

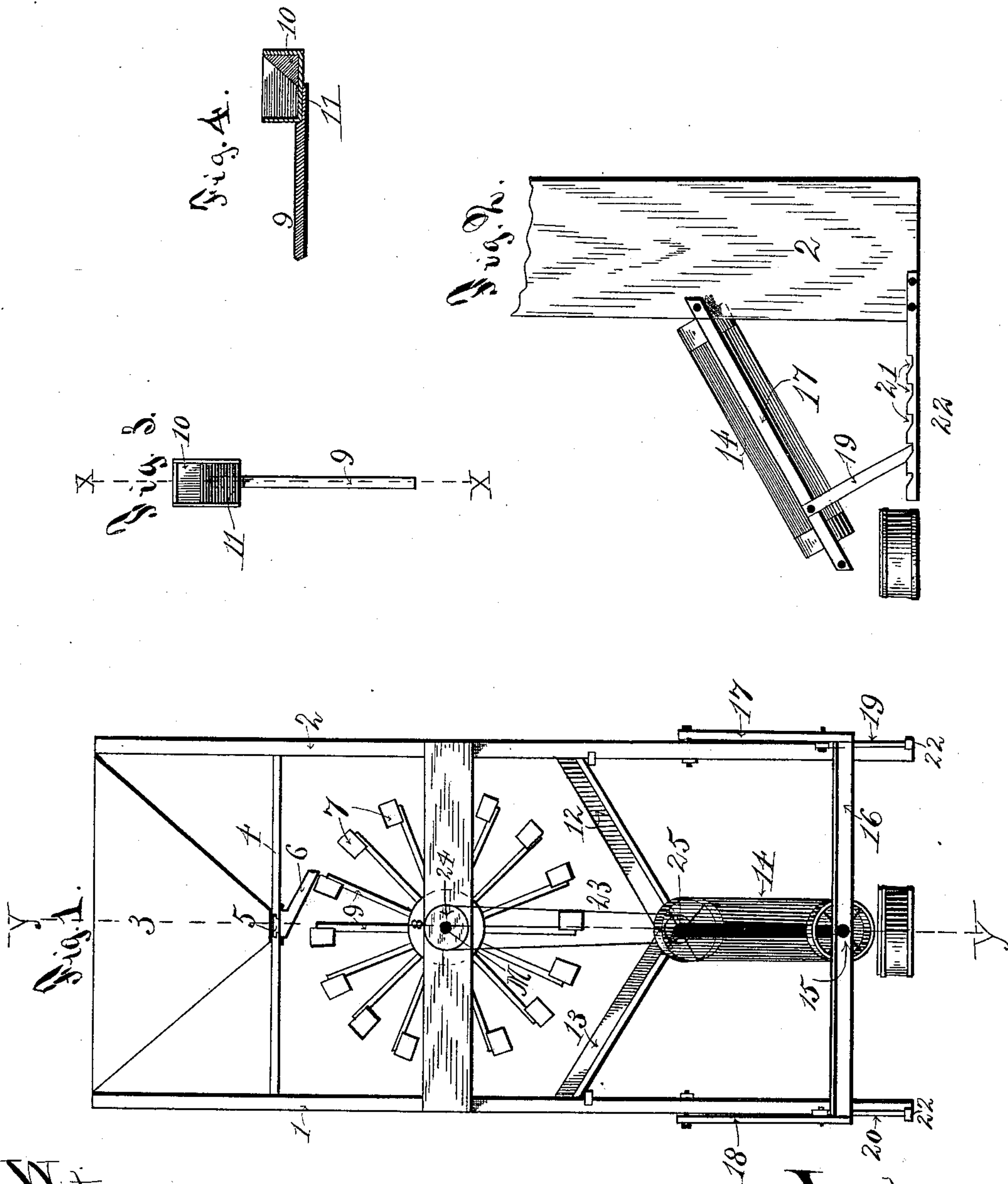
(No Model.)

2 Sheets—Sheet 1.

A. LENT.
GRAIN SEPARATOR.

No. 336,246.

Patented Feb. 16, 1886.



Witnesses.
J. Charles Ingram.
Walt. B. Grant.

Inventor.
Addison Lent.
By his Atty.
Geo. S. Duffie.

(No Model.)

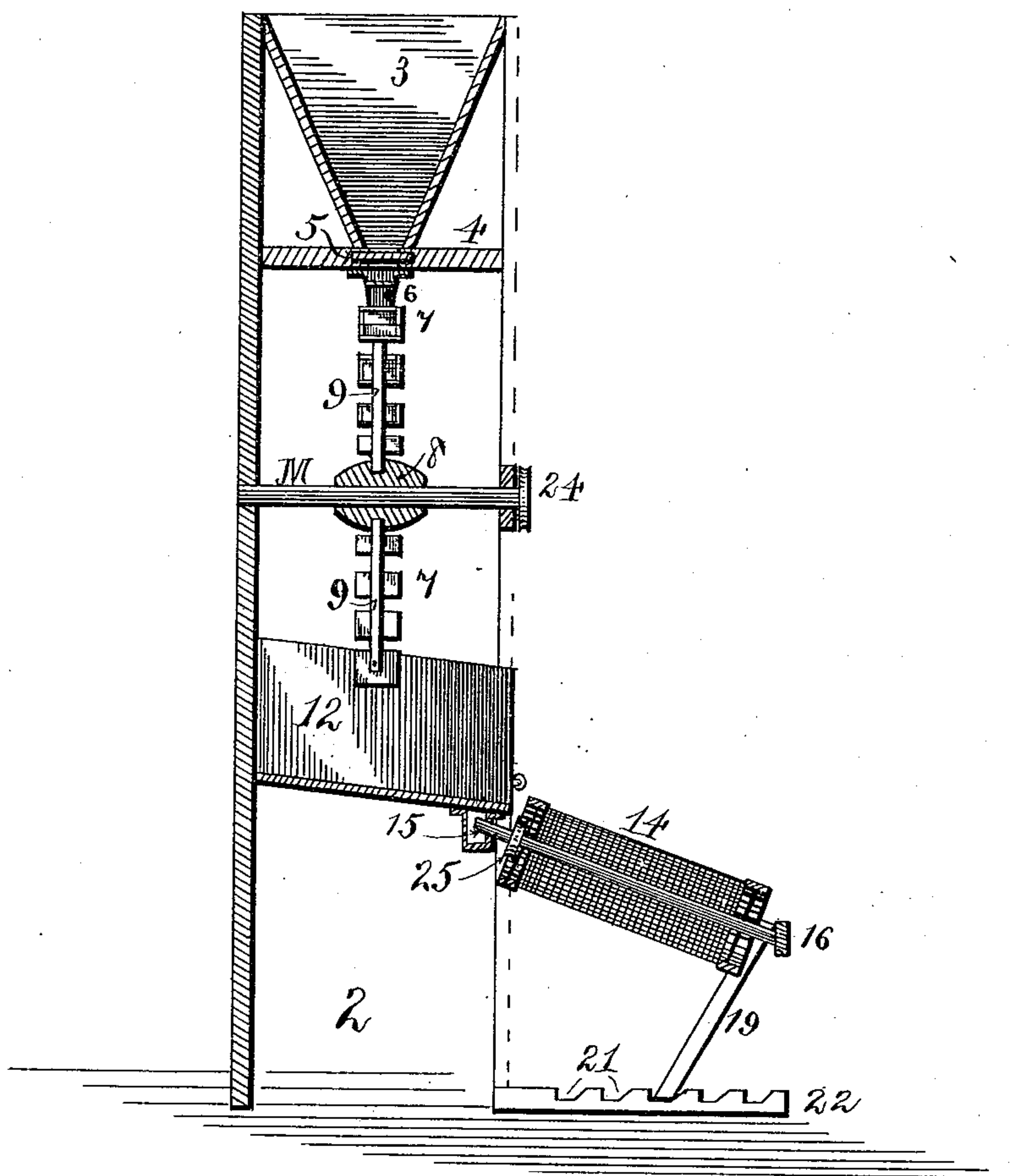
2 Sheets—Sheet 2.

A. LENT.
GRAIN SEPARATOR.

No. 336,246.

Patented Feb. 16, 1886.

Fig. 5.



Witnesses.
Jno. C. Harleton Ingram.
G. S. Cooper.

Inventor.
Addison Lent.
By his atty. John S. Duffie

UNITED STATES PATENT OFFICE.

ADDISON LENT, OF SLEEPY EYE, MINNESOTA, ASSIGNOR OF ONE-HALF TO
LEROY G. DAVIS, OF SAME PLACE.

GRAIN-SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 336,246, dated February 16, 1886.

Application filed September 11, 1885. Serial No. 176,827. (No model.)

To all whom it may concern:

Be it known that I, ADDISON LENT, a citizen of the United States of America, residing at Sleepy Eye, in the county of Brown and State of Minnesota, have invented certain new and useful Improvements in Grain-Separators, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention has relation to grain-separators; and it consists in the novel construction and combination of its parts, as hereinafter described, and set forth in the claims.

In the accompanying drawings, Figure 1 is a front elevation of my invention. Fig. 2 is side view of the lower parts. Fig. 3 is a detail view of one of the cups on the central wheel or hub. Fig. 4 is a sectional view of the same on the line X X. Fig. 5 is a sectional view of Fig. 1 on the line Y Y.

Between the two broad upright pieces, 1 and 2, I fasten a hopper, 3, into which is poured the grain to be screened. The bottom of this hopper rests on a board, 4, fastened horizontally to the uprights, and into which I place a slide-valve, 5, by which I can regulate the flow of grain from the hopper or stop it altogether, as desired. To the bottom of the board 4, and immediately under the valve 5, I secure a trough or chute, 6, through which the grain runs, and from its open end falls into the cups 7, attached to the central wheel or hub, 8, as each cup is successively brought into the line of the grain fall.

Near the middle of a shaft, M, supported in the back of the separator and extending through the front of the same, I affix a wheel or hub, 8. Around the periphery of this hub I insert arms 9, the same being rigidly secured in the said hub, and on the outer end of each of these arms I secure a cup, 7. The centers of the said cups, in their revolution, pass directly under the center of the chute 6. Thus the grain, as it falls, will strike inside of the said cups, and not on the sides. In the front or upper end of each cup 7 is secured a block, 10, which forms an inclined plane from the bottom 11 of the cup to the upper edge, so that the grain may quickly and easily slide out of the cups when they reach their lowest level and fall on the double-inclined hopper,

consisting of two boards, 12 and 13, fastened to the uprights 1 and 2, their rear edges being higher than their front edges in order to give the boards a cant toward the front. These boards also join at the middle of the frame, a short distance below the plane of their junction with the sides. Thus the boards slant toward the center and front of the separator and cause the grain to gather at the middle and front of the hopper, from which point it moves into a cylindrical wire screen or shaker, 14, through the interstices of which the cockle or other foreign matter falls, while the grain passes on out of the front end and falls into a receptacle.

The screener 14 is secured on a shaft, 15, which passes through its center, and is journaled at its rear end in a socket, eye, or any device for that purpose, attached to the bottom of the inclines 12 and 13. The forward end of the shaft 15 is journaled in a cross-bar, 16, which is fastened at its ends to two bars, 17 and 18, which are pivoted to the uprights 1 and 2. Near the outer ends of these bars 17 and 18 are pivoted two short bars, 19 and 20, their lower ends resting in notches 21 of the bars 22, which are secured to the feet of the uprights 1 and 2 and project forward from the same. This arrangement of the bars 16 17 18 19 20 and the notched bars 22 is for the purpose of grading the slant or incline of the screen so that the grain will not run out too fast nor too slow.

The screen 14 is revolved by means of a belt, 23, passing over a pulley, 24, rigidly secured on the outer end of the shaft M, and around a small pulley, 25, rigidly secured on the inner end of the shaft 15.

The operation of my machine is as follows: The grain to be cleaned is poured into the hopper 3. It passes thence through the chute 6 and falls into the cups 7, which causes the hub 8 to revolve with them, which, in turn, revolves the pulley 24, and this, by means of the belt 23, revolves the small pulley 25, the shaft 15, and wire screen 14, which is attached to the shaft by braces.

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

1. In a grain-separator, the combination of

the upright pieces 1 and 2, board 4, hopper 3, chute 6, cups 7, arms 9, hub 8, pulley 24, rigidly secured on shaft M, belt 23, pulley 25, shaft 15, screen 14, and the double-inclined hopper, all constructed and arranged substantially as shown and described, and for the purposes set forth.

2. In a grain-separator, the combination of the uprights 1 and 2, the side bars, 17 and 18, having their upper ends pivoted to the said uprights, the cross-bar 16, attached to the lower ends of said side bars, the shaft 15, bearing in

the center of cross-bar 16 and suitably supported at its rear end, the screen 14, the bars 19 and 20, having their upper ends pivoted to bars 17 and 18, and bars 22, having notches 21, substantially as shown and described, and for the purposes set forth.

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

ADDISON LENT.

Witnesses:

ISAAC GALLAGHER,
L. G. DAVIS.