K. D. HAWLEY & G. W. ANDERSON.

Automatic Weighing Attachment for Faucets.

No. 216,567. Patented June 17, 1879.

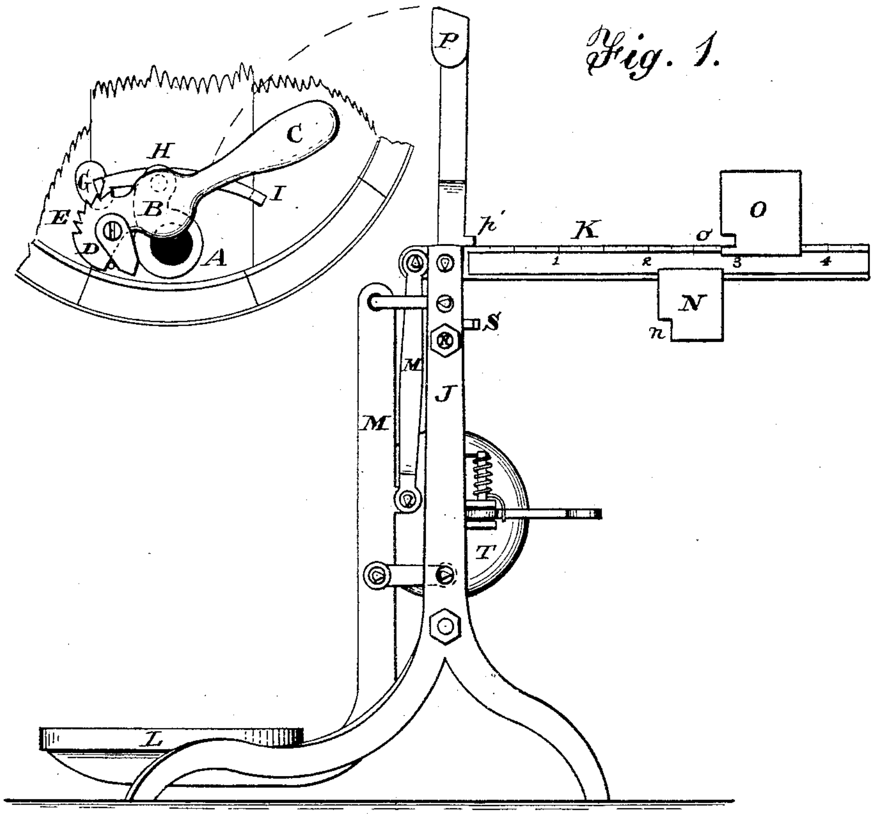

Fig. 1.

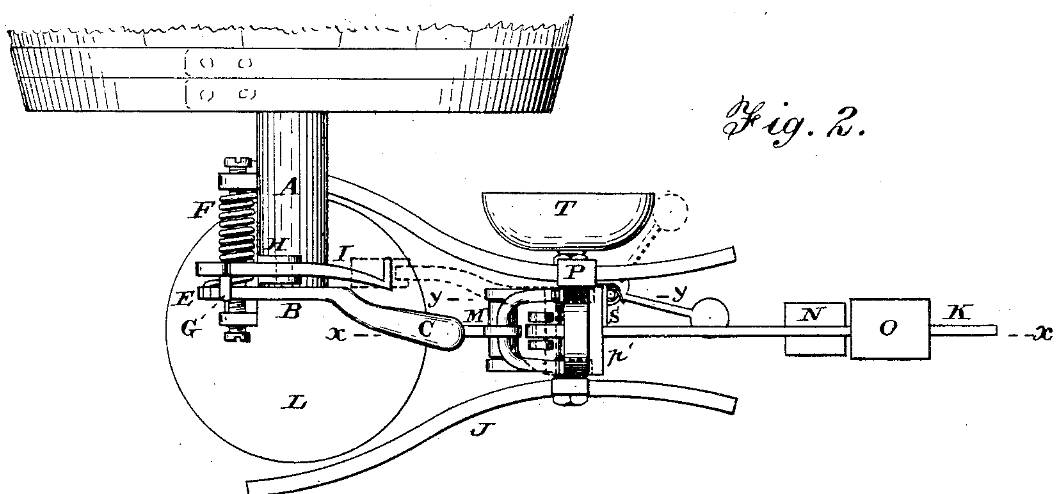

Fig. 2.

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Fig. 3.

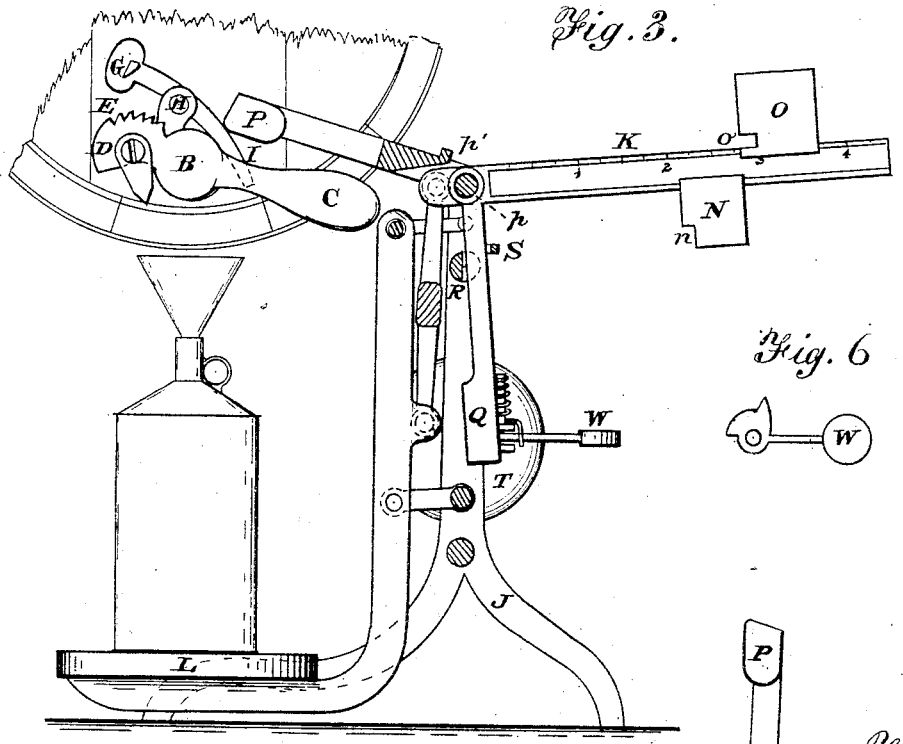


Fig. 6

Fig. 5.

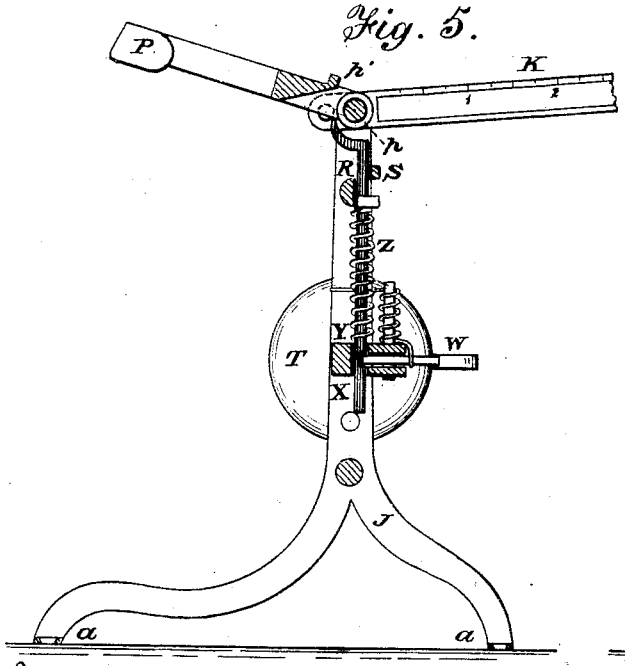
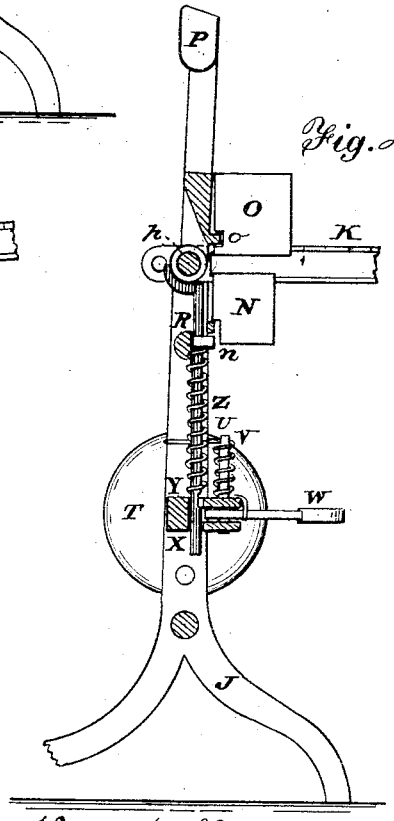


Fig. 4.



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UNITED STATES PATENT OFFICE.

KOERT D. HAWLEY AND GEORGE W. ANDERSON, OF ELIZABETHTOWN, INDIANA.

IMPROVEMENT IN AUTOMATIC WEIGHING ATTACHMENTS FOR FAUCETS.

Specification forming part of Letters Patent No. **216,567**, dated June 17, 1879; application filed March 29, 1879.

To all whom it may concern:

Be it known that we, KOERT D. HAWLEY and GEORGE W. ANDERSON, both of Elizabethtown, Bartholomew county, Indiana, have invented a new and useful Weighing Attachment for Molasses Gates or Faucets, of which the following is a specification.

Our device, although applicable for use with any kind of liquid, is more particularly designed to facilitate the retail service of such semi-liquids as molasses, tar, fatty oils, glycerine, and the like, whose slow delivery and adhesive qualities usually involve much expenditure of time, waste of material, and inaccuracy of measurement.

Our invention is an improvement on those devices for the automatic serving of any prescribed quantity of liquid that employ a platform-scale whose operation acts through a suitable member or appendage to close the gate or valve the instant the desired amount has passed into the can, jug, or other receptacle in which it is to remain.

Our device comprises, essentially, two distinct but co-operating apparatuses, which we denominate, respectively, members 1 and 2, and of which the first consists of attachments or appendages to the faucet—that is to say, a dog, pawl, or trigger—for holding the gate open, and the second and most distinguishing member, of a weighing apparatus and striker, which, at the instant that the proper quantity has been served, becomes effective to trip the pawl and automatically close the faucet.

In the accompanying drawings, Figure 1 is a front elevation of an apparatus embodying our invention, the faucet being shown open and the tripping mechanism being set for automatic action. Fig. 2 is a top view of the same. Fig. 3 is a section on the line *x x* of the apparatus as it appears after its automatic functions have been discharged. Figs. 4 and 5 are sections on the line *y y*, taken respectively before and after the discharge of said functions. Fig. 6 represents the bell-clapper in profile.

A may represent the spout, and B the gate or valve, of a customary molasses-faucet. The gate B has a handle, C, and a heel-plate, D, having serrated edge or rack E. The gate B in the preferred form of our attachment is self-closing. The self-closure of the gate may be obtained either by the weight of its handle or by the stress of a spring, F.

The gate B is rendered capable of being held in its open position by the automatic engagement in its rack E of a pawl, dog, or trigger, G, which is prolonged beyond its fulcrum H so as to form a handle, I. The pawl G is made self-engaging in the rack either by the preponderating weight of its head G or by a suitable spring.

The series of notches or serrations in the rack E enable the operator to set the gate more or less open to suit the condition of the liquid, the desired rapidity of discharge, &c.

While preferring a faucet such as above described, it is proper to state that such form is not essential to the working of our invention. A common molasses-gate held to its open, or partially open, position by simple friction may be employed effectively in conjunction with the weighing apparatus and automatic striker, which constitute the most distinguishing feature of our invention, and are included in member 2. This member comprises the following parts: J, K, L, and M may represent, respectively, the standard or frame, the scale-beam or steelyard, the platform, and the connecting-rods of any customary or appropriate platform-scale.

N and O represent customary sliding weights, of which the lesser one, N, serves to counterbalance the weight of whatever vessel may, for the time being, be employed, and the larger weight, O, that which is used to determine the quantity of liquid to be served.

Sleeved at *p* to the trunnions of the scale-beam is an arm, P, which we call the "mallet" or "striker." A heel or shoulder, *p'*, on the said striker, resting upon the beam, holds the striker to the nearly vertical position represented in Fig. 1 when the apparatus is set.

A rigid pendant, Q, from the under side of the beam, in the plane of its fulcrum, serves to just counterbalance the upheld striker, and also serves, in conjunction with stops R and S, to limit the vibrations of the beam to within a few degrees above and below horizontality.

The weights N and O are notched, *n* and *o*, to receive the stops S and *p'* when the weights are in their most retracted position; and in this position said weights with the scale-beam exactly counterbalance the platform and its appendages on the other side of the fulcrum, the weight of the striker P being at the same time exactly neutralized by that of the pendant Q. The heel or stop *p'*, when engaged in the notch *o* of weight O, coacts with said weight to retain the striker to its elevated position, even should the beam become uptipped by the premature loading of the platform or from other cause.

Lugs *a* may be provided on the lower ends of the frame to receive wood-screws for fastening No. 2 to its proper place upon the floor.

The stop R may, in addition to its function of limiting the oscillations of the beam, also serve as one of the cross-braces of the frame.

Although preferring the trigger G and rack E, it is proper to state that these members are not deemed by us absolutely essential. They may, in fact, be omitted altogether, and the striker may operate directly upon the handle of a gate held open by simple friction, in the ordinary manner.

In addition to the essential features above described, an audible-signal mechanism to indicate closure of faucet may be provided, as follows: T may represent a bell or sonorous wire or other resonant appendage to the frame; U V W, a common spring clapper or hammer; X, a notched rod, which is capable of a slight vertical play in guides Y R S; Z, a spring, which holds rod X to its elevated position, except when depressed by pressure of cam 1 on the heel of the striker as the latter reaches its effective position.

The operation of our attachment is as follows: Member 2 having been suitably located relatively to the faucet, and the striker P being in its upturned position, and having its heel *p'* engaged in notch *o* of weight O, the jug or other receiver is then placed upon the platform, and weight N is shifted outward to counterbalance it. The weight O is then shifted outward to the mark on the scale which designates the quantity to be served. The attendant then lifts the gate to a less or greater height, according to the desired volume and freedom of delivery, the pawl automatically holding the gate to whatever elevation it is placed. If it be desired to use the bell, the clapper is put in cock. The apparatus may then be left, and at the proper instant will close the faucet and sound the alarm.

We claim as new and of our invention—

1. The combination, with the self-engaging dog F and self-closing gate B, of the pivoted and upwardly-extending striker P, thrown beyond its center of equilibrium by the uptip of the scale-beam, substantially as and for the purpose set forth.

2. In combination with scale-beam I, the flopping strikers P *p p'*, pivoted to the beam at or near its center of motion, as and for the purpose set forth.

3. The combination of scale-beam I, flopping striker P, and counter-balance O, for the purpose set forth.

4. The combination, with a dogged and self-closing molasses-gate, B D F *f f'*, of the low-down platform J of a weighing-scale whose beam is provided with the flopping striker P.

5. In the described combination, dogged and self-closing gate B D F *f f'*, the platform-scale H J J K L M, striker P, and counter-balance O, the whole being arranged and operating substantially as set forth.

6. In combination with the self-closing molasses-gate B D and self-engaging dog or trigger, the bell-alarm device, consisting of bell T, stem U, springs V and Z, guides R S Y, rod X, striker P, and clapper W, substantially as described.

In testimony of which invention we hereunto set our hands.

KOERT D. HAWLEY.
GEORGE W. ANDERSON.

Attest:
GEO. H. KNIGHT,
JOHN B. ANDERSON.