

Scale Beam.

Patented Nov. 4, 1862.



Witnesses  
William Root  
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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN SCALE-BEAMS.

Specification forming part of Letters Patent No. 36,828, dated November 4, 1862.

*To all whom it may concern:*

Be it known that I, SAMUEL G. BARKER, of Carbondale, in the county of Luzerne and State of Pennsylvania, have invented a new and useful Improvement in Beams for Weighing; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view, and Fig. 2 a top view, of the improvement applied, like letters indicating the same parts when in the two figures.

The nature of my invention consists in the mode hereinafter described and specified of making the suspension-point or knife-edge of a weighing-beam adjustable both vertically and longitudinally upon the said beam, substantially as hereinafter described, for the purpose of facilitating in the regulating of the same to suit the pea and weights in manufacturing, and also for the purpose of enabling the weigher to change the position of the said suspension-point in relation to the fulcrum so that he can at any time readily adapt the beam or scale to either gross or net weight or foreign standards.

In the drawings, A is the beam; B, an adjustable slide which carries the suspension-point *c*; *d*, the fulcrum; *e*, the point for supporting the usual counterpoising-weights, and *f* the ball for adjusting the center of gravity of and balancing the beam. Forward of the fulcrum *d* the beam A is made in this instance in the usual well-known form for a platform-scale; but between the fulcrum and the extreme rear end of the piece of which the beam is made it is constructed to have parallel sides and edges, for the purpose of receiving upon it the slide B, which latter is mortised longitudinally through its center in such a manner or form that while its interior side surfaces fit accurately and closely against the two sides of the beam A it will leave a parallel space between it and either of the edges of the said beams in rear of the fulcrum *d*, for the purpose of allowing the said slide B to be either raised or lowered as the proper line through its point *c* and the fixed points

*d* and *e* may require. Projecting from this slide B there is a stud or boss, *g*, in which is fixed firmly a threaded stem, *h*, provided with two jam-nuts, *i i*, and projecting from the beam A there is also provided a stud or boss, *k*, having a hole through it which freely admits the threaded stem *h*, and in such a manner that when the nuts *i i* are respectively screwed up against the opposite sides of the said boss *k* the slide B will be kept from being moved longitudinally in either direction. On the under edge of the said slide there is another boss, *l*. This receives and supports a thumb-screw, *m*, in such a manner that the latter can be used as a set-screw and operate in conjunction with a plate, *n*, of any suitable thickness, for the purpose of keeping the point or knife-edge *c* at a proper height upon the beam, substantially as represented in Fig. 1.

If preferred, two set-screws may be inserted through the upper edge of the slide B, so as to form two separate upper bearings for the upper edge of the beam in the same as substitutes for the plate *n*.

It will be readily seen that the slide B can be moved either vertically or longitudinally, or both, and then firmly secured at any requisite position on the beam A, and consequently that the point of suspension or knife-edge *c* can be adjusted with the greatest accuracy and facility to the line and distance from the fulcrum required.

On the rear end of the beam A there is fixed securely a vertically-slotted piece, *o*, and in the rear slot thereof the threaded stem *p*, which is traversed by the ball *f* in the usual manner, is adjusted and secured by two jam-nuts, *q q*, so as to project back therefrom horizontally at any height the proper vibration of the beam may require. It will therefore be seen that when the beam is suspended in the usual "post" of a platform-scale a more free access will be afforded by this arrangement for rotating the ball *f*, and thus balancing the beam as occasion frequently requires. It will be manifest that the fulcrum-point may be made adjustable in the same manner instead of the suspension-point, as described. Therefore I do not intend to confine my invention to the suspension-point alone; but,

Having fully described my improvement and shown its utility, what I claim as new therein of my invention, and desire to secure by Letters Patent, is—

Making the suspension-point *c* adjustable upon the beam A by means of the slide B, in combination with the threaded stem *h*, jam-

nuts *i i*, boss *k*, and thumb-screw *m*, the same being arranged to operate substantially in the manner described, for the purposes specified.

SAMUEL G. BARKER.

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