(No Model.)

C. H. COOLEY.

REGULATOR FOR GRAIN SCALES.

No. 409,669. Patented Aug. 27, 1889.

Fig. 1.

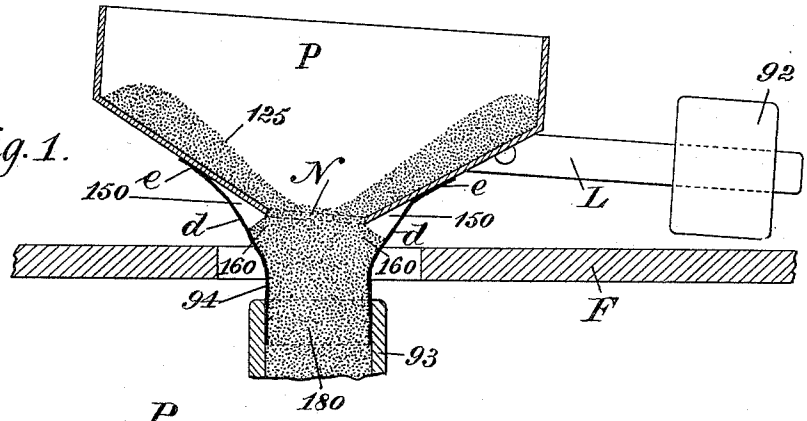


Fig. 2

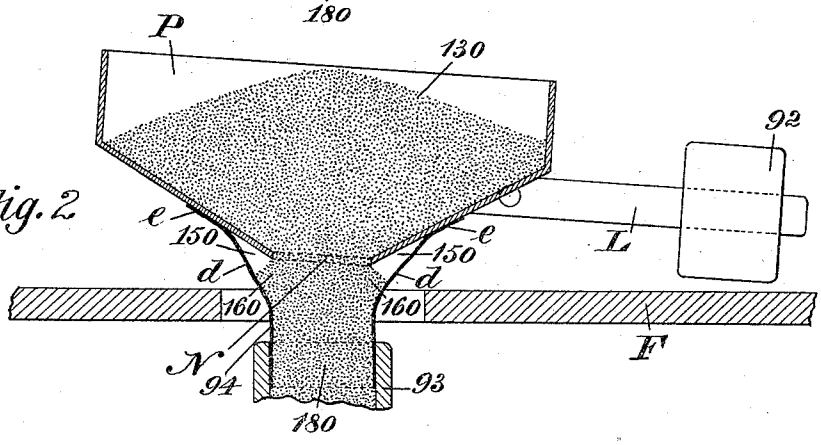
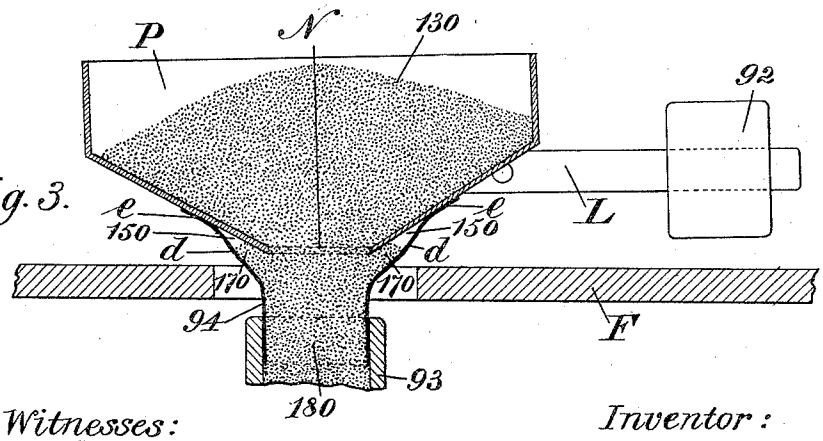


Fig. 3.



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By his Atty. F. H. Richards.

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UNITED STATES PATENT OFFICE.

CHARLES H. COOLEY, OF HARTFORD, CONNECTICUT, ASSIGNOR TO THE PRATT & WHITNEY COMPANY, OF SAME PLACE.

REGULATOR FOR GRAIN-SCALES.

SPECIFICATION forming part of Letters Patent No. 409,669, dated August 27, 1889.

Application filed October 15, 1888. Serial No. 288,160. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. COOLEY, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Regulators for Grain-Scales, of which the following is a specification.

This invention is in the nature of an improvement in the corresponding part of the regulator apparatus described in my application for Letters Patent of the United States, Serial No. 288,159, filed October 15, 1888.

In the drawings accompanying and forming a part of this specification, Figure 1 is a sectional elevation of those parts of a grain-scale-regulator apparatus which embody my present improvements. Figs. 2 and 3 are similar views further illustrating the construction and mode of operation of said improvements.

Similar characters designate like parts in all the figures.

In the drawings, the floor or platform supporting the grain-scale (not shown herein) is designated by F. The regulator-hopper P, lever L, counterbalance-weight 92, and fixed conduit 93, are all supposed to be the same, or substantially so, as the respective parts in my aforesaid Letters Patent and to have the same functions and mode of operation.

It will be remembered that the grain-bucket of the automatic grain-scale discharges its loads of grain intermittently into the regulator-hopper P, from whence the grain passes down through the opening N and through the connecting-pipe 94 and fixed conduit 93 into a normally-oversupplied grain-receiving chamber or apparatus below said conduit, and that since the grain-discharging capacity of the grain-scale is normally greater than the grain-receiving capacity of the said grain-receiving chamber the conduit 93 and pipe 94 are kept fully supplied with grain so long as the machinery is in operation. As the grain runs down and out of the hopper P, as indicated at 125 in Fig. 1, the weight 92 overbalances the hopper P, and this rises, as there shown. This movement extends the flaring upper end of connecting-pipe 94, leaving the clear space 150 outside of and around opening N and within the outwardly-flaring upper end *d* of said flexible pipe, which upper end is secured at *e e* to the under side of hopper P at some distance from the opening N. On receiving its next load of grain, as indicated at 130 in Fig. 2, the loaded hopper P then overbalances the weight 92 and descends, as indicated in Fig. 3. In doing this, however, (the column of grain 180 usually having but a slow downward motion,) the grain at 160, in Figs. 1 and 2, is forced outwardly and upwardly into the said space 150, as indicated at 170, Fig. 3, this operation being facilitated by the flexibility of the flaring part *d* of pipe 94, which quality allows said part to be bulged out, as there indicated, to permit a freer outward movement of the grain into said surrounding space. As the column 180 descends, the displaced grain at 170 runs down with the column and leaves the space 150 free, as in Fig. 1, ready for the next operation of the regulator-hopper.

Having thus described my invention, I claim—

The combination, in a regulator apparatus of the class described, of the vertically-movable hopper, the fixed conduit below said hopper, and the flexible connecting-pipe having its upper end outwardly flaring and joined to said hopper around and above the discharge-opening, whereby there is provided a space around the opening in the hopper and within said flaring part, all substantially as described.

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Witnesses:

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