

(No Model.)

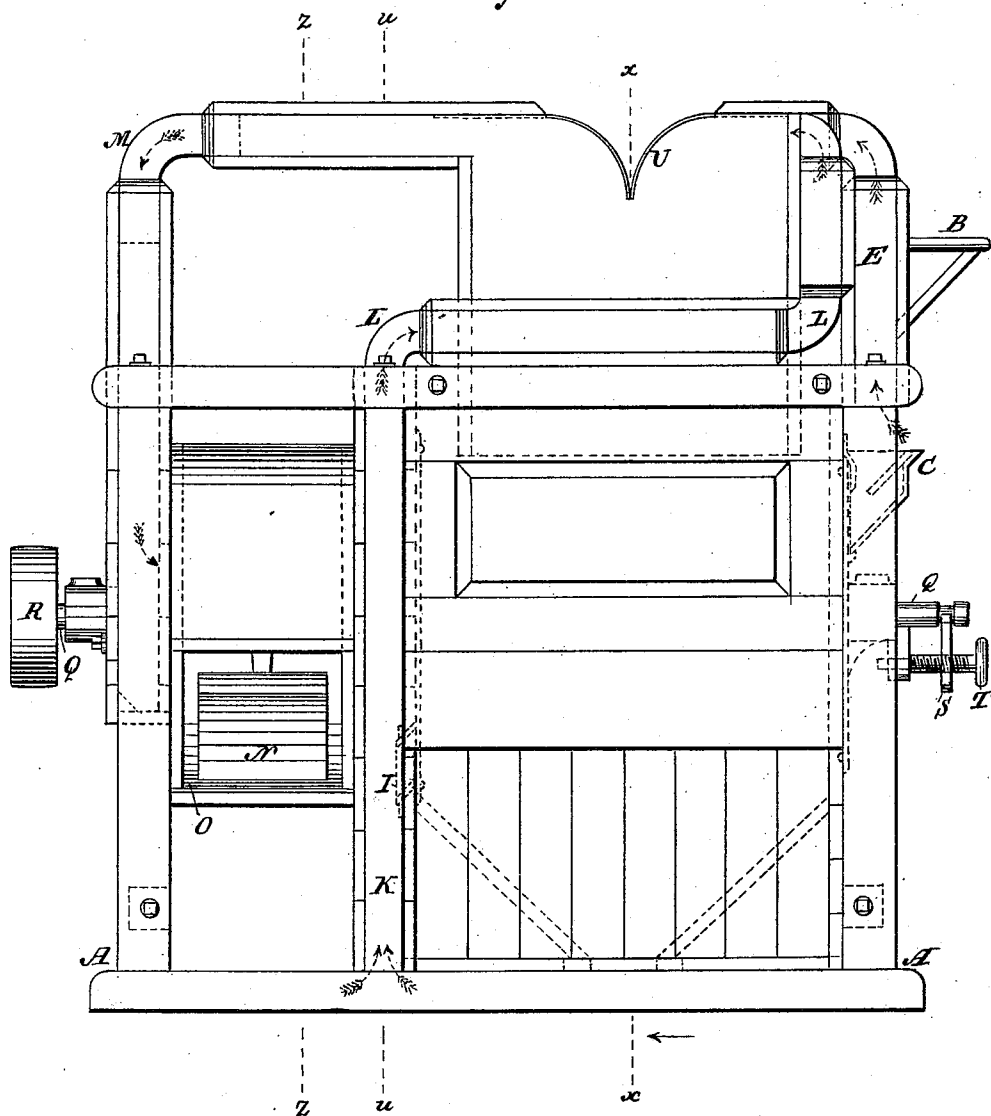
4 Sheets—Sheet 1.

T. A. SEIP.
GRAIN OR COFFEE CLEANER.

No. 471,901.

Patented Mar. 29, 1892.

Fig. 1.



WITNESSES:

Edward Wolff.
William Miller.

INVENTOR:

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BY

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(No Model.)

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Fig. 2.

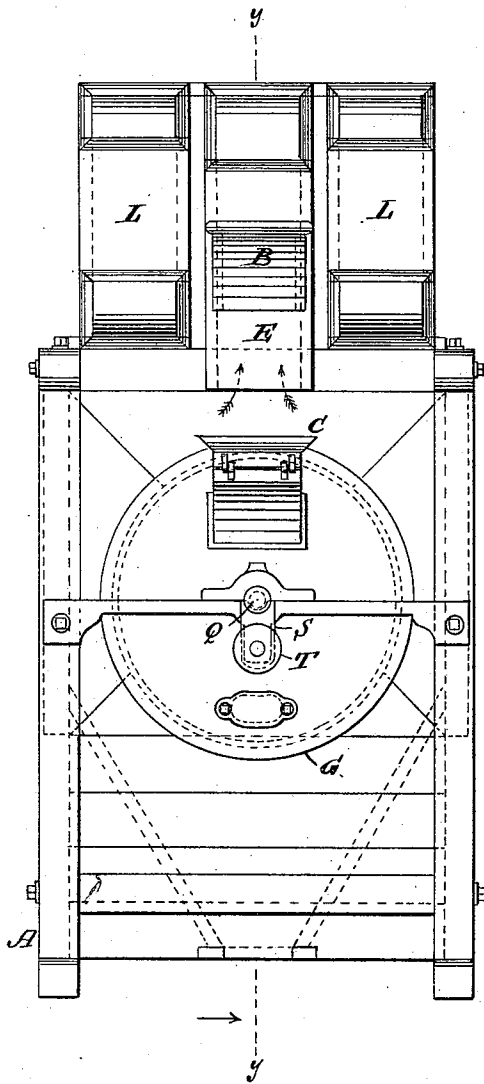
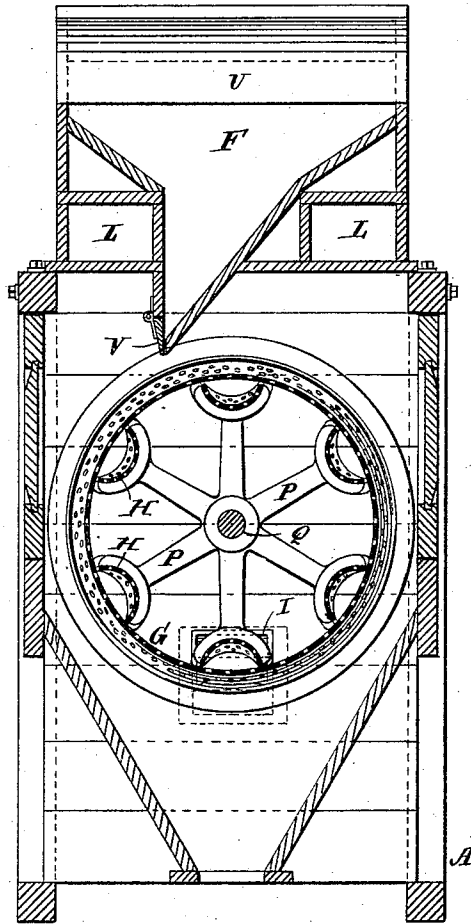


Fig. 3.



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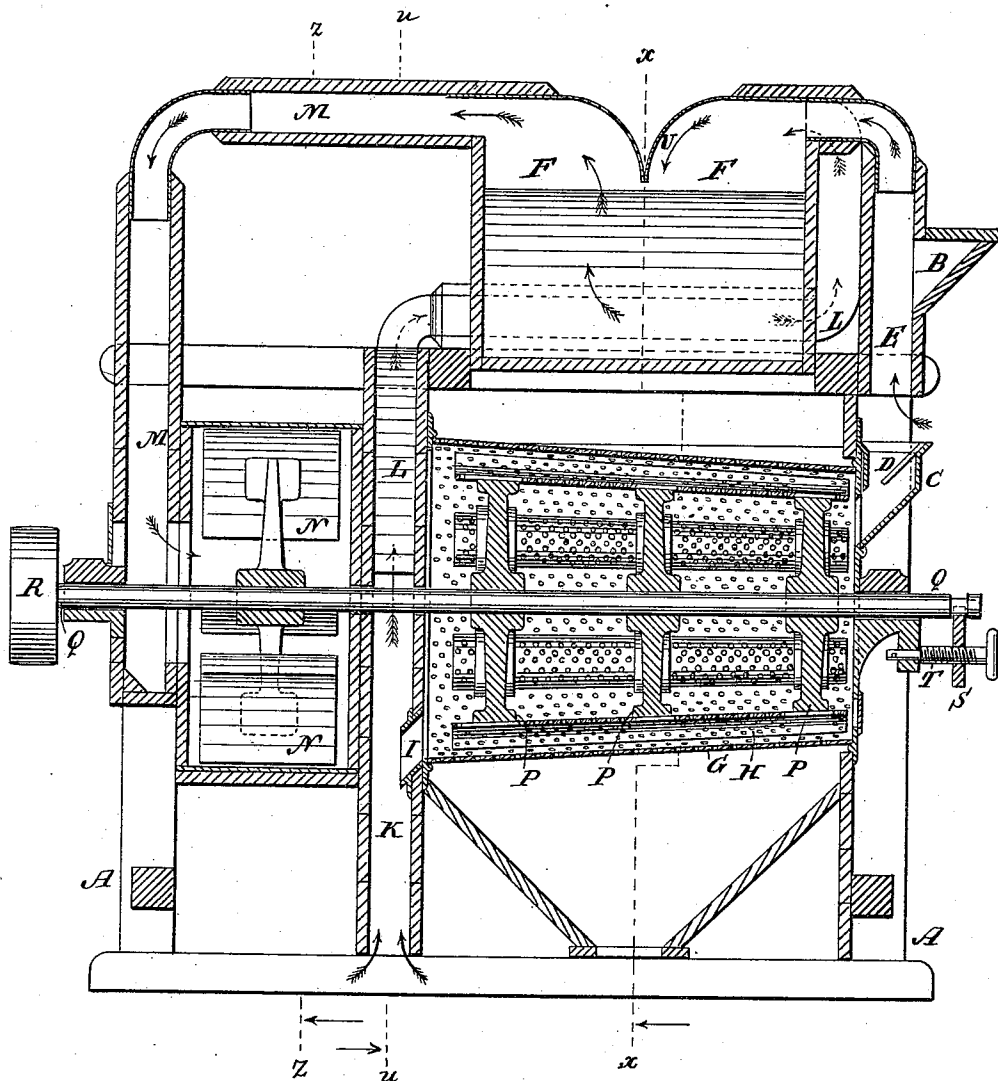
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Fig. 4.



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Fig. 5.

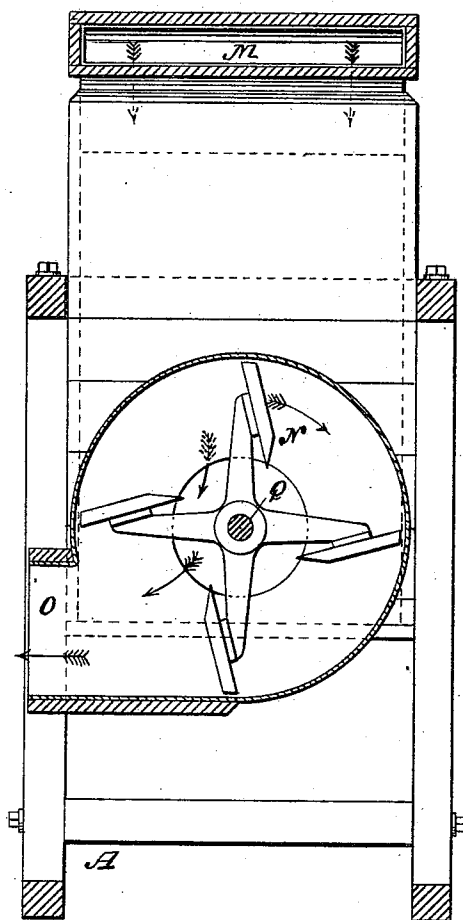
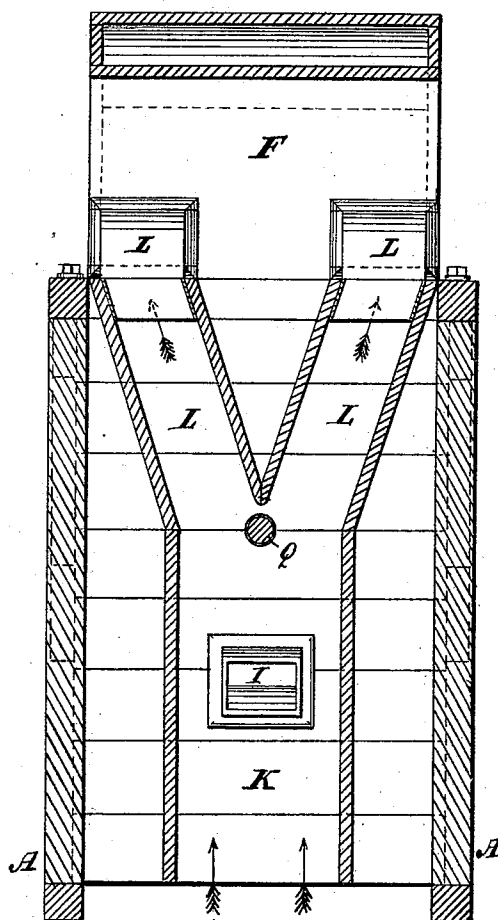


Fig. 6.



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UNITED STATES PATENT OFFICE.

THOMAS AMOS SEIP, OF NEW YORK, N. Y., ASSIGNOR TO JABEZ BURNS & SONS, OF SAME PLACE.

GRAIN OR COFFEE CLEANER.

SPECIFICATION forming part of Letters Patent No. 471,901, dated March 29, 1892.

Application filed May 28, 1891. Serial No. 394,350. (No model.)

To all whom it may concern:

Be it known that I, THOMAS AMOS SEIP, a citizen of the United States, residing at New York city, county and State of New York, have invented new and useful Improvements in Grain or Coffee Cleaners, of which the following is a specification.

This invention relates to an improvement in cleaners for grain, coffee, and like substances; and it consists in the details of construction set forth in the following specification and claims, and illustrated in the annexed drawings, in which—

Figure 1 is a face elevation of the cleaner. Fig. 2 is an end elevation of Fig. 1. Fig. 3 is a section along *xx*, Fig. 1. Fig. 4 is a section along *yy*, Fig. 2. Fig. 5 is a section along *zz*, Fig. 4. Fig. 6 is a section along *uu*, Fig. 4.

In the drawings, the letter A designates a frame or support. The grain or material is fed through chute B and passes thence to chute C, when the magnet D removes nails or particles of iron. In passing from chute B to chute C the current of air in channel E carries dust and impurities along said channel into chamber F. From chute C the material passes into the chamber G, where it is agitated by the independent blades H. These blades are hollow or trough-shaped, as seen in Fig. 3, and said blades rotate in the chamber G, the walls of which are perforated or sieve-like, so that as the material is agitated by the blades a considerable amount of dust escapes through the walls of chamber G. From chamber G the material escapes through the mouth I and passes off through the perpendicular channel K, in which an oppositely-moving current of air carries off remaining dust and impurities into a divided conduit L, which opens into the upper portion of a dust-chamber F. From chamber F the air is drawn through conduit M by the fan-blower N and expelled through exit O, while the dust and impurities are deflected downward by a deflector or curved portion U, formed as a part of the top wall of the dust-chamber F. The dust-chamber F is provided at one side of its lower end with a gravitating door V, which is forced open by the downwardly-deflected air after a certain quantity of impurity has collected on said door. The

blades H are secured to radial arms P, extending from the rotary shaft Q, having the pulley R, and since these trough-shaped blades are formed as independent pieces or sections they can be separately supported by the radial arms P, and therefore the trough-shaped blades can be separated from each other a considerable distance, as clearly exhibited by Fig. 3, in such manner that the material under treatment can descend or fall between the blades, and consequently as the material descends or falls it is caught and carried up again by one blade after another. By this means the material is subjected to considerable agitation and is thoroughly cleaned and scoured. This result could not be accomplished if the blades H were contiguous to each other, because the material could not descend or drop down between the blades, and therefore would not be effectually agitated and cleaned. The radial arms are varied in length, so that the blades are inclined to the shaft, and the tendency of the inclined blades is to work the material toward the exit-mouth I. The fan-blower is also mounted on shaft Q. Said shaft has a shoulder or recess in which sits an arm S, which loosely engages said shaft, so that the shaft can rotate independently of said arm; but any lateral movement of the arm is communicated to the shaft. The arm is engaged by a set-screw T, extending from the frame or side of the device, and by turning the set-screw the shaft Q with the blades H can be longitudinally adjusted.

The trough-shaped blades H are perforated or made sieve-like, as seen in the drawings. The trough-shaped perforated blades are very efficient in cleaning or scouring, since as the material travels along said trough-shaped blade the dust and foreign matter sift through the perforations of the blade. By constructing the independent blades H trough-shaped and curved outwardly, as shown, their longitudinal edges approach or are adjacent to the internal surface of the stationary casing G in such manner that each trough-shaped blade holds a mass of grain between itself and the casing for a short time, thereby materially increasing the efficiency of the machine by entirely avoiding any rubbing or crushing of the grain between the blades and the casing.

This is a desirable feature, which distinguishes my improved construction from prior scourers of this type.

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

1. A grain-cleaner provided with a scourer consisting of a rotary shaft having radial arms and independent trough-shaped blades secured to the arms and separated from each other throughout their length, so that the material can fall between the blades, each blade having its longitudinal edges arranged adjacent to the inside of the casing to hold a mass of grain between the blade and the casing for a short time, substantially as and for the purposes described.

2. A grain-cleaner consisting of a stationary perforated casing, a rotary scourer arranged in the casing, a dust-chamber located directly over the casing and having its bottom portion provided with a gravitating door, which is automatically opened by downwardly-deflecting

air after a certain quantity of material has collected on such door to discharge the material onto the casing, a curved pendent deflector constituting a portion of the top wall of the dust-chamber, an air-discharge passage leading from the chamber at one side of the deflector, and a perpendicular channel K, terminating at its upper portion in a divided conduit L, the two portions of which extend along opposite sides of the dust-chamber and communicate with the upper portion thereof at the side of the deflector which is opposite the air-discharge passage, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

THOMAS AMOS SEIP.

Witnesses:

WM. C. HAUFF,
W. HAUFF.