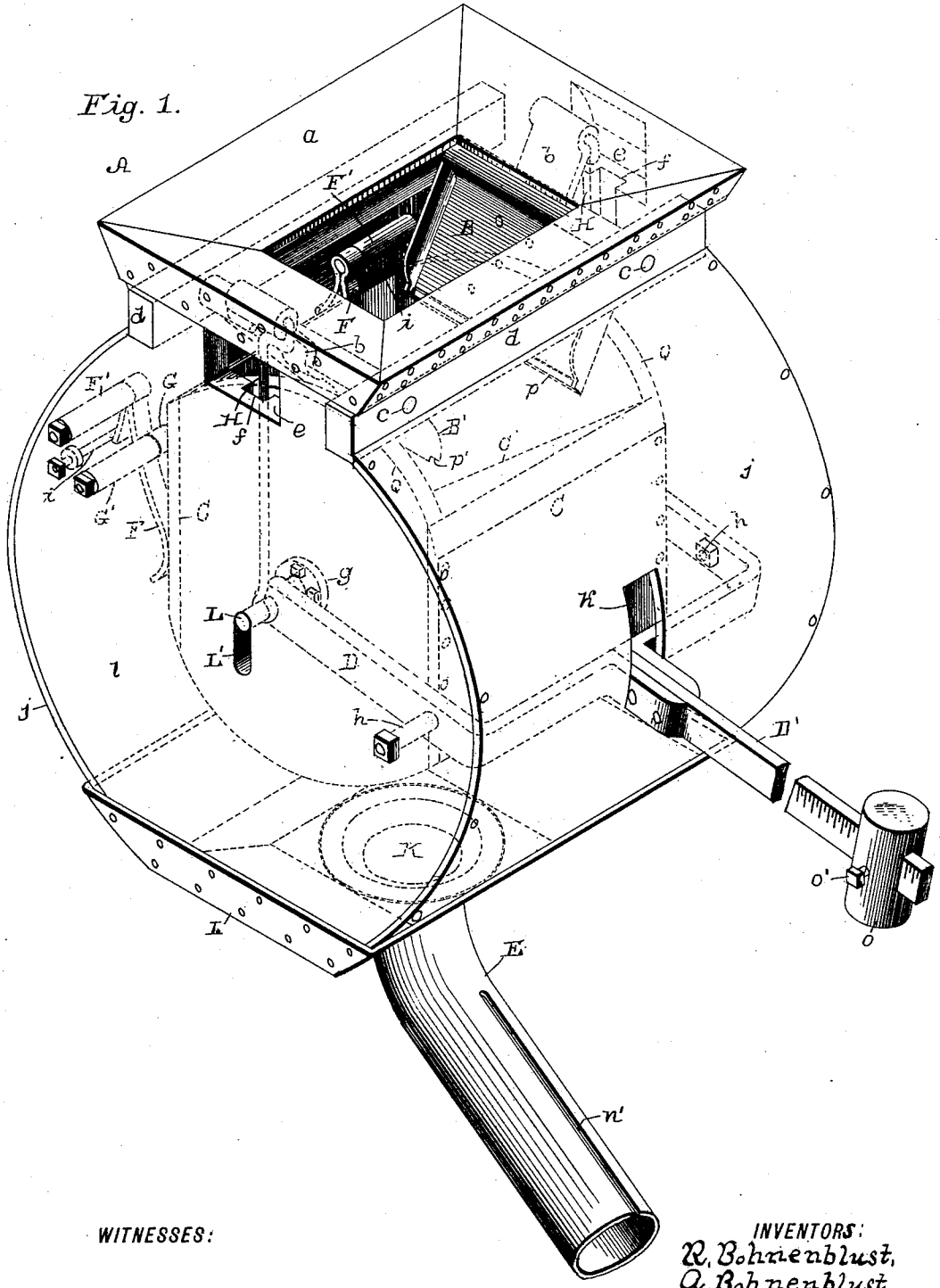
(No Model.) 2 Sheets—Sheet 1.

R. & A. BOHNENBLUST.

ROTARY GRAIN METER.

No. 414,750. Patented Nov. 12, 1889.

Fig. 1.



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(No Model.) 2 Sheets—Sheet 2.

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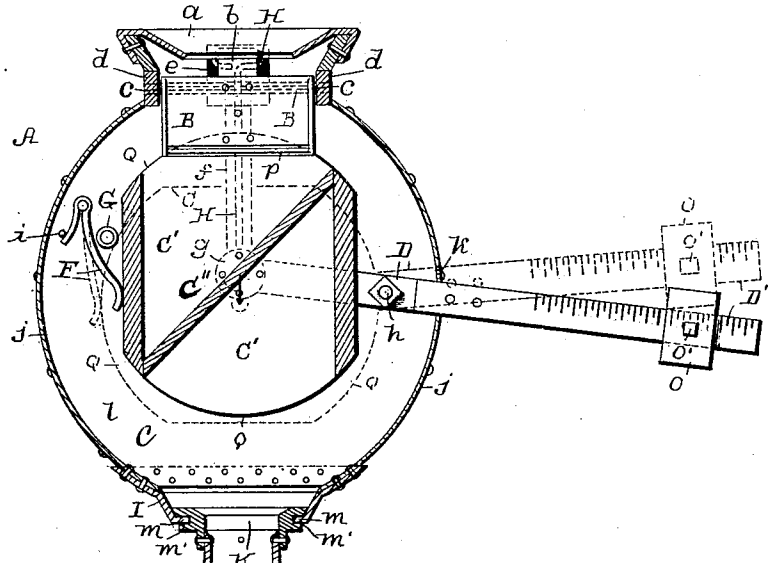


Fig. 2.

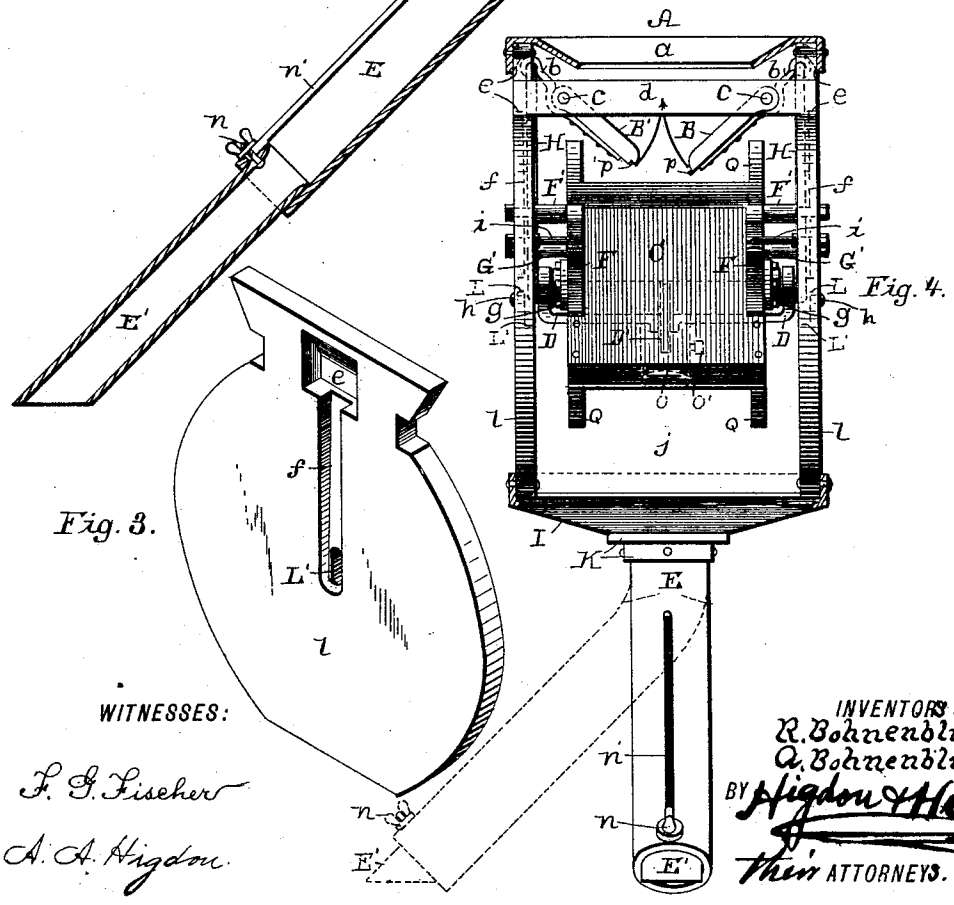


Fig. 4.

Fig. 3.

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UNITED STATES PATENT OFFICE.

ROMANUS BOHNENBLUST AND ARNOLD BOHNENBLUST, OF RILEY, ASSIGNORS OF ONE-FOURTH TO PETER H. GFELLER AND THEODORE MANZ, OF TELL, KANSAS.

ROTARY GRAIN-METER.

SPECIFICATION forming part of Letters Patent No. 414,750, dated November 12, 1889.

Application filed July 25, 1889. Serial No. 318,695. (No model.)

To all whom it may concern:

Be it known that we, ROMANUS BOHNENBLUST and ARNOLD BOHNENBLUST, of Riley, Riley county, Kansas, have invented certain new and useful Improvements in Weighing and Measuring Devices for Grain, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

Our invention relates to an improvement in grain measuring and weighing apparatus; and it consists in the peculiar construction and combination of devices that will be more fully set forth hereinafter, and particularly pointed out in the claim.

In the accompanying drawings, Figure 1 is a perspective view of our improved grain measuring and weighing machine, parts in the interior of the case being shown in dotted lines for the sake of clearness. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a detailed perspective view of one of the heads of the case. Fig. 4 is a front elevation of our improved grain weighing and measuring machine, part of the case being removed.

The heads *l* of the main casing or frame are substantially circular in form, have openings *e* in their upper edges, vertical central grooves *f* extending downward from the said openings, and vertical slots L′ in their centers, which communicate with the lower ends of the said grooves. The bottom I of the casing has a central circular opening provided with an annular tongue *m*. The front and rear sides of the casing are formed by metallic sheets *j*, bent on the curved edges of the heads and secured thereto by screws, as shown. Cross-bars *d* connect the heads at the upper side of the casing, and on the said bars is secured the hopper *a*. Rods *c* connect the bars *d* near the ends of the latter and form the pivots for valves B B′, which are arranged under the mouth of the hopper. The valve B has a tongue *p* at its lower edge, adapted to enter the re-entering groove *p′* in the lower edge of the valve B′, and thereby form a lapped joint between the said valves when they are closed under the hopper. The valves are further provided with arms *b*, projecting from their outer sides and having eyes, to which are pivoted the upper ends of links H, which are arranged in the grooves *f*. A yoke D is arranged in the casing and is pivoted on bolts *h*. From the center of the yoke projects a scale-bar D′, which extends outward through a vertical slot K in the front side of the casing. A weight *o* slides on the scale-bar and has a set-screw *o′*, by which the weight may be secured at any desired adjustment.

The measuring-bucket C is cylindrical in form, with its opposite sides flattened, and is divided into two compartments C′, of like capacity, by an inclined partition C″. On the centers of the heads of the bucket are secured trunnions *g*, the journals L of which are arranged in the slots L′ and have their bearings in the ends of the bail D, and are also connected with eyes formed in the lower ends of the links H. Anti-friction rollers G are mounted on bolt-shafts G′, which project inward from the ends of the casing. The weighted scale-bar normally counterbalances the bucket when the latter is empty and causes the yoke to elevate the same to such a height that the journals L are at the upper ends of the slots L′. While in this position the rollers G bear against one of the flattened sides of the bucket, as shown. Flat springs F, pivoted on bolt-shafts F′, also bear on the flattened side of the bucket to retain the same in its normal position. The free outer ends of the said springs are held against bolt-rods *i*.

The operation of our invention is as follows: While the bucket is in its normal elevated position the links H, by elevating the outer ends of the arms *b*, depress the inner ends of the valves and open the same, so as to uncover the bucket. The weight being adjusted to the required figure on the scale-bar, the grain is caused to be poured into the hopper, and from the same runs into the uppermost compartment of the bucket. When the required quantity of grain is in the bucket, its weight causes the bucket to descend until the rollers G clear its flattened side, and the preponderating weight of the grain on one side of the bucket then causes the latter to make a half-revolution, thereby discharging the grain into

the bottom of the case. The rollers G operate on the curved edges of the bucket while the latter is revolving and prevent the same from rising until all of its contents have been discharged, and the springs F, by engaging the flattened sides of the bucket, serve to arrest its revolving movement after each discharge of the weighed and measured grain, thus holding the bucket in proper position to be again filled. As the bucket descends, preparatory to discharging the grain, as before described, the links H cause the valves to close the mouth of the hopper, and thus prevent waste of the grain. The discharge-spout E has a slot n' on its upper side, and at the upper end of the spout is riveted a collar K, having an annular groove m', which engages the annular tongue m at the bottom of the casing, and thus adapts the spout to be swung in a circular direction to any desired point. An extensible joint E′ is arranged telescopically in the spout and has a set-screw n on its upper side that operates in the slot n'. By this arrangement the spout is adapted to be lengthened or shortened, as will be readily understood.

Having thus described our invention, we claim—

The combination of the case, the cylindrical revoluble bucket having the flattened sides and the inclined partition C″, dividing it into compartments C′, the pivoted yoke having bearings at its inner end for the trunnions of the bucket and having the scale-beam and the sliding weight, the vertical guides in the sides of the case for the bucket-trunnions, the pivoted valves, the links connecting the same to the bucket-trunnions, the rollers G on fixed supports, arranged to operate on the curved sides of the bucket when the latter is lowered, and the stop-springs F, to engage the flattened sides of the bucket, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

ROMANUS BOHNENBLUST.
ARNOLD BOHNENBLUST.

Witnesses:
ERNEST HARBES,
B. F. MORGAN.