

No. 620,492.

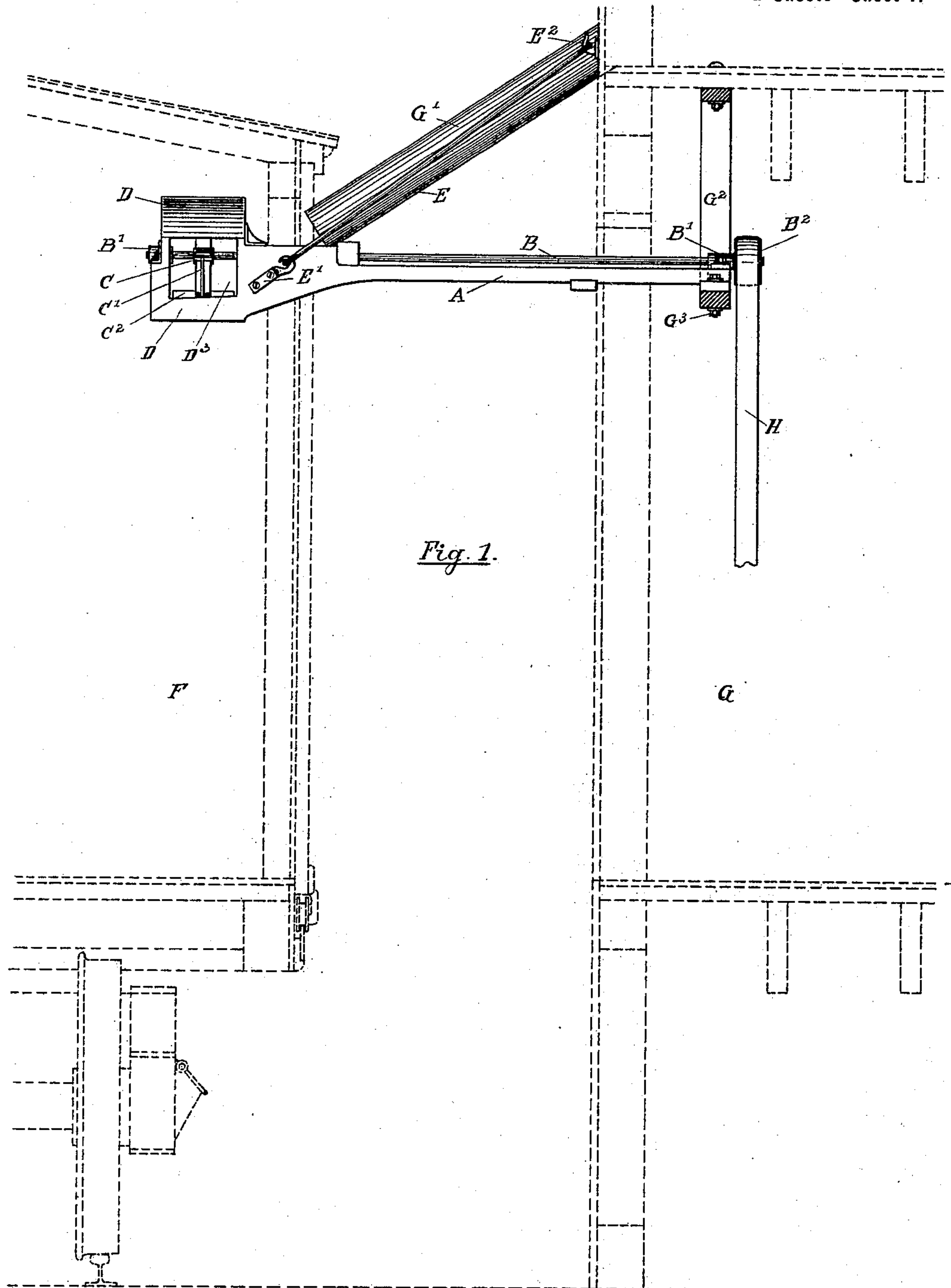
Patented Feb. 28, 1899.

M. L. PAGE.
GRAIN LOADER.

(Application filed Nov. 22, 1898.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

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Georg Weifs.

INVENTOR

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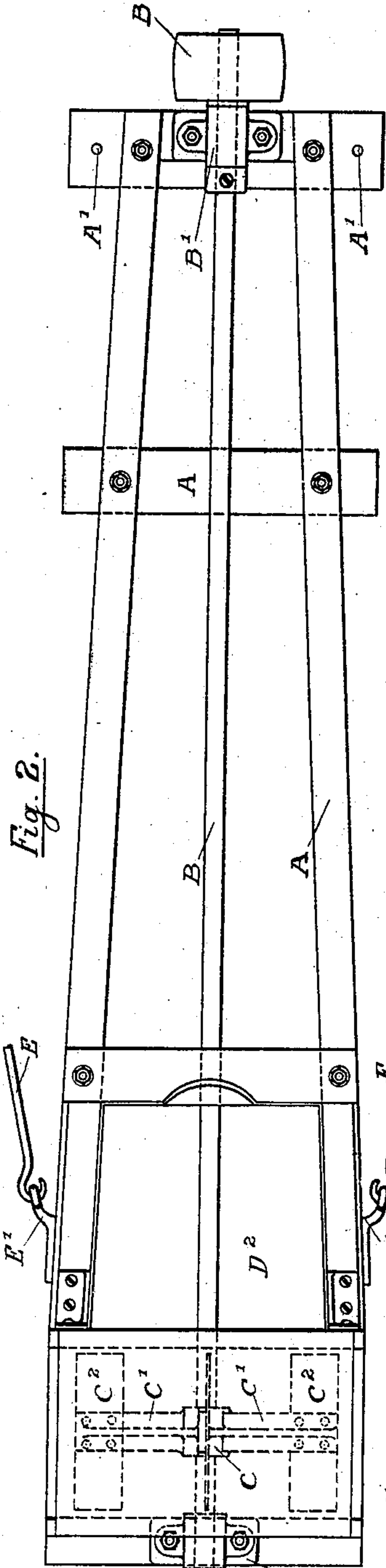


Fig. 2.

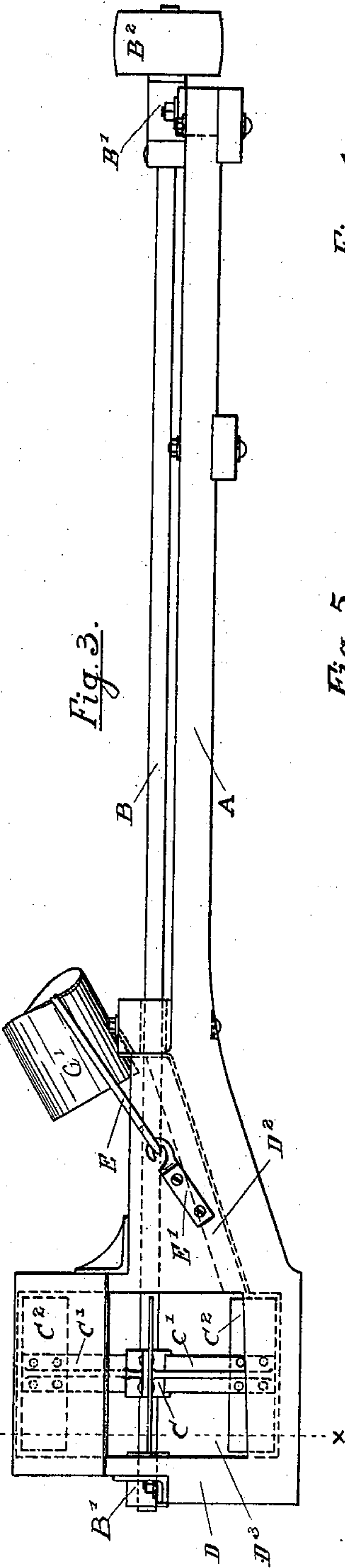


Fig. 3.

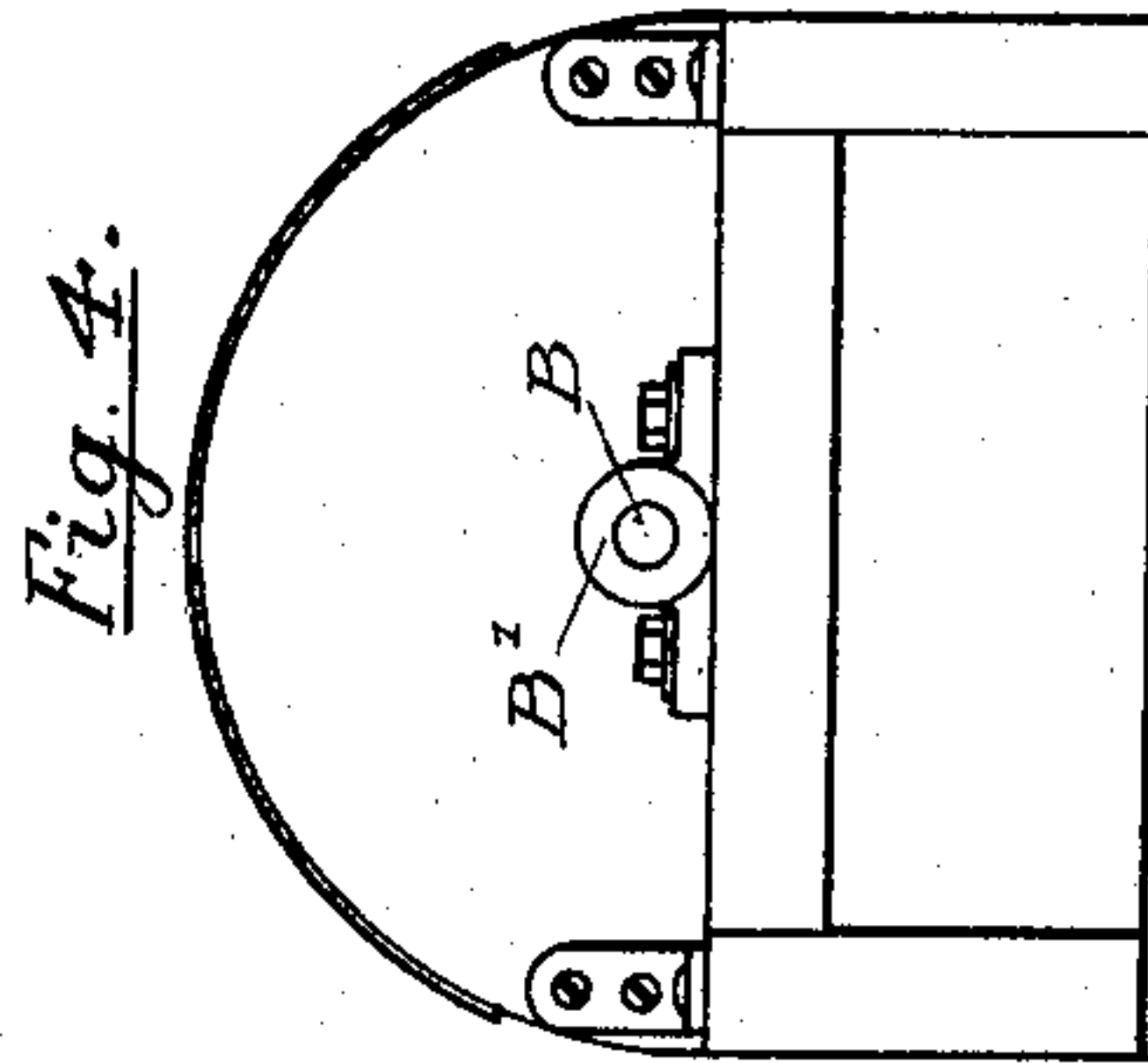


Fig. 4.

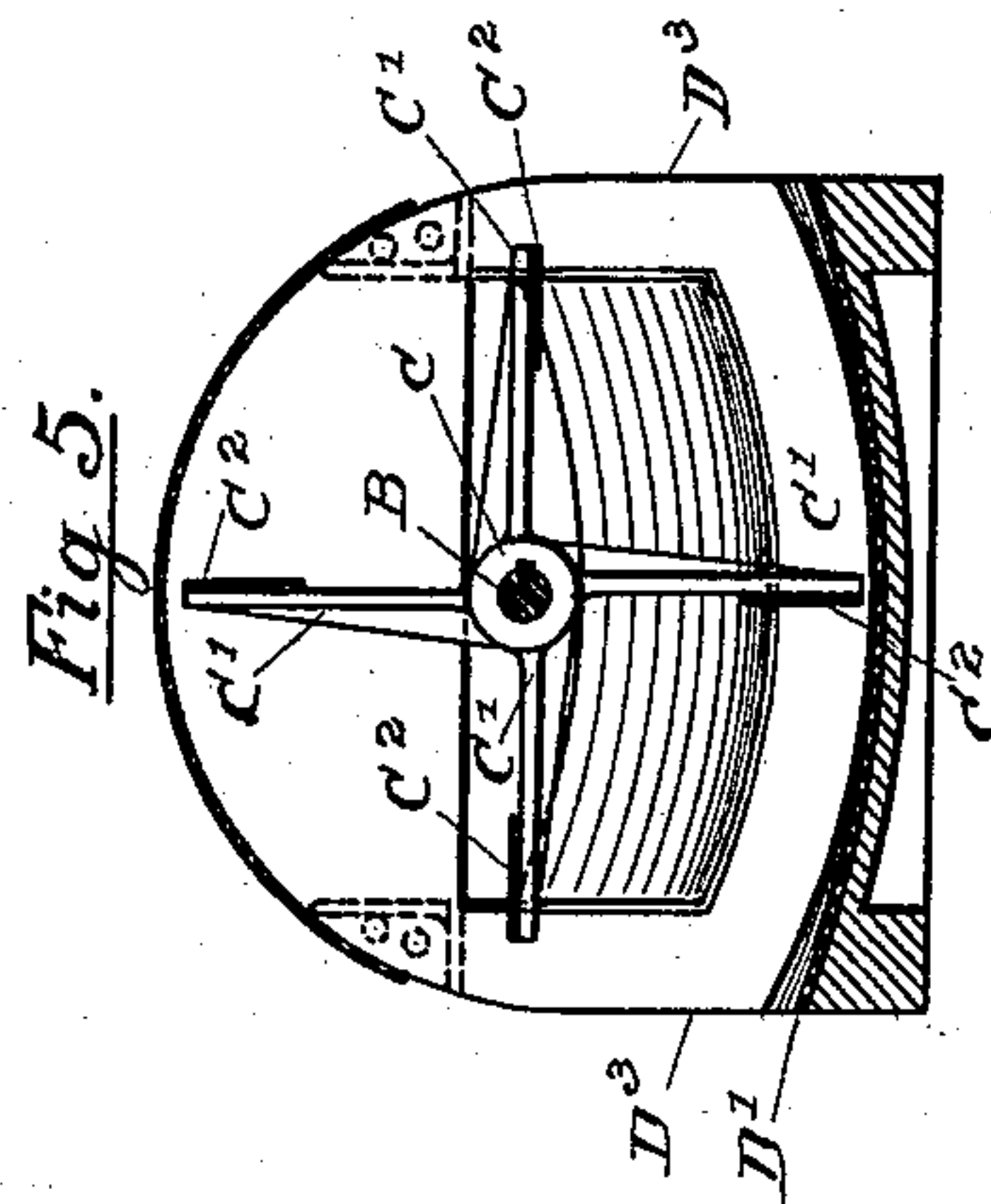


Fig. 5.

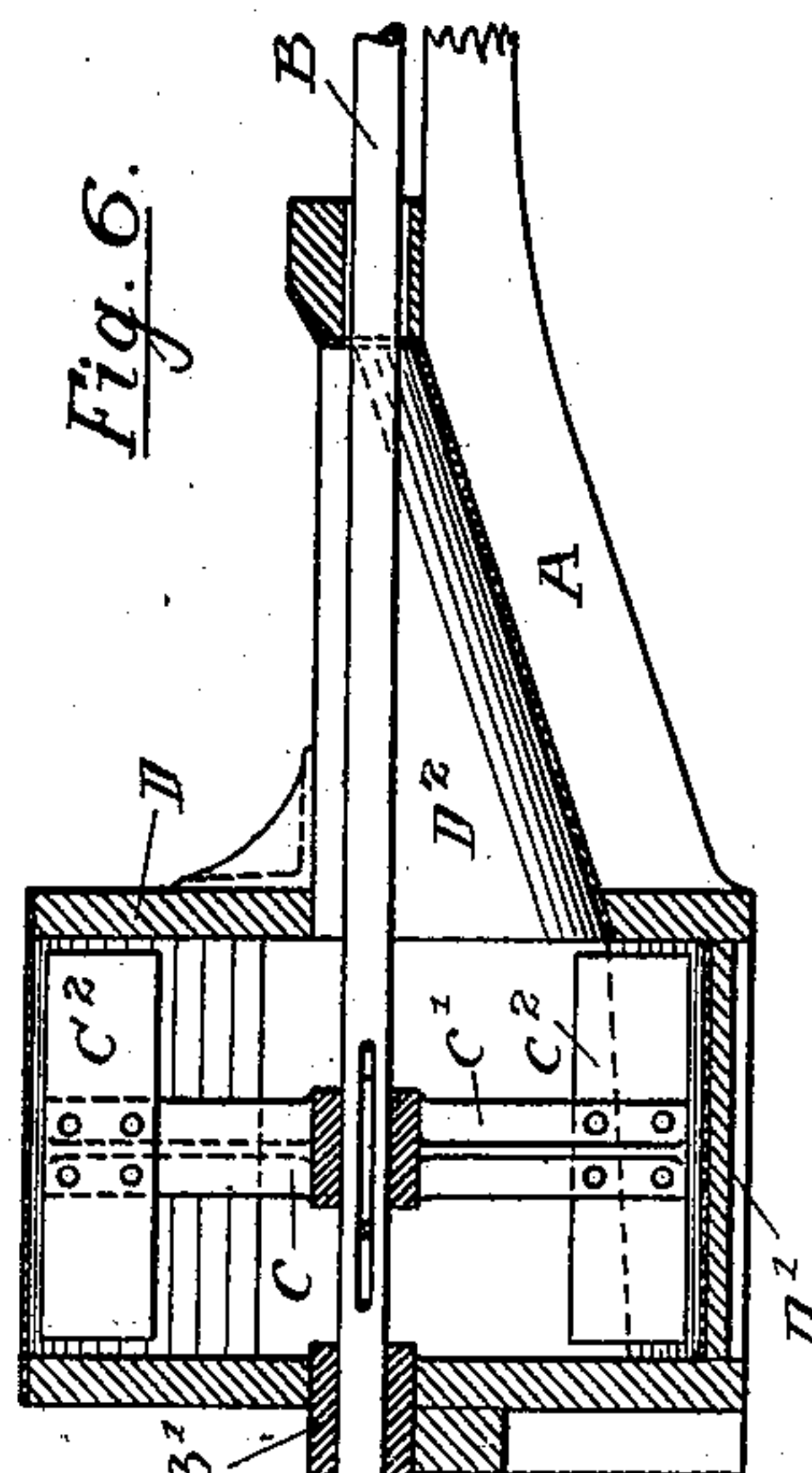


Fig. 6.

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MARCUS L. PAGE, OF KYTE RIVER, ILLINOIS.

GRAIN-LOADER.

SPECIFICATION forming part of Letters Patent No. 620,492, dated February 28, 1899.

Application filed November 22, 1898. Serial No. 697,213. (No model.)

To all whom it may concern:

Be it known that I, MARCUS L. PAGE, a citizen of the United States, residing at Kyte River, in the county of Ogle and State of Illinois, have invented certain new and useful Improvements in Grain-Loaders, of which the following is a specification.

The object of this invention is the production of a simple device for loading grain from elevators into cars through the door of the latter, filling the car, if necessary, without the assistance of manual labor. This result I accomplish by employing a distributing-fan which throws the grain delivered to it by the elevator-spout to the end of the car, at the same time drying and scouring the grain. By crossing the drive-belt the direction of rotation in the distributing-fan is changed, and the grain may then be projected in a contrary direction therefrom.

In the accompanying drawings, Figure 1 is a side elevation of my grain-loader, showing in dotted lines a portion of a storage grain-elevator building and a car with the loader in position to distribute the grain in the car when the same is delivered from the elevator. Fig. 2 is a plan view of my loader. Fig. 3 is a side elevation of the same. Fig. 4 is an outer end elevation; Fig. 5, a transverse vertical section on dotted line xx , Fig. 3; and Fig. 6 is a longitudinal vertical section through the distributing-fan and its housing.

Like letters of reference indicate corresponding parts throughout the several views.

A is the main frame of the loader.

A' are openings forming means for securing the frame A to supports in the elevator-building.

B is a shaft mounted in journal-bearings B' on the frame A.

B² is a drive-pulley fixed on the shaft B, at one end thereof, outside the frame A. C is a distributing-fan keyed to the opposite end of the shaft B. This fan has the four radial arms C', provided with the blades C² at their outer ends.

D is the housing for the distributing-fan C. D' is the curved bottom of said housing.

D² is a feed-chute into which the elevator-spout discharges. The chute D² directs the grain into the fan-housing D and deposits it

upon the curved bottom D' in the path of the blades C².

D³ are the discharge-openings for the grain in each side of the housing D. The curves of the two edges of the bottom D' are not uniform, the side nearest the chute D² describing a smaller circle than the outer edge. The inner edge of the curving bottom D' thus rises higher at the discharge-openings D³ than the outer edge, the consequence being that the stream of grain issuing forth from the discharge-openings D³ is directed diagonally across the car, and while the end of the loader projects but a little way within the car-door the grain will be loaded evenly and the car entirely filled.

E are supporting stay-rods. E' are hooks for attaching them to the carrier near to its outer end, and E² is one of two similar hooks for attaching the opposite ends of the supporting-rods E to the elevator-building.

F is the car to be loaded. The loader has no connection with the car, merely projecting inward through the car-door, being supported entirely by the elevator-building.

G is the elevator-building.

G' is the grain-spout, communicating with one of the bins within the elevator-building.

G² is a support for the inner end of the frame A. It is of any common construction, and while I have shown it extending from the ceiling downward it may obviously be secured to the floor. The frame A is secured to the support G² by bolts G³, (only one of which is shown,) extending through the openings A' in the frame A.

H is a driving-belt for the pulley B², by means of which motion is imparted to the distributing-fan C.

In operation my loader is secured by the bolts G³ and the supporting-rods E to the elevator-building, the drive-belt H placed on the pulley B², and grain admitted through the grain-spout G' and the chute D² to the fan-housing D, falling, as it enters, upon the curved bottom D'. The blades C² of the rapidly-revolving distributing-fan C immediately sweep the grain outward toward one of the discharge-openings D³, from which, owing to the peculiar conformation of the bottom D', it is projected not in a line at right angles

to the length of the shaft B, but diagonally forward, filling the entire end of the car. When it is desirable to discharge the grain into the opposite end of the car, the drive-
 5 belt H is crossed, thus causing the distributing-fan C to be rotated in the opposite direction. I find that this process not only loads the grain without the assistance of hand labor, but cleans and brightens it as well.

10 I claim as my invention—

1. In a grain-loader, in combination, a main frame, a shaft, means for rotating said shaft, a distributing-fan on the shaft, a curved plate one edge of which plate describes the arc of a
 15 smaller circle than the other edge, and means for conducting grain to the curved plate.

2. In a grain-loader, in combination, a main frame, a shaft, means for rotating said shaft, a distributing-fan on the shaft, a housing for
 20 said fan, having a discharge-opening in said housing, a curved plate in said housing, one edge of which plate describes the arc of a smaller circle than the other edge, a chute for conducting the grain to the fan, and means
 25 for supporting the main frame.

3. In a grain-loader, in combination, a main frame, a shaft, means for rotating said shaft, a distributing-fan on the shaft, a housing for
 30 said fan, having a discharge-opening in said housing, a curved plate in said housing beneath said fan, one edge of which plate describes the arc of a smaller circle than the

other edge, and a chute for conducting the grain to the curved plate.

4. In a grain-loader, in combination, a main 35 frame, a shaft, means for rotating said shaft, a distributing-fan on the shaft, a housing for the fan, having a discharge-opening in said housing, and a curved plate in the housing, one edge of which plate describes the arc of 40 a smaller circle than the other edge.

5. In a grain-loader, in combination, a main frame, a shaft, means for rotating said shaft, a distributing-fan fixed on the shaft, a hous- 45 ing for the fan having discharge-openings in said housing, a curved plate in the housing, a chute for conducting the grain to the curved plate, and rods and a supporting-bracket for holding the main frame in position.

6. In a grain-loader, in combination, a main 50 frame, a shaft, a pulley on said shaft, a distributing-fan fixed on said shaft, a curved plate adjacent to said fan, one edge of which plate describes the arc of a smaller circle than the other edge, a housing for said fan, 55 having a discharge-opening in the housing at each end of the said plate, a chute for conducting the grain to the curved plate, and rods and a supporting-bracket for holding the main frame in position.

MARCUS L. PAGE.

Witnesses:

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