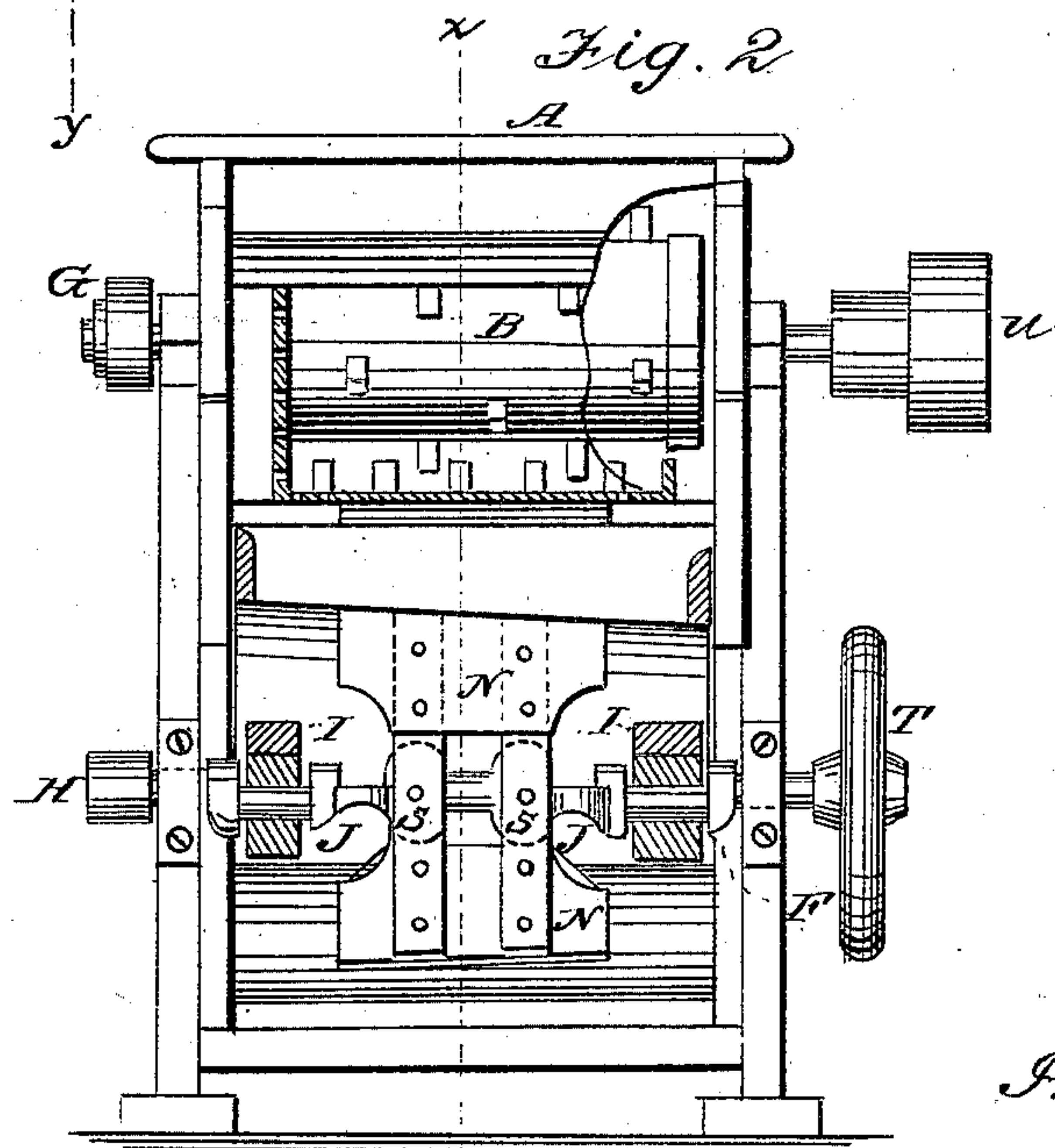
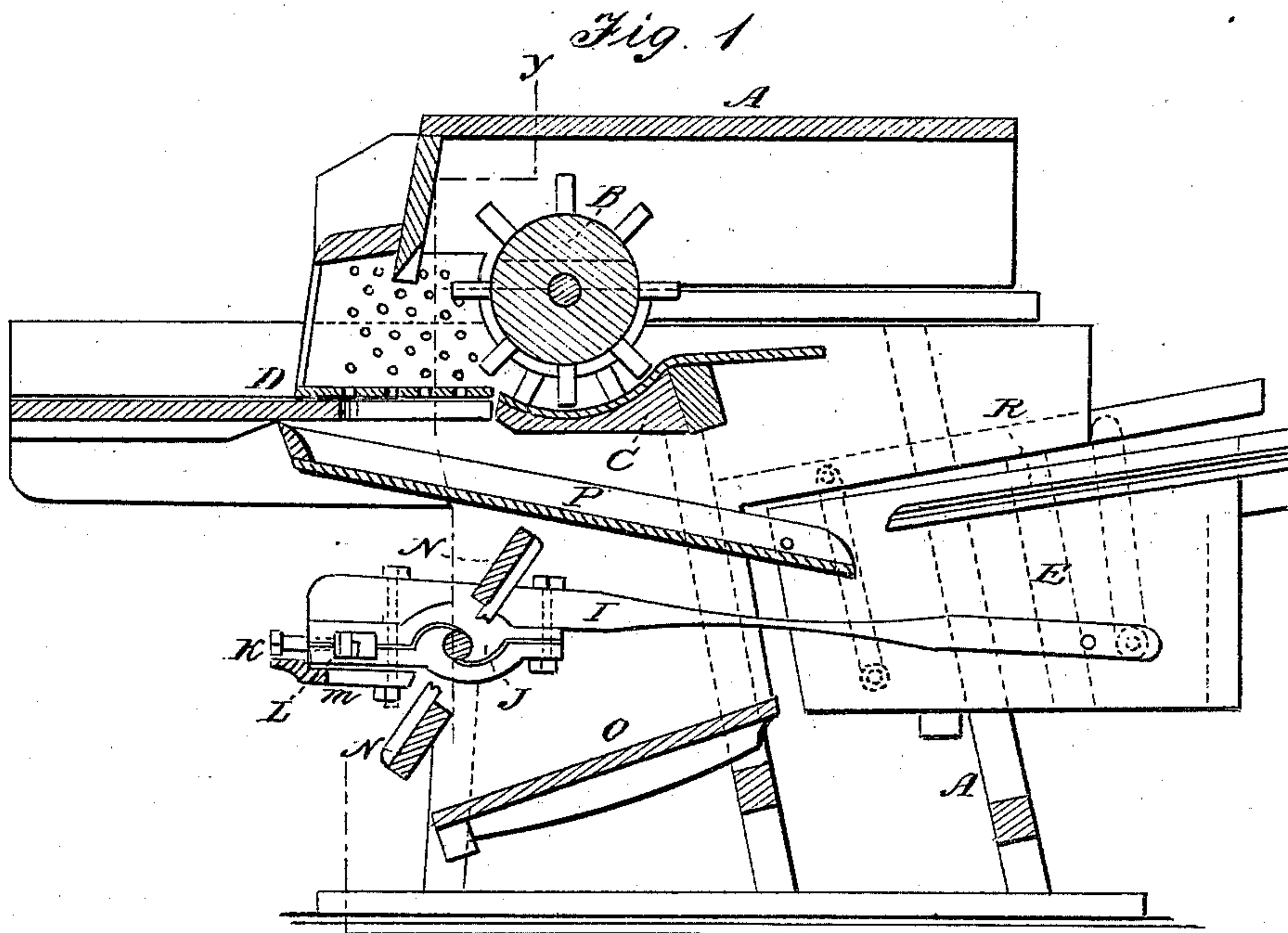


B. AYARS.
Thrashing Machine.

No. 99,519.

Patented Feb. 8, 1870.



Witnesses
Chas. Vida
Alex F. Roberts

Inventor
B. Ayars
PER *Mmm Co*
Attorneys

United States Patent Office.

BENJAMIN AYARS, OF GREENWICH, NEW JERSEY.

Letters Patent No. 99,519, dated February 8, 1870.

IMPROVEMENT IN THRESHING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, BENJAMIN AYARS, of Greenwich, in the county of Cumberland, and State of New Jersey, have invented a new and useful Improvement in Threshing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification.

This invention relates to new and useful improvements in machines for threshing grain, whereby such machines are rendered more useful and durable than they have heretofore been; and consists in the construction and arrangement hereinafter described.

In the accompanying drawing—

Figure 1 represents a vertical longitudinal section of the machine, through the line *z z* of fig. 2.

Figure 2 represents a vertical cross-section of fig. 1, through the line *y y*.

Similar letters of reference indicate corresponding parts.

A is the frame of the machine.

B is the cylinder.

C is the bed or concave.

D is the feed-apron.

E is the shoe or cleaner, to which is given a vibratory motion from the crank-shaft F.

This shaft is revolved by means of a belt from the pulley G of the cylinder-shaft, on to the pulley H of the crank-shaft F.

The shoe E is connected with the shaft F by means of the bars I, one on each of the inner sides of the shoe, which are attached to boxes J, on the cranks of the shaft.

The boxes J are made in two parts, which are bolted to the bars I, which parts are made adjustable by means of the screws K and nut L.

The screw K is prevented from turning round when the machine is in motion, by means of the clamp M, which is held to the lower part of the box by a bolt. Its outer end encloses the head of the screw on three sides, as it has projecting lugs for that purpose.

N represents blowing-wings or fans connected with the shaft F.

The current of air produced by these wings sweeps up on the apron O, and comes in contact with the grain as it falls from the chute.

The chute P is connected with the shoe, and moves with it.

The forward portion of the feed-apron D is formed of sheet-metal, which is turned up on each side, and perforated, so as to produce, by means of the rapid rotation of the threshing-cylinder, a current of air through the unthreshed grain on the feed-apron. This arrangement disposes of nearly all the dust, which is usually so annoying and injurious to the person who feeds the machine.

The dust thus disposed of is discharged from the chute P, and carried off with the chaff. The straw and grain from the bed C of the cylinder is thrown on to the separator, while the grain with the chaff is returned to the cleaner in the usual manner, over the chute R.

The fan-shaft F is made of cast-iron, with flanges projecting on each side for fastening the arms of the wings. These flanges are seen in fig. 2, in dotted lines, and designated by the letter S. These flanges widen the shaft, and thereby impart strength to it, whereby I avoid the use of a larger and heavier shaft. I also avoid the necessity of perforating the entire shaft, in order to attach the fan-wings, as this may be done by simply perforating the flanges and bolting the wings thereto. This construction also facilitates their removal, and gives them increased bearing-surface on the shaft.

T is a fly-wheel on the fan-shaft.

u is the driving-pulley.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

1. In the threshing-machine herein shown, the combination, with the case and frame A, of the feed-apron D, with its perforated end, the toothed cylinder B, bed C, chute P, shoe E, bars I, fan N, the crank-shaft and its fly-wheel, and the inclined platform O, when the said parts are constructed and arranged as herein shown and described.

2. The double adjustable box J, screw K, and bolt-holder or clamp M, arranged substantially as described for the purposes set forth.

BENJA. AYARS.

Witnesses:

EPHRAIM L. BITTER,
HOMER B. AYARS.