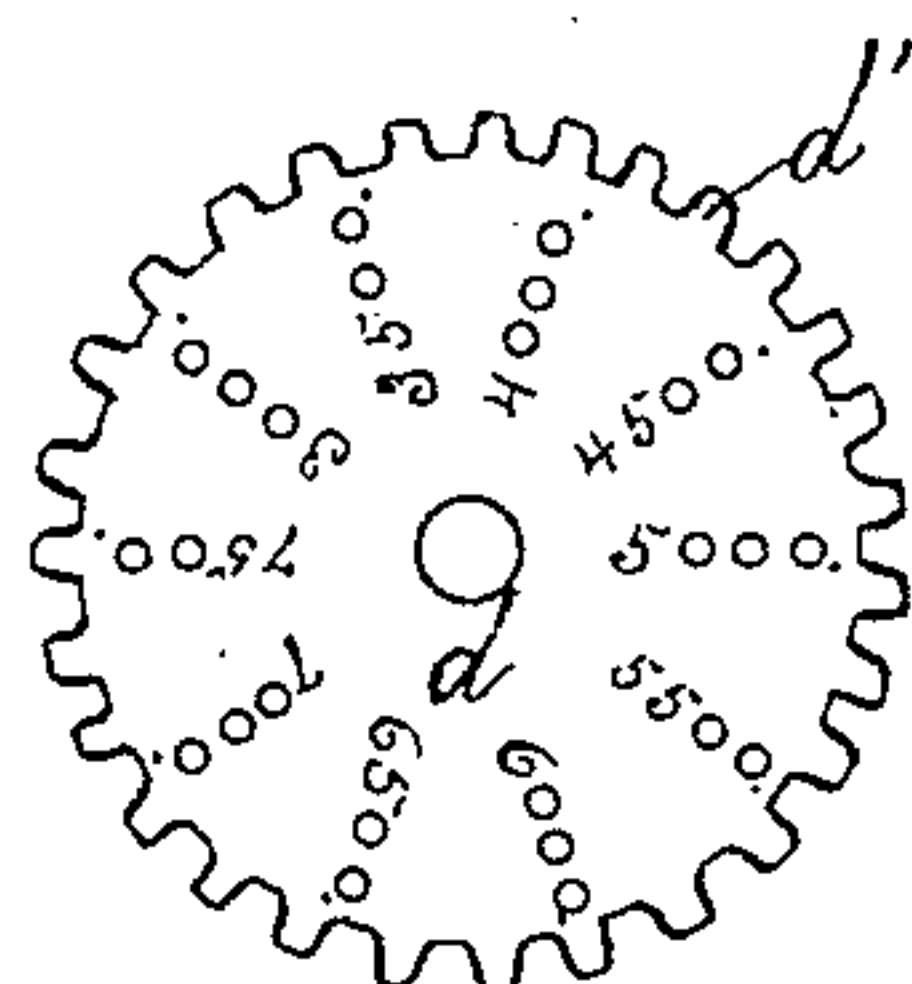


FIG. 4.

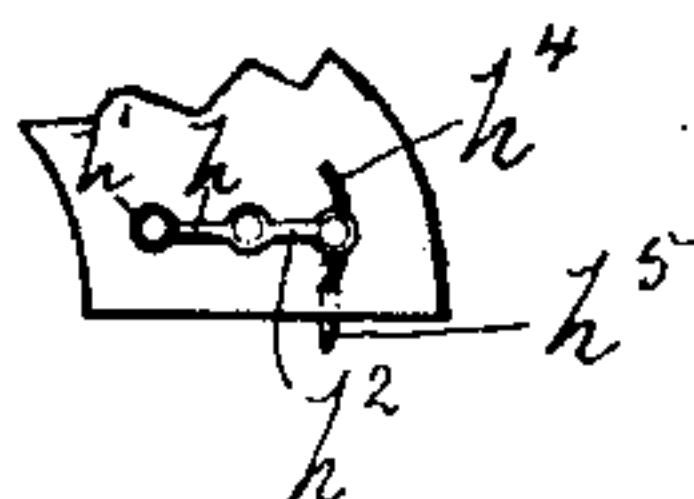


FIG. 6.

Witnesses:

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# UNITED STATES PATENT OFFICE.

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## SCALE BEAM AND POISE.

SPECIFICATION forming part of Letters Patent No. 312,779, dated February 24, 1885.

Application filed June 19, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, MEYER H. WIENER, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Beams and Poises; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention consists in the combination, with a scale-beam consisting of an open frame on the inner and upper face of which are centrally arranged a line of teeth or cogs, of a circular toothed poise having thereon the weight-indicating figures, and adapted to engage with the teeth or cogs, and a covering-disk provided with a slot or opening therein, through which only the proper weight appears, and in certain other details of construction, all of which will be more fully described and claimed.

In the drawings, Figure 1 is a perspective view of that part of a scale which embodies my improved poise and its beam. Fig. 2 is an enlarged view in elevation of the revolving poise and its carriage. Fig. 3 is a central vertical transverse section of the poise and carriage, and Figs. 4, 5, and 6 are detached detail views.

Referring to the drawings, and more particularly to Fig. 1, I have therein shown my improved beam for carrying the poise, the rest of the parts in such figure being of common construction. This beam  $a$  is devised with especial reference to my improved poise; and it consists, substantially, of the high frame,  $a'$ , and the lower frame,  $a''$ , separated a short distance from and parallel with each other. On the inner and upper face of the frame  $a'$  are centrally arranged the line of teeth or cogs  $b$ , and on the inner and lower face of such frame is the recess or slot  $c$ . (See Fig. 3.)

It is apparent that the teeth or cogs  $b$  could be located upon the lower face of the opening in the frame without departing from the spirit of my invention; but I have preferably arranged them above, as shown.

$d$  is the revolving poise, consisting, preferably, of a flat disk provided with the teeth or

cogs  $d'$  around its periphery. Upon one face of this disk are arranged at the proper points a series of figures indicating a set of weights. This poise just described is adapted to fit within the frame  $a'$ , its teeth or cogs intermeshing with the teeth  $b$  within such frame, the slot  $c$  being adapted to receive and guide the lower part of the poise, as clearly seen in cross-section in Fig. 3. A carriage is provided, in which the poise is so mounted that it may revolve, consisting of the spider-frames  $e e$ , rigidly mounted upon and secured together by the axle  $f$ . The upper inside edges,  $e'$ , of the arms  $e$  of the frames  $e e$  are shouldered, as shown in Fig. 3, and embrace and slide upon the upper and lower parts of the frame  $a'$ . This carriage is designed to be made as light as possible, it being sufficient to make it only just stiff enough to steady the revolving poise in its travel along the beam, the circular toothed wheel alone constituting the poise proper. By means of this frame  $e e$  just described the revolving poise can be moved easily and accurately within the frame  $a'$ .

Upon the axle  $f$ , and between the poise and frame  $e e$ , is rigidly secured the circular disk or cover  $g$ , provided with the narrow radial slot  $g'$ , through which the figures indicating the weights appear, as clearly shown in Fig. 2.

The device for stopping and holding the poise and its carriage at the proper point for each weight indicated is arranged as clearly indicated in Figs. 2, 3, and 6.

In the lower end of one of the arms  $e$  of the frame  $e e$ , and on the opposite side to the disk or cover  $g$ , is pivoted a lever, one arm of which is provided with a button,  $h'$ , the other arm,  $h''$ , of which having the projection  $h^3$ , passing through the curved slot  $h^4$  in the arm  $e$ , and depending from this projection  $h^3$  is the spur  $h^5$ , adapted to enter or be withdrawn from a series of slots or sockets,  $h^6$ , in the lower arm of the frame  $a'$ .

It will be noticed by referring to Fig. 1 that the lower frame,  $a''$ , is similarly provided with its revolving poise and carriage, adapted for a series of weights of which the figures on the upper poise are multiples, as is the case with compound scales of any of the well-known forms.

The operation of adjusting my improved poise and its carriage upon the beam is as fol-



lows: The spur  $h^5$  is lifted out of its socket in the frame by pressing the button  $h'$  with the finger, and the carriage and its poise are then slid along the frame, the poise revolving by means of its cogs  $d'$  and the cogs  $b$  of the frame until the proper indicating-figure appears in the slot  $g'$ , at which point the spur  $h^5$  will drop by its own gravity into the socket, and the poise will be retained in its proper position until it becomes necessary to again move it. The cogs upon the poise and frame provide for an accurate movement of the poise.

The operation of the scale provided with my improved revolving poise is substantially the same as in any of the well-known forms of scales, except that the revolving poise contains the indicating-figures, only one of which can be seen, and that one indicating the proper number of pounds, and the bar or frame carrying the poise has no indicating figures or notches upon it, by means of which construction the mistakes in reading the figures and adjusting the poise common to the old form of arrangement are effectually avoided.

The improved construction and arrangement herein shown and described are obviously susceptible of considerable variation and modification without departing from the broad spirit of my invention.

I claim—

1. The combination, with a scale-beam consisting of an open frame on the inner and upper face of which are centrally arranged a line of teeth or cogs, of a circular toothed poise having thereon the weight-indicating figures,

and adapted to engage with the teeth or cogs, and a covering-disk provided with a slot or opening therein, through which only the proper weight appears, substantially as shown and described.

2. The combination, with a scale-beam consisting of an open frame on the inner and upper face of which are centrally arranged a line of teeth or cogs, of a circular toothed poise having thereon the weight-indicating figures, and adapted to engage with the teeth or cogs, a covering-disk provided with a slot or opening therein, through which only the proper weight appears, and a carriage in which the revolving poise and disk are mounted, substantially as shown and described.

3. In combination with the beam or frame  $a'$ , with its teeth or cogs  $b$ , the circular toothed poise  $d d'$ , the slotted disk or cover  $g g'$ , and the carriage  $e e$ , substantially as shown and described.

4. In combination with the beam or frame  $a'$ , with its teeth or cogs  $b$  and sockets  $h^6$ , the circular toothed poise  $d d'$ , the slotted disk or cover  $g g'$ , the carriage  $e e$ , and the catch  $h h^2$ , located upon the carriage, substantially as shown and described.

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

MEYER H. WIENER.

Witnesses:

W. T. MILLER,  
OTTO HODDICK.