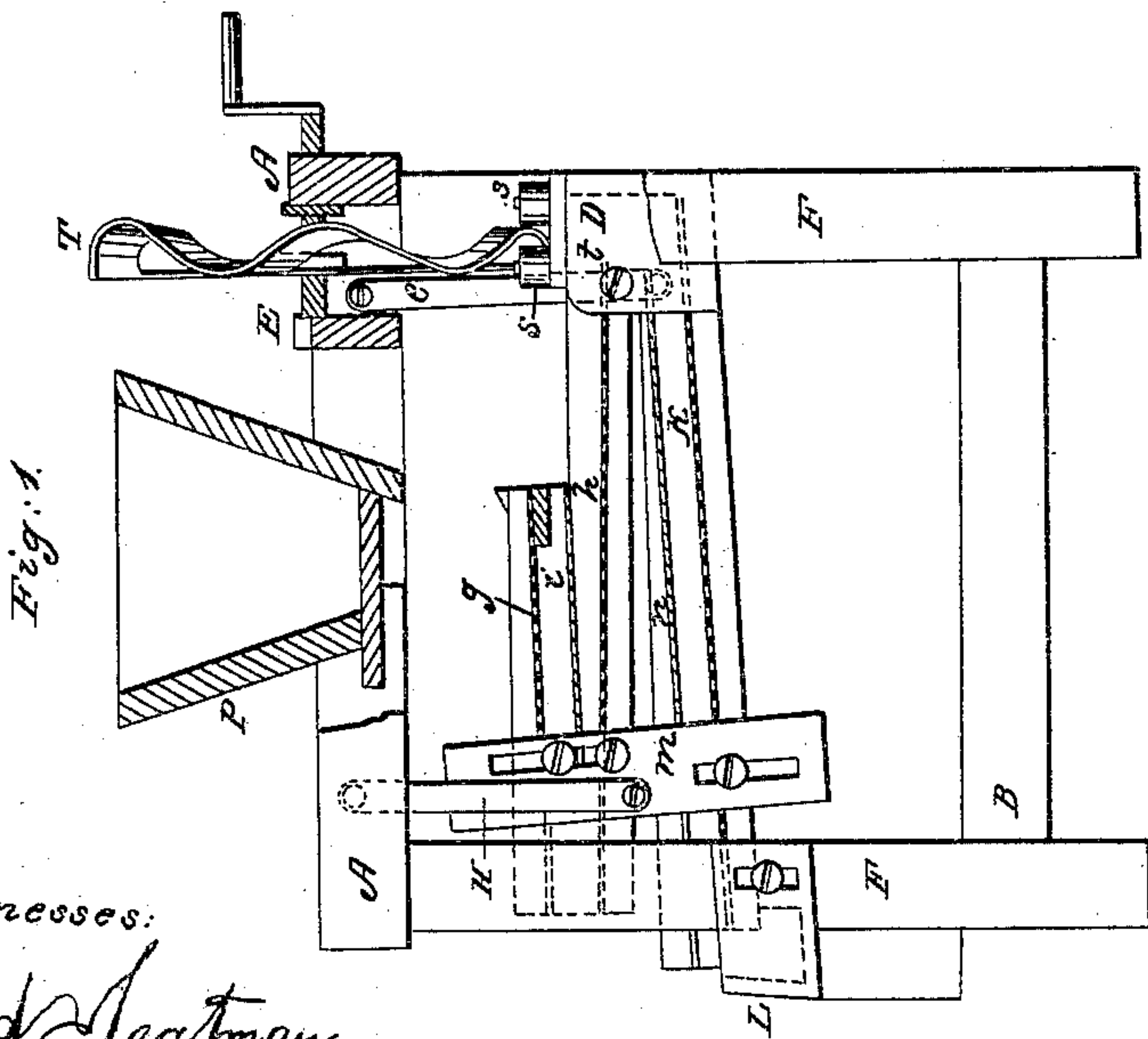
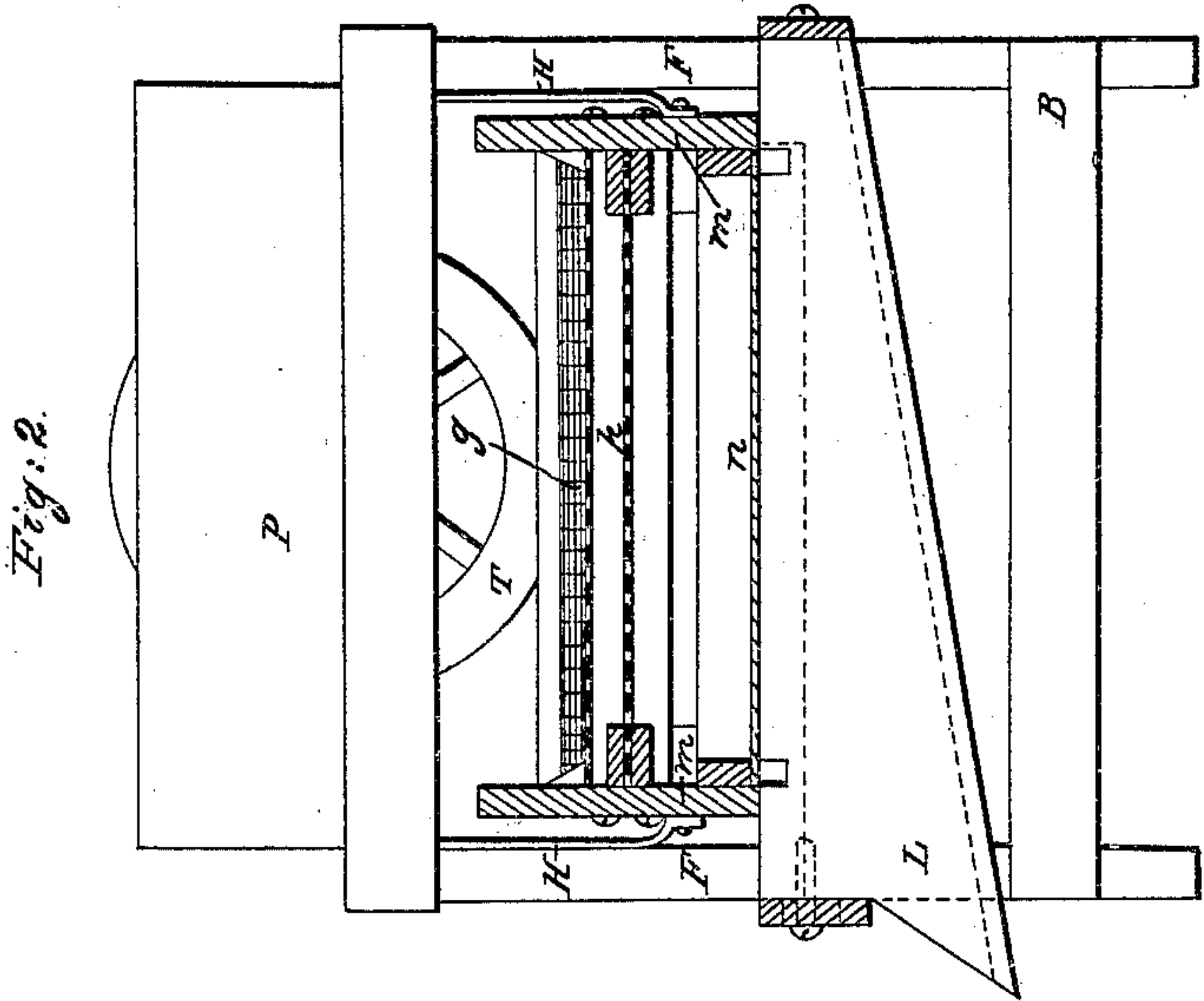


J. LONG.
Grain Screen

No. 58,551.

Patented Oct. 2, 1866.



Witnesses:

A. A. Seaman.
C. A. Alexander

Inventor
J. Long

Per T. W. Alexander
att'y

UNITED STATES PATENT OFFICE.

JOSIAH LONG, OF MORRISTOWN, INDIANA, ASSIGNOR TO JACOB G. WOLF,
OF SAME PLACE.

IMPROVEMENT IN GRAIN-SCREENS.

Specification forming part of Letters Patent No. 58,551, dated October 2, 1866.

To all whom it may concern:

Be it known that I, JOSIAH LONG, of Morristown, Shelby county, in the State of Indiana, have invented certain new and useful Improvements in Wheat-Screens or Separators; and I hereby declare that the following is a true, exact, and full description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

In the annexed drawings, which make a part of this specification, Figure 1 represents a cross-section of my invention. Fig. 2 gives an end elevation of the same.

The frame of my machine consists of four corner-posts, F, bound together by the rails A at top and B near the bottom. The form of the frame is nearly square.

D designates a box open on the inner side, and extending between the two rear corner-posts of the frame A, space being left between the ends of the box D and the corner-posts to admit of the free play of the box with a horizontal reciprocating motion when acted on in the manner hereinafter described. The box D is suspended at each end on pendants *e*, the upper ends of pendants *e* being pivoted to the inside of the two opposite top rails A.

The screens *h* and *k*, together with the frame that contains the metal plate *n*, are fastened at one end in the open side of box D. The screens and metal plates *n* and *i* are connected together near their front edge by means of screws which pass through slots cut in board *m*. By means of these screws and slots the screens and metal plates attached to them can be adjusted at the required angle.

H represents two pendants, one end secured to board *m*, and the other pivoted to the inside of rails A. Suspended on the pendants H and *e* the screens are easily acted on by the cam-wheel yet to be described.

On the upper surface of box D are two friction-rollers, *s*, which work on a metal plate bolted to D. Between these rollers the cam-wheel T operates to give the desired motion

to box D and the screens, which are attached to the box.

It will be remarked here that the upper screen, *g*, and the metal plate *i* under it, do not extend back to box D, but only about half the length of screen *h*, to the frame of which *g* and *i* are fastened. The plate *i* will be cut off, as seen in Fig. 1, so as to allow the grain to fall on screen *h*, through which the cockle alone will pass and fall on the metal plate *n*, which descends at a sufficient angle to carry the cockle beyond the wheat-box L. The cockle being now got rid of, the wheat and chaff or cheat will pass along the inclined surface of screen *h* until they reach the rear end of the screen *h*, and will then fall to the screen *k*. (See dotted lines, Fig. 1.) Through the meshes in screen *k* the cheat will pass, leaving the wheat entirely free from all mixture to be discharged into the box or spout L.

The cam-wheel which operates the screens will have its axle resting on one of the rails A and on the tie E which runs parallel with the rail.

The advantage which I claim for my separator is first the extensive surface over which the wheat must pass from hopper P until it reaches the point of discharge, the first screen, *g*, getting rid of or expelling the chaff, the second expelling the cockle, and the third getting rid of the cheat.

Having thus described my machine, what I claim, and desire to secure by Letters Patent, is—

The cam-wheel T, in combination with the friction-rollers *s* and box D, the whole constructed and operating substantially as herein described.

In testimony that I claim the foregoing as my own act I hereby affix my signature in the presence of two witnesses.

JOSIAH LONG.

Witnesses:

JOHN M. DAVIS,
DAVID CLARY.