(No Model.)

2 Sheets—Sheet 1.

R. L. HASSELL.

SCALE BEAM.

No. 338,266. Patented Mar. 23, 1886.

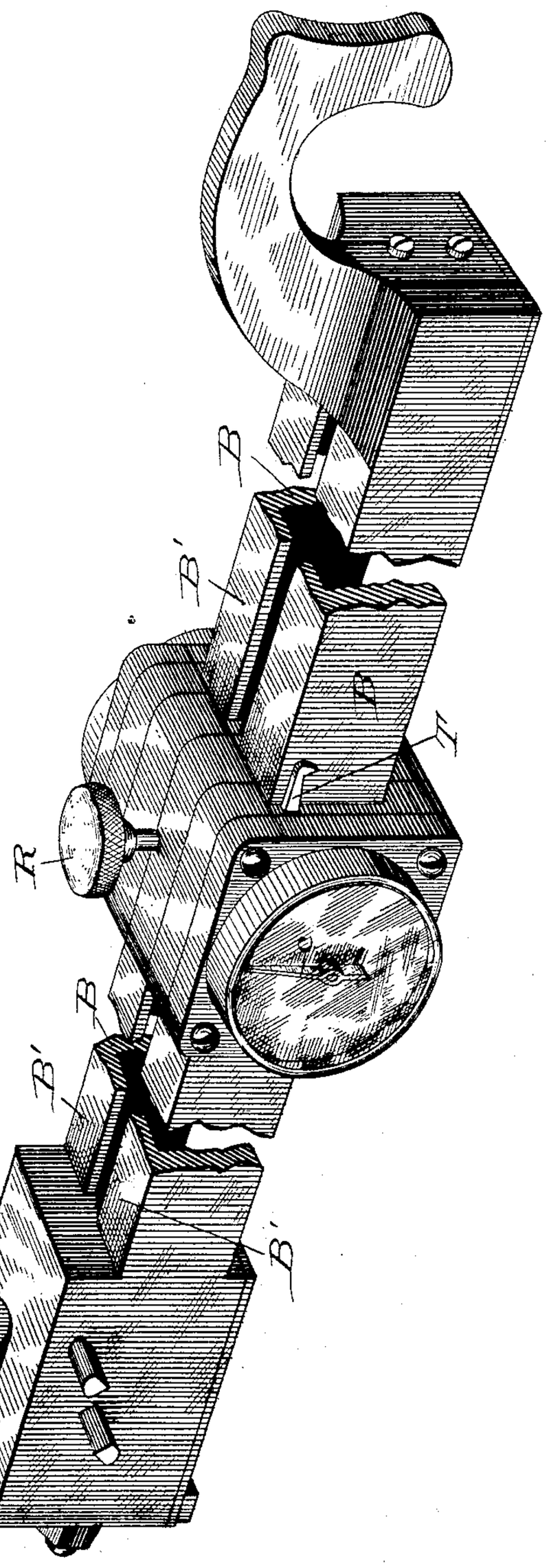


Fig. 1.

Witnesses:
Chas. E. Gaylord.
Arthur Johnson.

Inventor.
R. L. Hassell.

(No Model.) 2 Sheets—Sheet 2.

R. L. HASSELL.

SCALE BEAM.

No. 338,266. Patented Mar. 23, 1886.

Fig. 2.

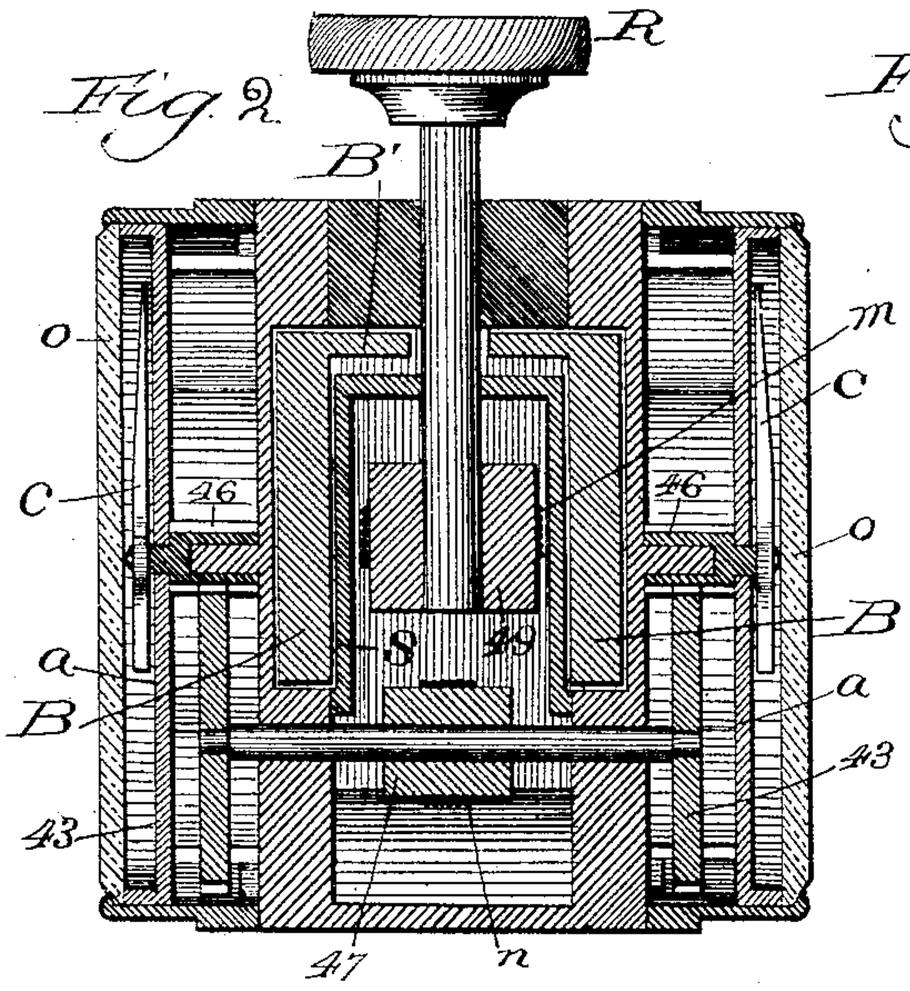


Fig. 3.

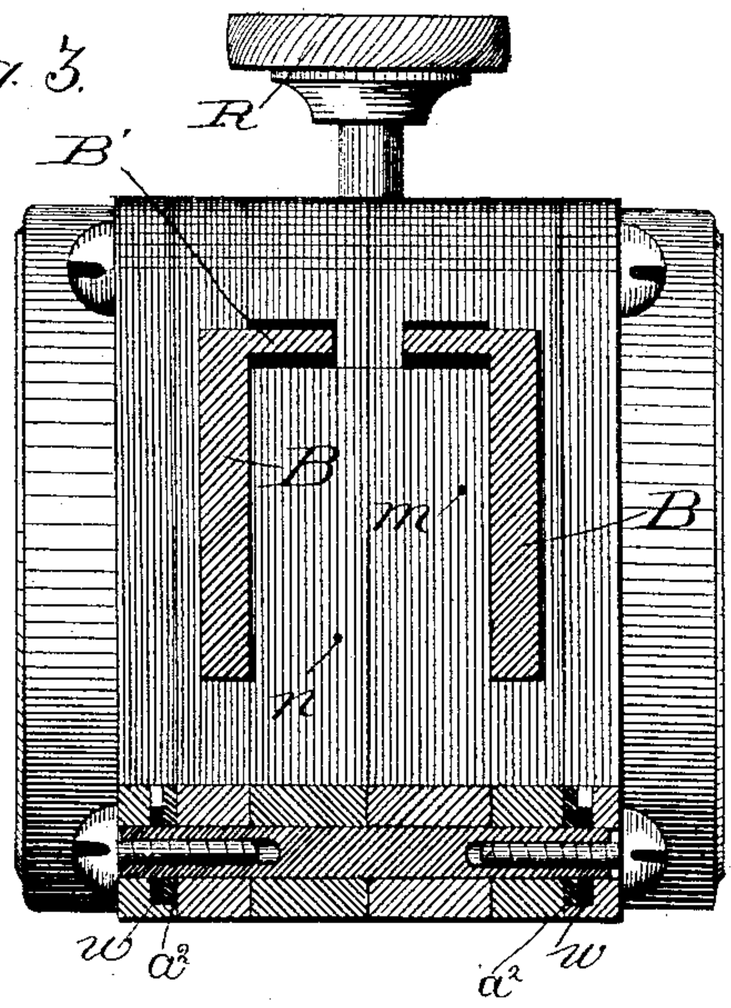


Fig. 4.

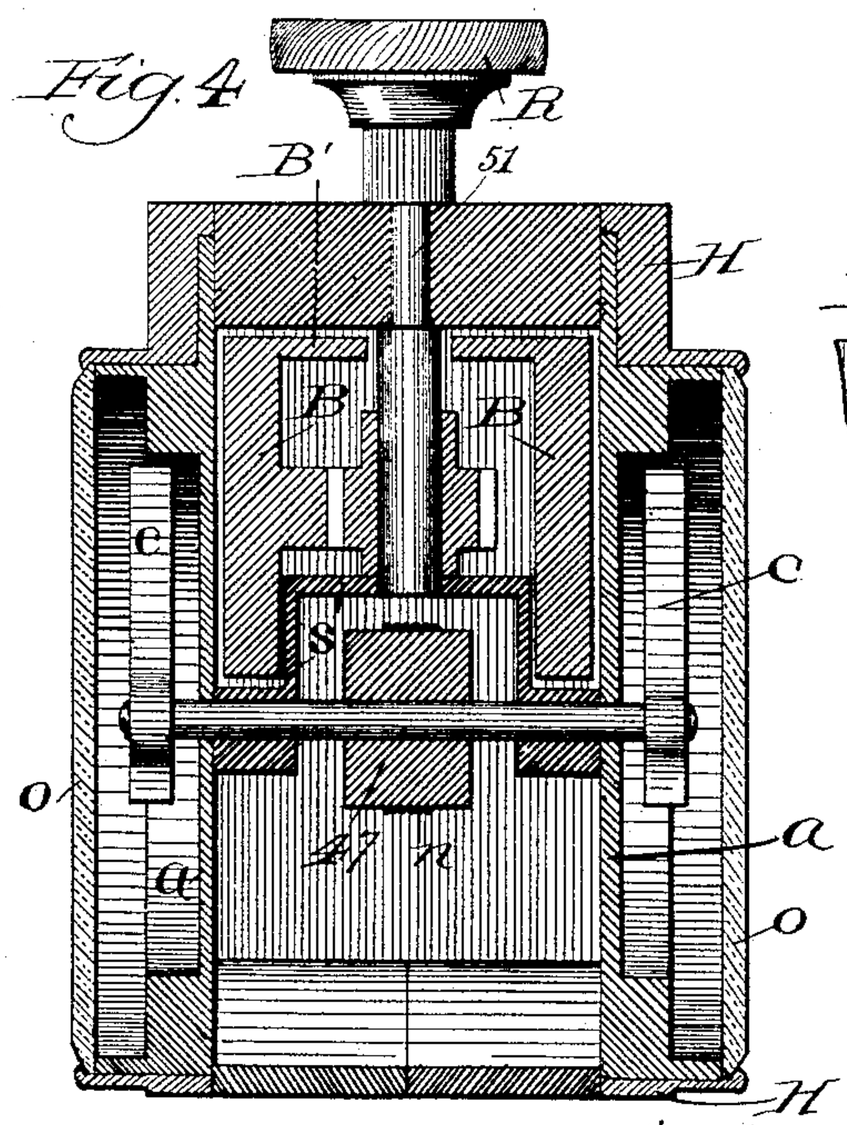


Fig. 5.

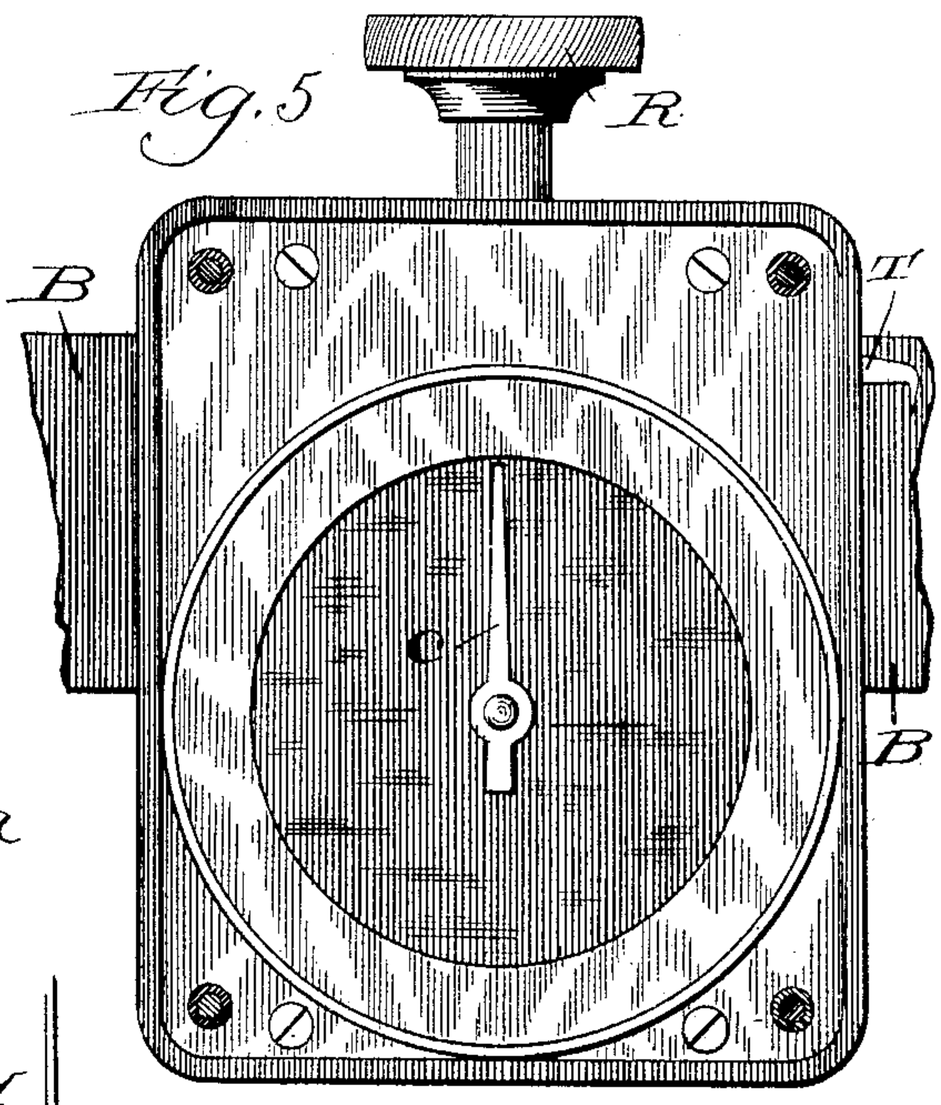
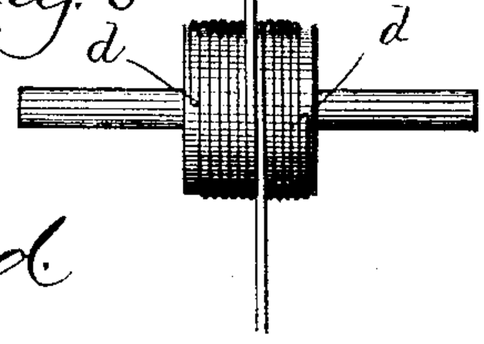


Fig. 6.



Witnesses:
Chas. E. Gaylord.
Arthur Johnson.

Inventor:
R. L. Hassell.

UNITED STATES PATENT OFFICE.

RICHARD LITTELL HASSELL, OF CHICAGO, ILLINOIS.

SCALE-BEAM.

SPECIFICATION forming part of Letters Patent No. 338,266, dated March 23, 1886.

Application filed June 15, 1885. Serial No. 168,820. (No model.)

To all whom it may concern:

Be it known that I, RICHARD LITTELL HASSELL, of Chicago, in the county of Cook and State of Illinois, have invented certain Improvements in Scale-Beams, of which the following, taken in connection with the accompanying drawings, is a specification.

My present invention relates to that class of scale-beams where the graduations and figures are placed on a dial or disk and motion is given to the indicating mechanism by means of a tense flexible connection, as described by me in my Patent No. 330,397, dated November 17, 1885; and it consists in certain modifications of the devices there shown, mainly of the beam, as will be hereinafter more fully described.

In the accompanying drawings, illustrating my invention, Figure 1 is a perspective view of my improved beam and poise; Fig. 2, a central vertical transverse section of the poise and beam; Fig. 3, an end view of the poise and vertical transverse section of the beam; Fig. 4, a central vertical transverse section of a modification; Fig. 5, a face view of this modification with the face-plate H and glass O removed; Fig. 6, a detail view.

The main object of my present improvement is to provide a better protection for the wires which give motion to the poise and indicating mechanism.

When the beam is formed as shown in my Patent No. 330,397, there is a liability in many cases of the operator introducing his fingers between the bars in the act of pushing the poise along the beam, and thus straining and distorting the wires. To avoid this, I provide the upper part of each of the bars B with a flange, B′, these flanges forming a cover for the beam; and, as seen in the different views, a sufficient space or opening or slot is left between these flanges for the passage of the shaft, to which is fastened the knob R. When it is preferable to have the knob R at the bottom of the poise, this opening or slot will not be necessary, and the flanges will then become a top or cover extending from bar to bar of the beam. When it is preferable to have this knob at the bottom of the poise, the shaft to which it is fastened can be placed to one side to avoid the pulley 47, and the shaft carrying the pulley 47 can also be placed to one side, if desired.

In the modification shown in Fig. 4 the indicating hands are fastened to the same shaft as the pulley 47, as seen, and in this case the dial-plates form part of the interior casing. A face view of this modification with the face-plate H and glass O removed is seen in Fig. 5.

When a rack and pinion are used for the purpose of moving the poise along the beam, as shown in Fig. 4, the interior casing, S, will preferably run no higher than there shown, as it is preferable that the pinion should not be cased in, and when a chain is used it is preferable that the sprocket-wheel which engages with the chain should in like manner be left uncovered.

Instead of placing the rack on the side of one of the bars, as shown, the bottom edge of one or both bars may be toothed, and the shaft 51, with its pinion or pinions and knob or knobs, be placed horizontally at either end of the poise.

The upper part of the shaft carrying the pulley 49 can be screw-threaded to accommodate the longitudinal movement, under the action of the wire, described in my Patent No. 330,397, or the lower part of this shaft may be formed square and the pulley 49 fitted to it, so as to revolve with the shaft and yet be free to move longitudinally. In this latter case the shaft will be formed with shoulders, to prevent its longitudinal movement.

The wire N, which gives motion to the indicating mechanism, need not pass more than once round the pulley 47, in which case a square groove can be turned in the periphery of the pulley for the reception of the wire; and it will not be necessary in this case to allow anything for the longitudinal movement of the pulley or shaft to which the pulley is fastened.

When a wire is used for the purpose of moving the poise along the beam, the wire can be wound on and fastened to the pulley, as shown in Fig. 6, in which the ends *d* of the wire are fastened to the pulley; and it may sometimes be desirable to use this arrangement on the pulley giving motion to the indicating mechanism.

In the devices here shown the smaller units will be placed on the dials and indicated by the revolving hands C, and the larger units will be placed on the bars B and indicated by the projecting hands T.

In Fig. 3 the lower part of the poise is cut away for the purpose of showing the method employed of fastening the several parts of the poise together.

w w are rubber washers, which press against the feet a^2 of the dial-plates and keep them in place.

I claim—

A scale-beam having two side bars, such as B B, each of said bars being provided with a flange, B′, said flanges forming a cover or partial cover for the beam, substantially as set forth.

R. L. HASSELL.

Witnesses:
ROBERT BOYD,
FRANK A. BRONSON.