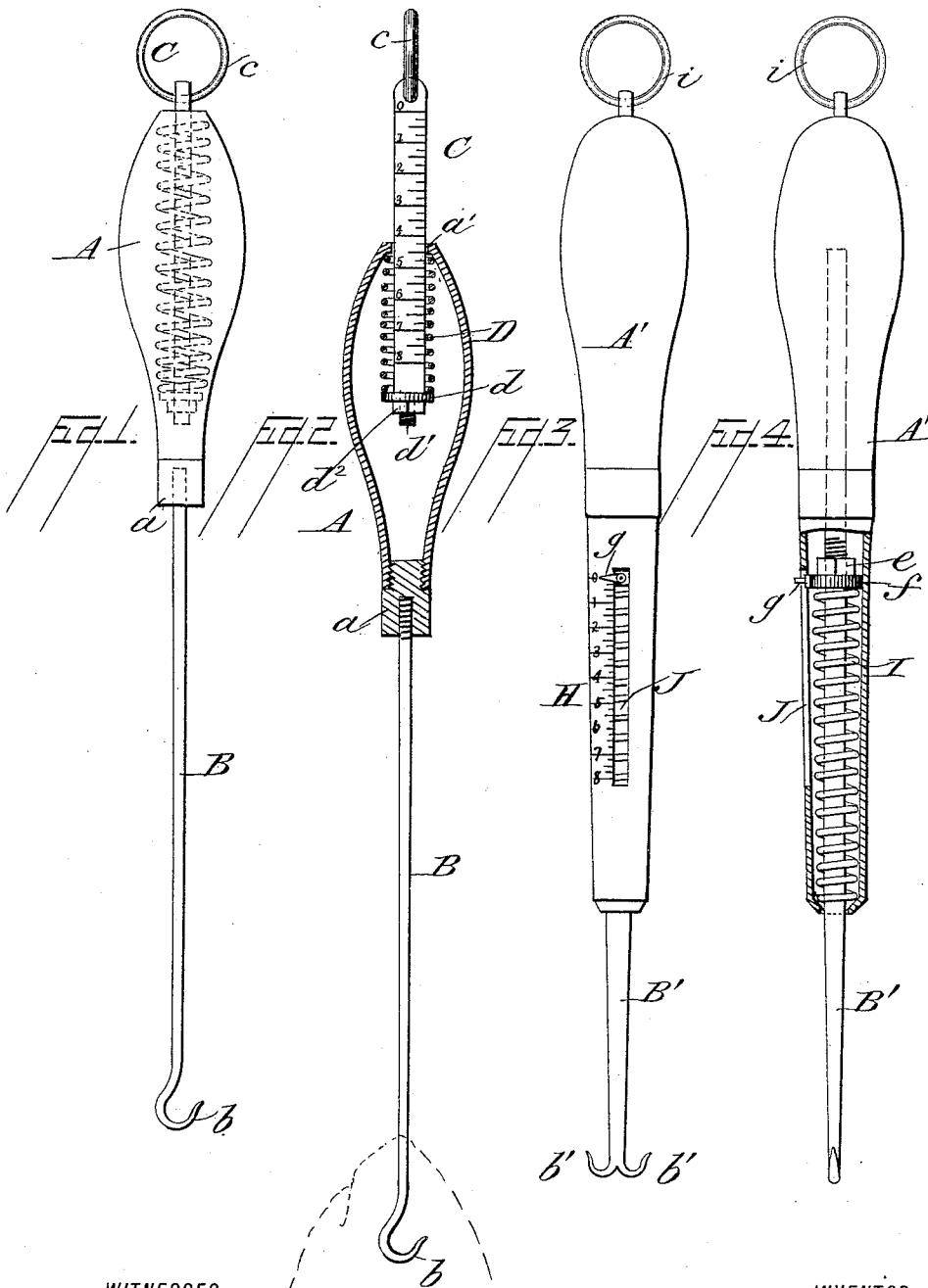


(No Model.)

J. S. McILVAINE.
SPRING SCALE.

No. 452,278.

Patented May 12, 1891.



WITNESSES:

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SPRING-SCALE.

SPECIFICATION forming part of Letters Patent No. 452,278, dated May 12, 1891.

Application filed January 22, 1890. Serial No. 337,703. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. MCILVAINE, a citizen of the United States, residing at Chambersburg, in the county of Franklin and State of Pennsylvania, have invented certain new and useful Improvements in a Combined Hook and Scale; 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.

My invention relates to a combined hook and scale, its object being to provide a hook such as is commonly used for the purpose of lifting fish, meats, and other preserved articles or substances from the barrels or other receptacles in which they are contained, with a suitable scale or similar device by means of which the said articles may be easily weighed without detaching them from the lifting-hook, thus avoiding handling the articles and preventing the befouling of the counter, scales, &c., which commonly occurs when the article is first lifted by means of the hook from its brine or pickle and then placed upon a separate weighing apparatus.

My invention by providing the lifting-hook with a scale combines the two operations of lifting and weighing in such an easy, simple, and efficient manner that the device becomes at once a valuable and useful adjunct to the merchant dealing in fish, meats, and other similar commodities; and it consists, essentially, in a rigid hook provided with a graduated scale, and also in certain details and peculiarities in the construction, arrangement, and combination of parts, substantially as will be hereinafter described, and then more fully pointed out in the appended claims.

In the accompanying drawings, illustrating my invention, Figure 1 is a side elevation of my improved combined hook and scale, the interior mechanism within the handle being shown in dotted lines and the device with the parts in the position that they occupy when it is not in use. Fig. 2 is a longitudinal sectional elevation of the same with the scale-bar extended out of the handle, the parts being shown in the position that they occupy when the device is in use. Fig. 3 is a side elevation similar to Fig. 1, showing a modified form of the device, the handle being longer and the

scale being differently arranged. Fig. 4 is a view similar to Fig. 3 in partial longitudinal section to expose the arrangement of the mechanism within the handle.

Like letters of reference designate corresponding parts throughout the different figures of the drawings.

A denotes the handle of the hook, and B the hooked rod, having the hooked end *b*. The handle A may be made of any suitable and desirable form, shape, and size and of any suitable material. It may be made of metal, if preferred, and nickel-plated or galvanized to preserve it from rusting. Brass or iron will afford convenient material of which to make this handle. Its interior is hollow to permit the location therein of the scale-bar and its spring, as will be presently explained.

The upper end of the handle is provided with a slot or opening *a'*, through which the scale-bar emerges and through which said bar is adapted to play during the manipulations of the device. The lower end of the handle A is closed by means of a plug or stopper *a*, which is screwed therein and to which the end of the hook-rod B is firmly and rigidly connected. Thus it will be seen that the handle A and hook B constitute a fish or meat hook adapted to grasp articles contained within a preserving-receptacle and remove them therefrom in the ordinary and usual manner. In Fig. 2 I have indicated in dotted lines one such article which is being grasped by the end *b* of the hook.

C indicates a scale-bar having a series of graduations thereon adapted to denote certain degrees of weight. This scale-bar may be of any suitable and desirable form, shape, and length. It is provided at its upper end with a ring *c*, adapted to be held by the user of the device when he is weighing the article suspended by the hook. The scale-bar is located partially within the handle and plays through the aforesaid opening *a'*. The part of the scale-bar within the handle is surrounded by a coiled spring D, which is tensioned between the upper interior end of the handle A and a collar *d*, located upon the lower end of the scale-bar, said lower end of the scale-bar being screw-threaded at *d'* and provided with a nut *d''*, which is adjustable upon

the screw-threaded end of the scale-bar, and by means of which the tension of the surrounding spring may be regulated and changed. It is obvious from this description of the parts that the tendency of the coiled spring will be to retract the scale-bar within the handle and keep it normally in the position shown in Fig. 1, where said scale-bar is completely within the handle, excepting the extreme upper end thereof, which is provided with the ring *c*. When the device, however, is called into requisition for the purpose of weighing a suspended article, the weight upon the lower end of the hook will cause the spring to be compressed, and thus the scale-bar will mark the amount of such weight, said scale-bar being easily read by observing the graduation nearest to the end of the handle to which said bar will at the time be emerging, the scale thus registering in a line with the top of the handle.

In Fig. 3 I have represented a modification in the construction of my improved device. The handle is much longer than in Figs. 1 and 2, said handle being designated *A'* and being provided with an elongated slot *J*. The upper end of the handle is provided with a ring similar to the ring *c*, and the hook-bar *B'* is provided with two hooked ends *b' b'*, instead of with one, as in Figs. 1 and 2. The series of graduations are delineated upon the outer surface of the handle *A'* in a line adjoining the slot *J* at *H*, instead of being located upon the movable bar, as is the case in Figs. 1 and 2. The rod *B'* is itself reciprocatory, inasmuch as the graduated scale is fixed with respect to the handle. Said bar *B'* extends upward through an opening in the lower end of the handle into the interior thereof, and is provided with a nut *e*, and likewise with a collar *f*, which collar carries a pointer *g*, that projects through the longitudinal slot *J* and rides along upon the outer surface of the handle, being in its course successively brought into proximity with the several members of the graduated scale, so that this indicator or pointer will mark the amount of weight which is being suspended upon the hook of the device.

Coiled around the rod *B'* within the handle and tensioned between the collar *f* and the inner lower end of the handle is a spring *I*, similar to the spring *D*. This is clearly

shown in Fig. 4. When the spring is in its normal position, the pointer *g* will be at the zero-mark of the scale; but when an object is being suspended by the device the spring *I* will be compressed to a greater or less extent, the result of which change in the position of the parts will be to cause the pointer to indicate some other mark upon the scale, and thus show the weight being sustained upon the device. It will thus be seen that my device consists, essentially, of a rigid fish or meat hook having a suitable handle and provided with a scale, so that when an object has been withdrawn by means of the hook from the receptacle which contains it the user of the device may at once weigh the object without detaching it from the hook, thus enabling him to save time and to prevent soiling or injuring the counter, scales, and person.

Any kind of a spring may be used with this device, either the kind described or an expansion-spring.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the hollow handle having an opening in its upper end, the rigidly-connected hook, the scale-bar located within the handle and playing through said opening, and the spring surrounding the scale-bar.

2. The combination of the hollow handle having an opening in its upper end and a stopper in its lower end, a rigidly-connected hook fastened to said stopper, the scale-bar within the handle and playing through the upper opening, and the spring surrounding said scale-bar, as specified.

3. The combination of the hollow handle *A*, having the upper opening *a'* and the stopper *a* in the lower end thereof, the hook *B*, having the end *b*, said hook being connected to the stopper *a*, the scale-bar *C*, provided with ring *c*, the spring *D*, surrounding said scale-bar, and the nut *d'* on the end of the scale-bar, as specified.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN S. McILVAINE.

Witnesses:

H. E. HOKE, Jr.,

FRED H. SHUMAKER.