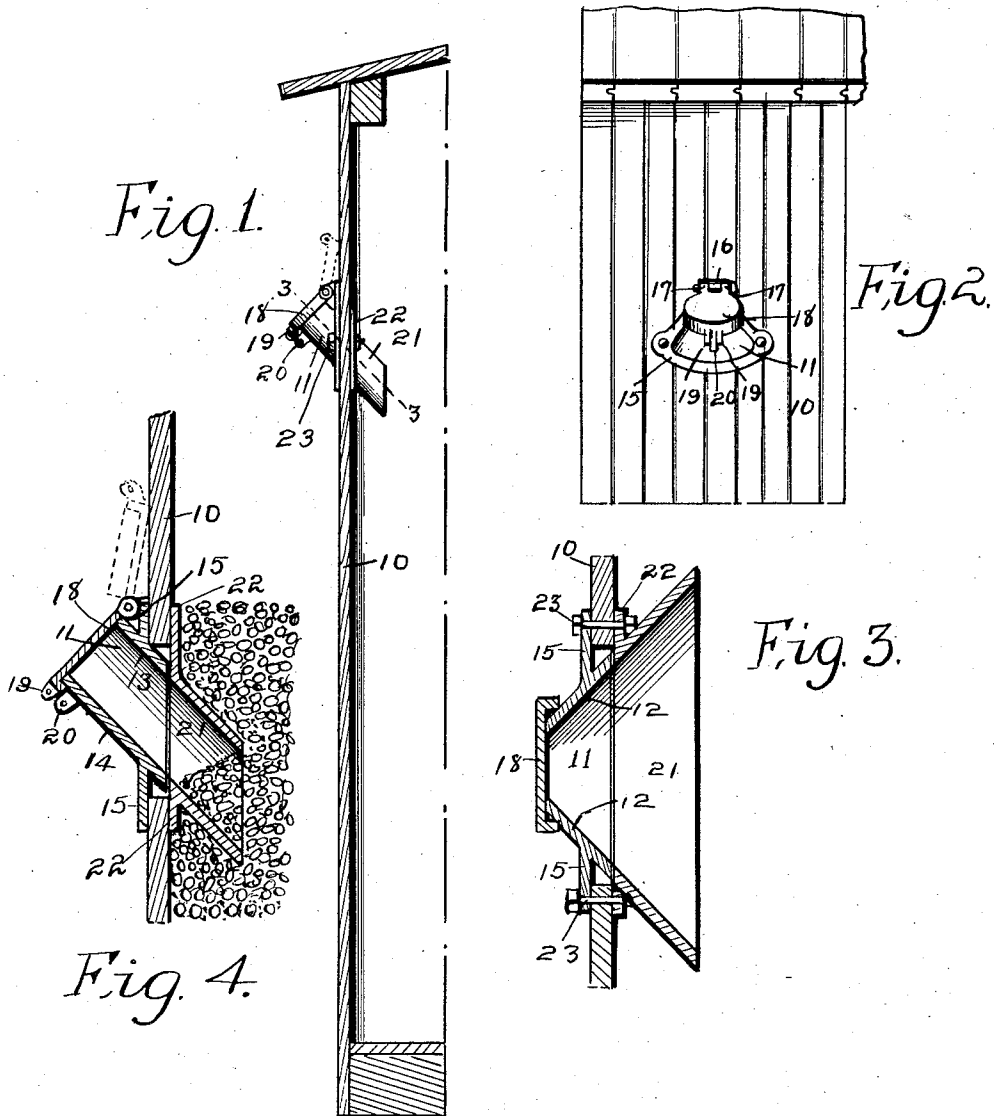


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INSPECTION DEVICE FOR GRAIN CARS.
APPLICATION FILED JULY 8, 1912.

1,063,135.

Patented May 27, 1913.



Witnesses.
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UNITED STATES PATENT OFFICE.

BENJAMIN F. OWENS, OF ROCKWELL CITY, IOWA.

INSPECTION DEVICE FOR GRAIN-CARS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, BENJAMIN F. OWENS, a citizen of the United States, residing at Rockwell City, in the county of Calhoun and State of Iowa, have invented a certain new and useful Inspection Device for Grain-Cars, of which the following is a specification.

The object of my invention is to provide a device of simple, durable and inexpensive construction that may be used in the nature of an attachment and that may be readily, quickly and easily applied to the side walls of grain cars for the purpose of permitting the inspection of the contents of a grain car by the insertion through the inspection device of grain test tubes.

More specifically, it is my object to provide a device of this kind which will prevent grain from flowing out of the car and which will also prevent rain, snow, dust, etc. from entering the car.

My invention consists in certain details, in the construction, arrangement and combination of the various parts of the device whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims and illustrated in the accompanying drawings, in which:

Figure 1 shows a sectional view of a part of a grain car having my improved inspection device placed therein in position for use. Fig. 2 shows a side elevation of a part of the car side with my improved device in position therein, the hinged cap thereof being closed. Fig. 3 shows an enlarged detailed sectional view of the line 3—3 of Fig. 1. Fig. 4 shows an enlarged detailed vertical central, sectional view through the device embodying my invention.

Referring to the accompanying drawings I have used the reference numeral 10 to indicate a part of the side wall of a grain car.

For the convenience of the operator in applying my improved device to a car side, it is preferably cast complete in two parts, one part to be secured to the exterior of the car side and the other to the interior thereof. The part that is applied to the exterior comprises a body portion 11. This body portion is formed hollow and is provided on its outer end with a small oval opening and on its inner end with a relatively large oval opening. The sides of the body portion incline away from each other at 12, being widest at the inner end as clearly shown in Fig. 3

and the top and bottom of the body portion 11 incline from the oval opening at the outer end downwardly and inwardly toward the car side, as clearly shown in Fig. 4 in which figure, numeral 13 indicates the top and 14 the bottom of the body portion 11. On the exterior of the body portion 11 at a point placed apart from its inner end is an outwardly extending flange 15 designed to rest against the outer surface of the grain car shown in Fig. 3.

At the top of the outer portion of the body 11 is a lug 16 to which is pivoted the lugs 17. These lugs 17 are formed integral with an oval cap 18 which is also provided with two lugs 19 designed to stand on opposite sides of the lug 20 at the bottom of the body portion 11. These lugs 19 and 20 are perforated to admit a lock or sealing means (not shown). The parts are so arranged and proportioned that when the hinged cap 18 is swung upwardly, it will rest against the side of the car as shown by dotted lines in Fig. 1 and it will incline inwardly from the car side only a slight distance beyond a vertical line so that in the event that an operator left the hinge cap open, a very slight shaking of the car would at once cause the hinged cap to drop to its position and thus exclude rain, snow and dust.

The part of my improved device that is designed to go inside of the car, comprises a body portion 21 which is oval in transverse section and open at both ends and the sides, top and bottom thereof are arranged to form a continuation of the body portion 11 and thus they are inclined in the same directions as are the corresponding parts of the body portion 11. On the exterior of the part 21 near the small end thereof is a flange 22 and this flange 22 is so arranged with relation to the flange 15 that bolts 23 may be extended through both flanges and through the car side to firmly connect the two parts of the device and secure them in position on the car side.

In practical use and assuming that it is desired to apply my improvement to a grain car side, I first form an opening in the car side large enough to admit the inner end of the body portion 11. I then place the body portion 11 in position from the outside of the car and I then place the body portion 21 in position from the interior of the car. Then the bolts 23 are placed in position and the nuts thereon are tightened thus firmly

and securely clamping both of the flanges 15 and 22 against the car side and firmly holding both said parts in position. When the parts are thus assembled and arranged, the cap 18 is so positioned with relation to the outer surface of the car side that when it is raised it will rest against the car side and not interfere in any way with the operator when inserting a test tube through the inspection device and if this cap should be inadvertently left open it will be automatically closed whenever the car is moved for the reason that it is in almost a vertical position and a slight amount of shaking applied to the car will cause it to be overbalanced and swing closed, thus excluding rain, snow and dust. By having the flange 15 formed integral with the body portion 11, rain, snow and dust are prevented from flowing down along the top or sides of the body portion 11 and through the opening into the car. By having the adjacent ends of the body portion 11 and 21 slightly spaced apart as shown in Fig. 3, the device is adapted for car sides of slightly different thickness and yet the interior of the device presents a comparatively straight, smooth, surface without any obstructions to the insertion or removal of test tubes.

By having the top and bottom of the inspection device incline from the small opening at the outer end downwardly and inwardly, I have provided against the possibility of any grain from within the car flowing outwardly through the inspection device even if the cap is open for the reason that grain will not flow to any appreciable extent above the level of the inner end of the top of the body portion 21. It is, however, desirable to have the level of the grain within the inspection device considerably lower than the opening at the outer end thereof so that an operator need not draw out any grain when the inspection tubes are being removed other than that grain which is contained within the inspection tubes. And inasmuch as it is not desirable to have the inspection device project either outwardly or inwardly to any great extent beyond the car side, it is advantageous to have the inspection device made of two parts,

one on the outside and the other on the inside of the car. By having the sides of the inspection device incline outwardly and away from each other from the interior of the car, an inspection tube may be inserted therein and extended to widely divergent points within the car.

I claim as my invention:

1. A device of the class described, comprising a hollow body portion open at both ends and having its sides inclined away from each other toward the inner end, an integral flange on the outer surface of the body portion spaced apart from the inner end thereof, and a cap hinged on top of the body portion and designed when open to stand in position slightly past a vertical line through the hinge, and when closed, to cover the opening in the outer end of the device, for the purpose stated.

2. A device of the class described, comprising a body portion formed with two parts designed to be attached to a car side or the like, having an opening therein, the outer part being formed hollow, open at both ends and having its sides inclined away from each other toward the inner end and its top and bottom both inclined downwardly and inwardly from the inner end, a flange formed on the outer surface of said outer part and spaced from the inner end thereof, a hinged cap for the outer end of the outer part designed, when open, to stand in a position slightly past a vertical line through the hinge center and to rest against the car side to which the part is attached, said inner part being formed hollow with its sides, top and bottom shaped to form a continuation of the corresponding portions of the outer part and a flange on the outer surface of said inner part, said flange being provided with perforations to receive bolts for fastening the two parts together on opposite sides of the car side for the purpose stated.

July 3, 1912. Des Moines, Iowa.

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Witnesses:

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