(No Model.)

F. H. EHLERS.

GRAIN MEASURE.

No. 381,350. Patented Apr. 17, 1888.

Fig. 1.

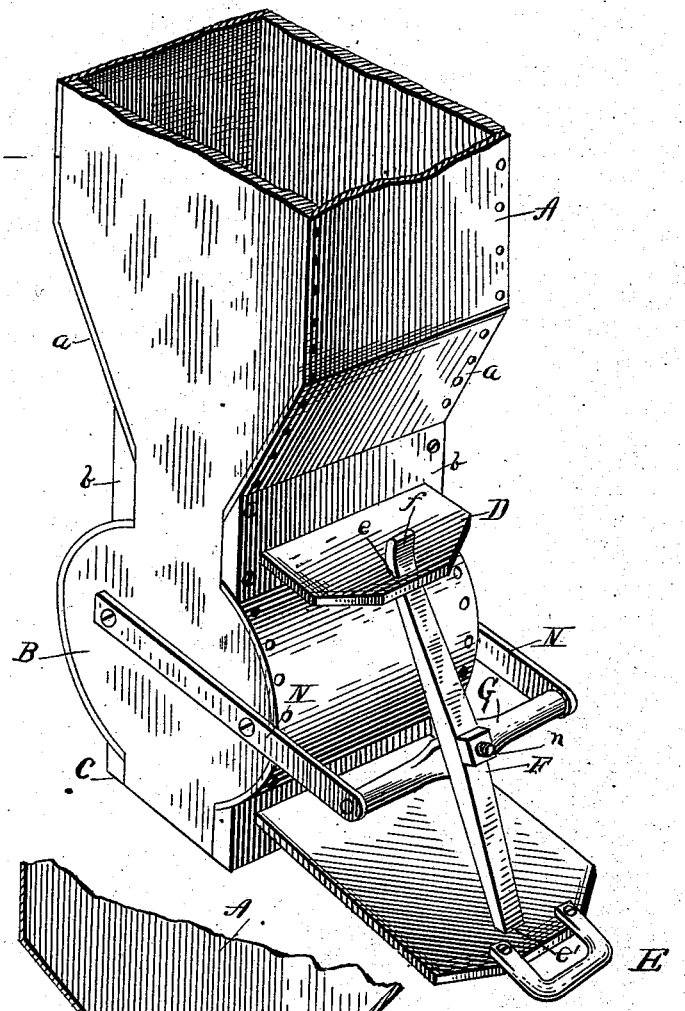
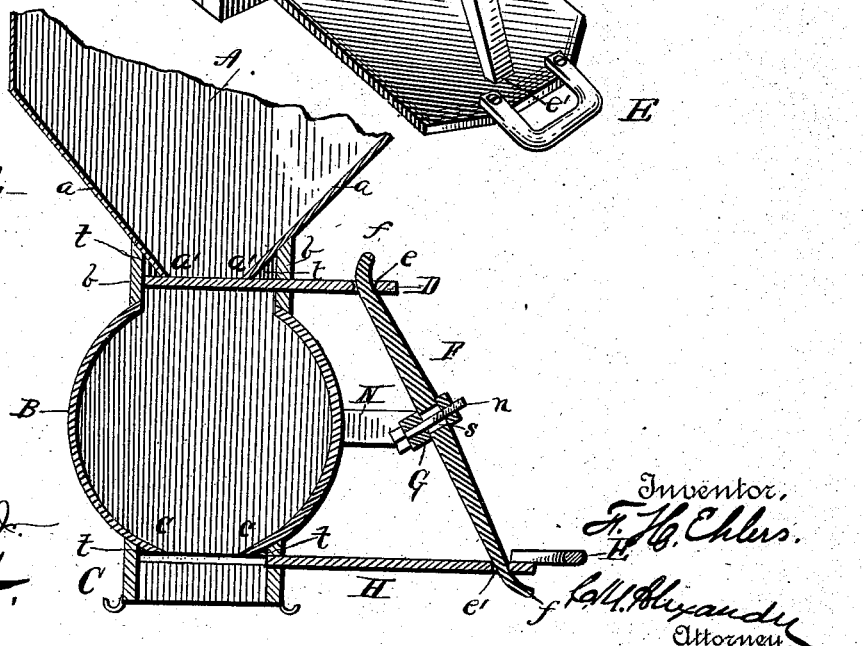


Fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

FRIDRECH H. EHLERS, OF MONTEVIDEO, MINNESOTA.

GRAIN-MEASURE.

SPECIFICATION forming part of Letters Patent No. 381,350, dated April 17, 1888.

Application filed December 29, 1887. Serial No. 259,333. (No model.)

To all whom it may concern:

Be it known that I, FRIDRECH H. EHLERS, a citizen of the United States, residing at Montevideo, in the county of Chippewa and State of Minnesota, have invented certain new and useful Improvements in Grain-Measurers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to means for measuring grain and the like, wherein two alternately-reciprocating slides or cut-offs are employed in combination with a supply-hopper, an intermediate receptacle between the slides, and a contracted neck to which a bag can be conveniently attached or detached.

The gist of my invention consists in improving the devices of the kind above named by extending the lower walls of the hopper downwardly and inwardly to afford a close bearing for a sliding cut-off; also, to extend the walls of the intermediate receptacle into the chute or bag-holder to afford a close bearing for the lower slide or cut-off, all of which will be fully understood from the following description and claims, taken in connection with the annexed drawings, in which—

Figure 1 is a perspective view of my improved grain-measurer. Fig. 2 is a vertical central section thereof, the upper portion of the hopper of which is broken away.

Referring to the annexed drawings by letter, A designates a hopper having inclined sides *a a*, converging downwardly and terminating in bearings *a' a'*, against which a sliding cut-off, D, bears, which slide is guided by two vertical cheeks, *b b*, as shown in the annexed drawings. The outer end of the sliding cut-off D has an aperture, *e*, through it, through which passes freely the upper curved end, *f*, of a vibrating lever, F, which is connected by a bolt and nut, *n*, to a rocking bar, G, which is fulcrumed in arms N, rigidly secured to the sides of the measuring-receptacle B. It will be observed that the bolt *n* passes through a slot, *s*, through the lever F; also, that the lower curved end, *f'*, of the lever F is passed freely through a slot, *e'*, made through the outer part of a secondary slide, H, which is free to reciprocate through the chute C, and which is in close relation to the contracted ends *c c* of the receptacle B.

The lower end of the chute C is preferably provided with means for the attachment of a bag into which the grain or other measured material is discharged.

It will be observed that the lever F is adjustable endwise, by means of the slot and the bolt-and-nut connection, with the oscillating fulcrum-bar G. The object of this connection is to prevent the possibility of binding at the points *e e'*, so that the sliding cut-offs shall reciprocate smoothly through the body of the measuring device.

It is essential to the practical working of the device that the ends of the vibrating lever F should be curved, as indicated at *f f'*, for the purpose of accommodating themselves to the rectilinear movements of the two slides without causing the parts to bind. It is also essential that said lever should be adjustable endwise on the oscillating bar G for the purpose of nicely adjusting this lever to the said slides, the lever serving as the means for transmitting movements from the lower slide to the upper slide or cut-off.

It will be observed that the lower ends of the sides *a a* of the hopper and the sides of the receptacle B afford narrow bearings for their respective slides, and leave clearing-spaces *t t*, which will effectually prevent lodgment of small grains, &c., between said bearings and the slides, thereby preventing binding thereof. It will also be observed that the outer end of the lower cut-off slide, H, is provided with a hand-grip, E, by means of which a person can alternately reciprocate the two slides and graduate the flow of grain or other material from the hopper A through the receptacle B and chute C into a bag or other suitable receiver. It will finally be observed that the lower termini of the hopper and the receptacle B are contracted, so as to afford independent upper bearings for the two slides, and also guides therefor, which direct the material being measured toward the centers of the discharge-hopper and chute.

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

1. In a grain-meter, the combination, with the hopper A, the chute C, the intermediate enlargement, B, and the two rectilinear slides

D H, of the rocking bar G, its bearing-arms, and a slotted vibrating lever, F, endwise adjustable on said bar and provided with curved ends freely engaging with the said slides, substantially as and for the purposes described.

2. The combination, in a grain-measuring device, of a hopper having inclined sides *a a*, terminating at *a' a'* in narrow bearings below the upper end of cheeks *b b*, the enlarged receptacle B, also terminating in narrow bearings *c c* below the upper end of the chute C, the said bearings leaving clearing-spaces *t t*, the slides D H, and a lever, F, having hooked ends engaging loosely with both of said slides and endwise adjustable on a rocking bar, G, substantially as described.

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

FRIDRECH H. EHLERS.

Witnesses:

C. A. FOSUES,

J. M. SEVERENS.