

G. W. BLISS.
Scale Beam.

No. 231,989.

Patented Sept. 7, 1880.

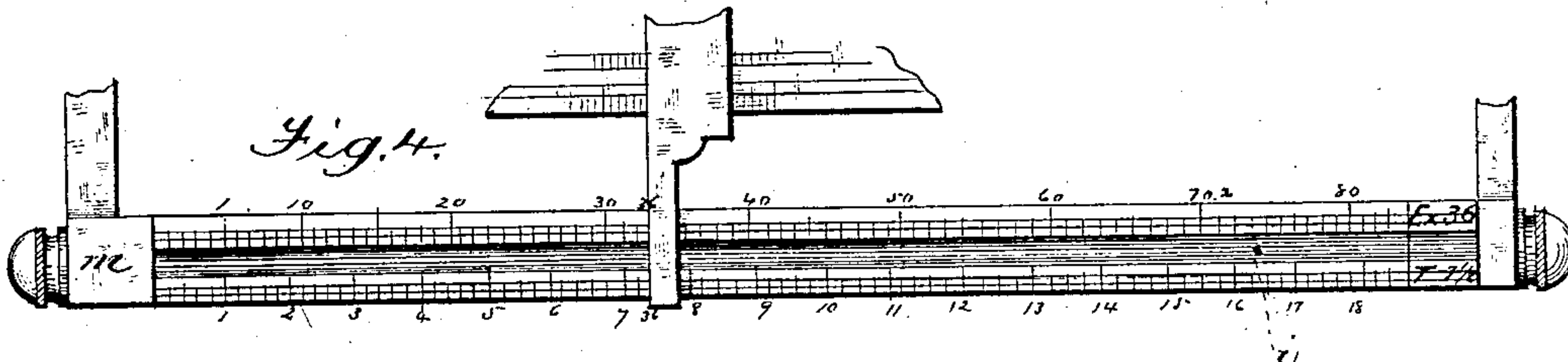
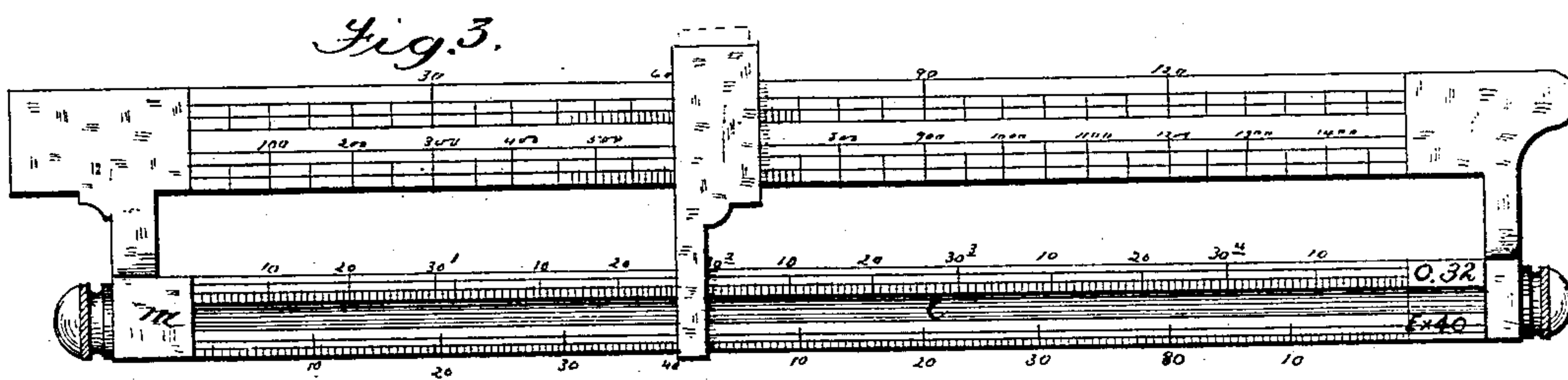
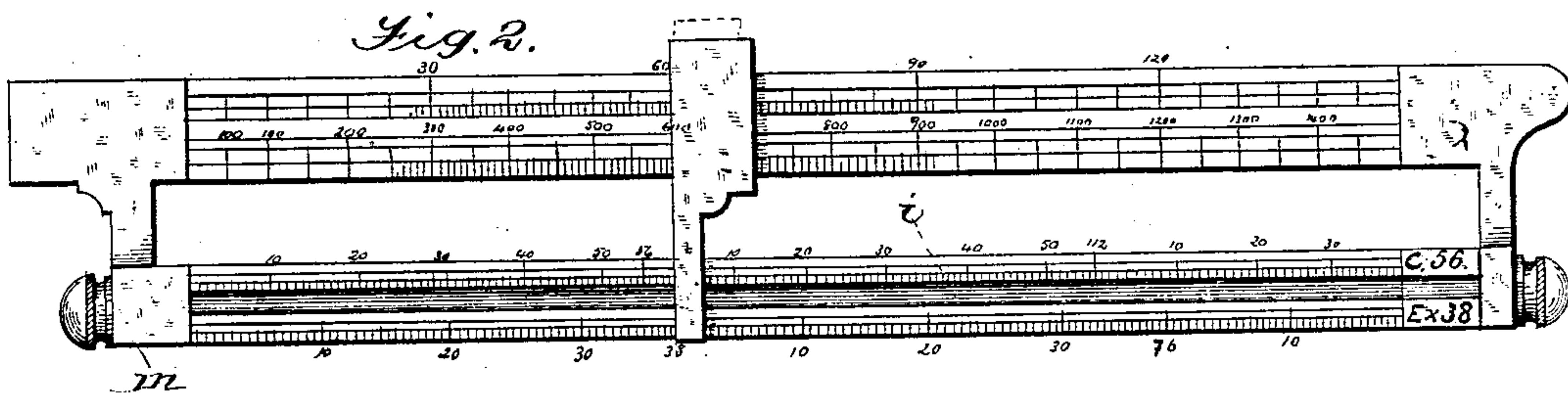
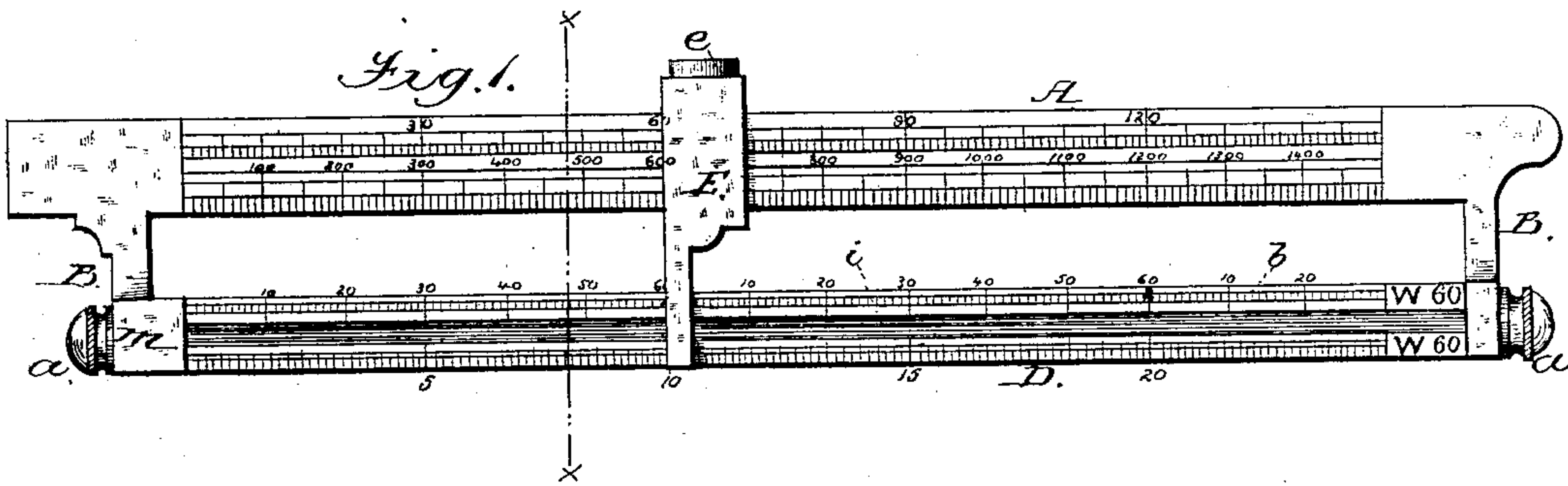
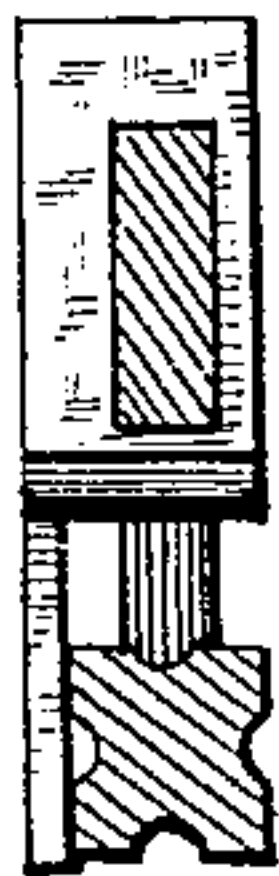


Fig. 5.



Attest
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Chas. Bliss

Inventor;
George W. Bliss
By his attys,
Cox and Cox

UNITED STATES PATENT OFFICE.

GEORGE W. BLISS, OF MANSFIELD, OHIO, ASSIGNOR OF THREE-FOURTHS OF HIS RIGHT TO WM. T. BLISS AND ONE-FOURTH TO EB C. FORD, BOTH OF SAME PLACE.

SCALE-BEAM.

SPECIFICATION forming part of Letters Patent No. 231,989, dated September 7, 1880.

Application filed December 31, 1879.

To all whom it may concern:

Be it known that I, GEORGE W. BLISS, of Mansfield, in the county of Richland and State of Ohio, have invented a new and useful Improvement in Scale-Beams, of which the following is a specification, reference being had to the accompanying drawings.

The invention relates to an improvement in scale-beams; and it consists of an ordinary scale-beam and a recording-beam so graduated and arranged as to show the tabular amount of any given number of pounds of material weighed; also to show the number of pounds of flour to be given in exchange for any given number of pounds of grain; also to show the amount of toll to be taken for grinding any specific quantity of grain, the scale-beam proper having two lines of graduations when desired, and the poise so constructed that its capacity may be increased to any desired amount to correspond with the lower or second line of said graduations. The object of this construction is to enable the scales to weigh large drafts, should it be desired to employ them for warehouse purposes as well as in connection with the milling business. Both the scale-beam and the recording-beam may have all the above graduations, with the addition to the poise, or any portion of them, as may be desired, all as hereinafter more fully set forth.

Referring to the accompanying drawings, Figures 1, 2, 3, and 4 are side elevations, showing the different sides of the recording-beam in connection with the beam A. Fig. 5 is a section view through line *xx*, Fig. 1.

A denotes the scale-beam, having at its ends the dependent arms B, between which and centrally below the beam A is pivoted the recording-beam D, which in the present instance is square and is graduated, as hereinafter described, upon its four sides. The beam D is secured in place by adjustable screws *a*, so that it may revolve freely or be removed when desired. Upon the beam A is hung, in any suitable manner so as to be movable horizontally thereon, the poise or indicator E, the finger of which passes down across the face of the beam D. The beam A is graduated in the present instance on its upper edge in one-pound divisions,

which are to be used for all gross weights and in connection with the recording-beam when used for mill purposes. The lower line of graduations is in the present instance in ten-pound divisions, which are to be used for warehouse purposes in connection with the recording-beam D, or for general purposes with the additional weight *e* on the poise or indicator E. The graduations on the face *b* of the recording-beam D are specially adapted for wheat. The upper edge of the face *b*, which is marked "W," indicating that that face is to be used in connection with wheat, is graduated in bushels and pounds, and is to be used to show the number of bushels and pounds there are in the gross pounds given on the upper line of graduations of the beam A. The lower edge of said face *b* is for giving the number of bushels and pounds of wheat indicated on the lower line of graduations on the beam A.

When it is desired to weigh corn the recording-beam D is revolved until the face marked "C," which indicates "corn," is brought to the front or next to the indicator E. This face C has its upper edge graduated in bushels and pounds, and is to be used in connection with the upper line of graduations on the beam A. The lower edge of the face C is marked "Ex," meaning "exchange," and is graduated so as to show thirty-eight (38) on this edge against sixty (60) pounds of wheat on the beam A, denoting the proportion of flour to be given for any number of pounds of wheat at thirty-eight (38) pounds for one bushel.

The next side of the beam D is marked "O," meaning "oats," and its upper edge is graduated to show that thirty-two (32) pounds is one bushel and the number of bushels and pounds in any given number of pounds gross indicated on the beam A. The lower edge of this face of the revolving beam is graduated to show how many pounds of flour are to be given for any number of pounds of wheat denoted on the upper line of graduations on the beam A at the rate of forty (40) pounds of flour to the bushel or sixty (60) pounds of wheat.

The next side of the beam D is marked on its upper edge "Ex," which means "exchange," showing the number of pounds of flour to be

given for any number of pounds of wheat at the rate of thirty-six (36) pounds of flour for one bushel or sixty (60) pounds of wheat. The lower edge of this face is marked "T," which indicates "toll," or the number of pounds of grain to be taken for grinding any number of pounds of grain at the rate of one-eighth ($\frac{1}{8}$) of the gross weight.

It is plain that the arrangement of the figures on the beams A D will have to be altered for some localities, owing to the regulations governing the exchange in different sections and the various kinds of grain to be handled. I do not, therefore, limit myself to the exact proportions stated.

The beam D may be of any desirable form and construction that will effectuate the object of the invention, and while a square beam having its indices separated by a groove, *i*, is a preferred form, and I claim it as my invention, as hereinafter recited, still I do not limit the application of the invention to a beam of that peculiar construction.

The lower end of one of the arms B has an enlarged head, *m*, over which the finger of the poise or indicator E may be moved, and thus be out of the way when it is desired to turn the beam D.

It is obvious that the invention above described may be used, as a rule, to denote exchange, toll, &c., and hung up in the mill for reference.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A beam for scales having a series of graduations, one of which indicates the amount of exchange in flour to be given for any quantity of grain specified in another graduation, substantially as specified.

2. A beam for scales having as many lines of graduations as may be desired, one of which indicates the amount of flour to be given for a quantity of grain specified on a second line, while the third line gives the number of bushels and fractions thereof, in pounds, of the said specified quantity of grain, substantially as specified.

3. A beam for scales having as many lines of graduations as desired, one of which indicates the amount of toll to be taken for grinding a quantity of grain specified, while another line denotes the amount of flour to be given in exchange for the said specified quantity of grain, substantially as expressed.

In testimony that I claim the foregoing improvement in scale-beams as above described I have hereunto set my hand this 18th day of November, 1879.

GEORGE W. BLISS.

Witnesses:

THOS. E. BARROW,
LEROY PARSONS.