

S. S. HITCHCOCK.

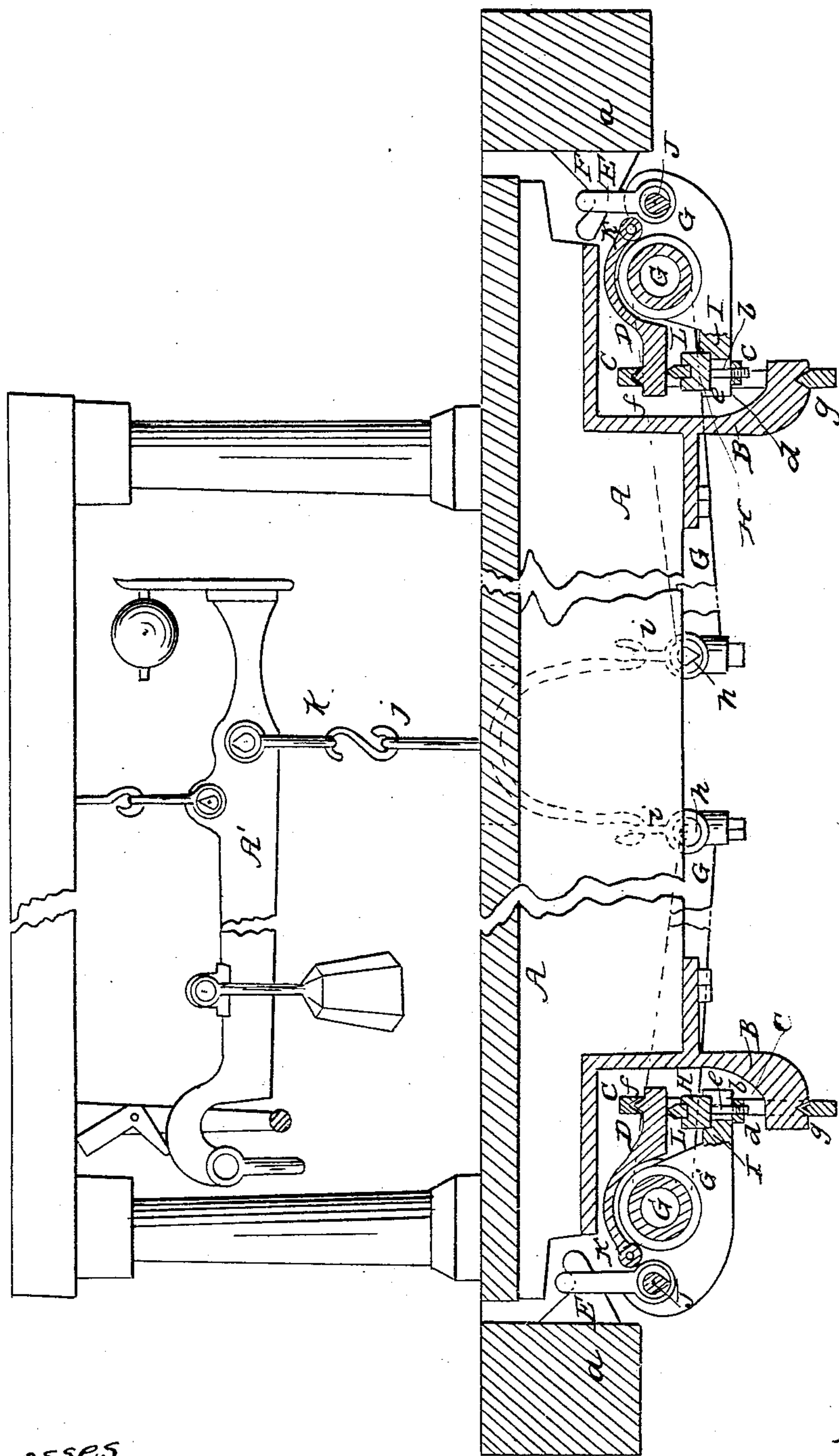
2 Sheets—Sheet 1.

Balance Scales.

No. 31,243.

Patented Jan. 29, 1861.

Fig. 1



witnesses
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Inventor
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S. S. HITCHCOCK.

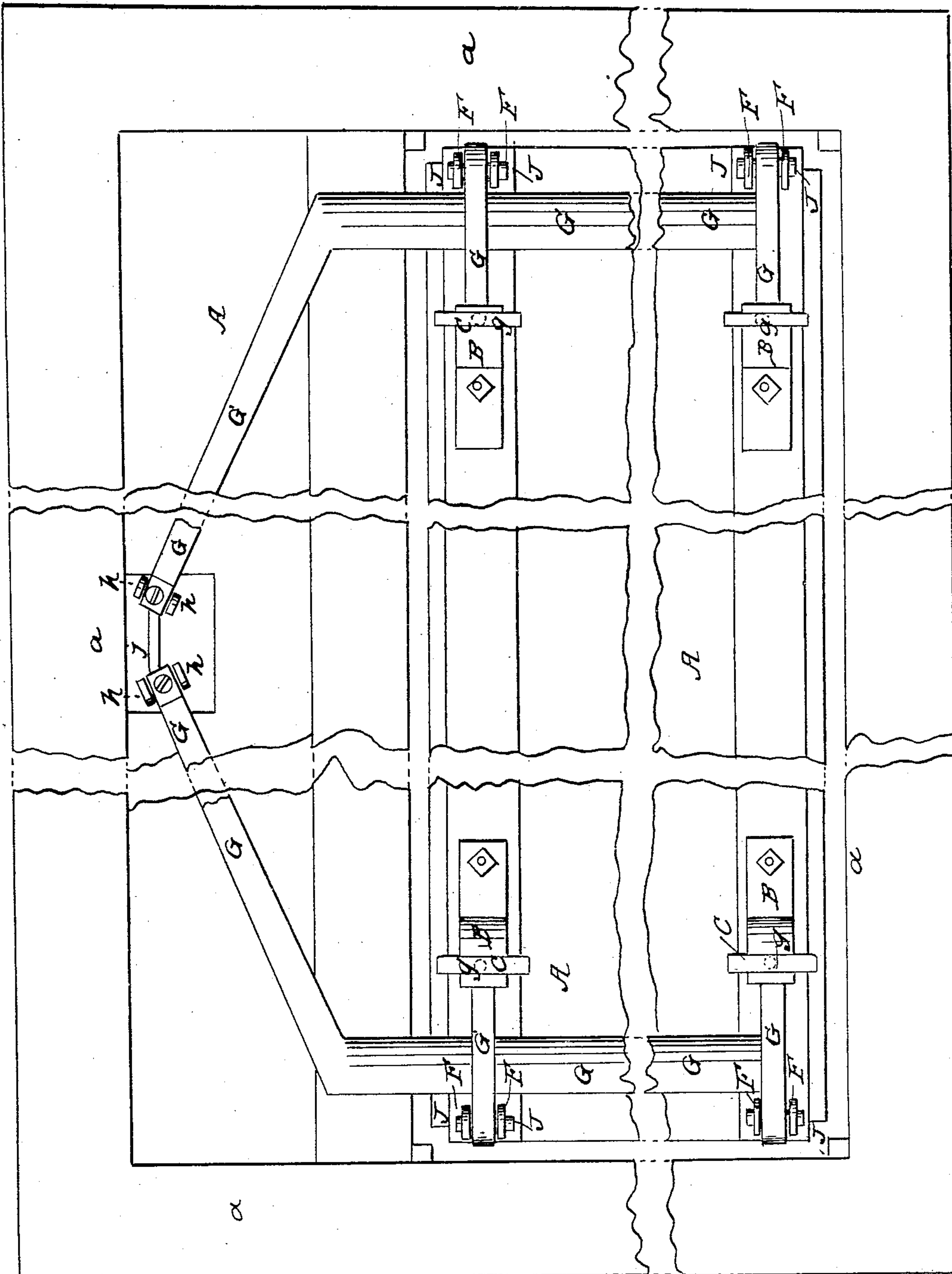
2 Sheets—Sheet 2.

Balance Scales.

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Fig. 2



Witnesses
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UNITED STATES PATENT OFFICE.

SILVESTER S. HITCHCOCK, OF CHICAGO, ILLINOIS.

SCALE.

Specification of Letters Patent No. 31,243, dated January 29, 1861.

To all whom it may concern:

Be it known that I, S. S. HITCHCOCK, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Platform-Scales for Weighing; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1, is a vertical longitudinal section of my improved platform scale. Fig. 2, is an inverted or underside view of the same.

Similar letters of reference in each of the figures indicate corresponding parts.

My invention consists in the combination and arrangement of the main elements of the scale, substantially as hereinafter described.

To enable others skilled in the art, to make and use my invention, I will proceed to describe its construction and operation.

A, represents the platform of the scale and A', the scale beam with its attachments; B, B, legs or brackets which project down from the underside of the platform A, and are firmly bolted to the beams or timbers of the same; E, E, corner brackets projecting out from the corners of the marginal lining a, a, of the vault or pit, which contains the supporting mechanism of the scale. From the convex brackets, links F, extend down and attach by knife edge fulcra J, J, to main levers G, G, as shown. The axes of said levers are to be made of a considerable diameter and hollow so that they shall be light and yet not liable to spring, and thus be able to sustain the weight brought to bear upon them. Also render unnecessary the employment of props or braces to support it, and thus a deep pit or vault, in which to set the sustaining mechanism of the scales, dispensed with. The depth for a ten-ton scale—erected after my plan—from top to bottom of pit, only requires to be fifteen inches.

D, D, are hinged bars hung to the main levers at the points K, K. These bars hang and extend over the axes of the levers G, G, and through links C, C, and rest on adjustable knife edged fulcra L, L, of the main levers, as represented. The fulcra L, L, are set in slides H, which are connected

to the main levers G, at the points L, by means of slots b, screws c, and nuts d. By being thus connected, they are susceptible of being easily adjusted back and forth or graduated relatively to the corner bearings. And after being properly adjusted, they can be fastened so as not to move themselves or allow of the hinged bars D, moving out of proper position. This arrangement lessens the liability of the parts working with unnecessary friction and wear. The links C, C, hang on top of pivotal bearings f, f, formed near the loose end—on top—of the hinged bars D, D, and extend down far enough to admit through them the feet of the legs or brackets B, B, of the platform A. The said feet rest on pivotal bearings g, g, of the links C, C, as represented. By this arrangement, the motion of the platform is borne by the links C, C, instead of by the knife edge fulcra L, L.

The scale beam connects with the main levers G, G, by means of adjustable knife edge bearings h, h, links i, i, forked hanger j, hook k, and link l, as represented.

My arrangement is very compact and simple and works with but little friction. It also weighs very accurately and withall is very durable and capable of being contained within a pit or vault of not more than fifteen inches in depth.

I do not claim anything covered by the patent of R. F. Walcott, dated Novr. 1st 1859, but—

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

1. The combination and arrangement of the main lever G, hinged bar D, leg or bracket B, links F, C, knife edge bearings L, J, and pivotal bearings f, and g, substantially as herein described and for the purpose set forth.

2. The combination of the hinged bar D, main lever G, and adjustable slide H, with knife edge bearing on its top, substantially in the manner and for the purpose described.

Signed and witnessed this 10th day of December 1860.

SILVESTER S. HITCHCOCK.

Witnesses:

P. W. GATES,
A. G. WARNER.