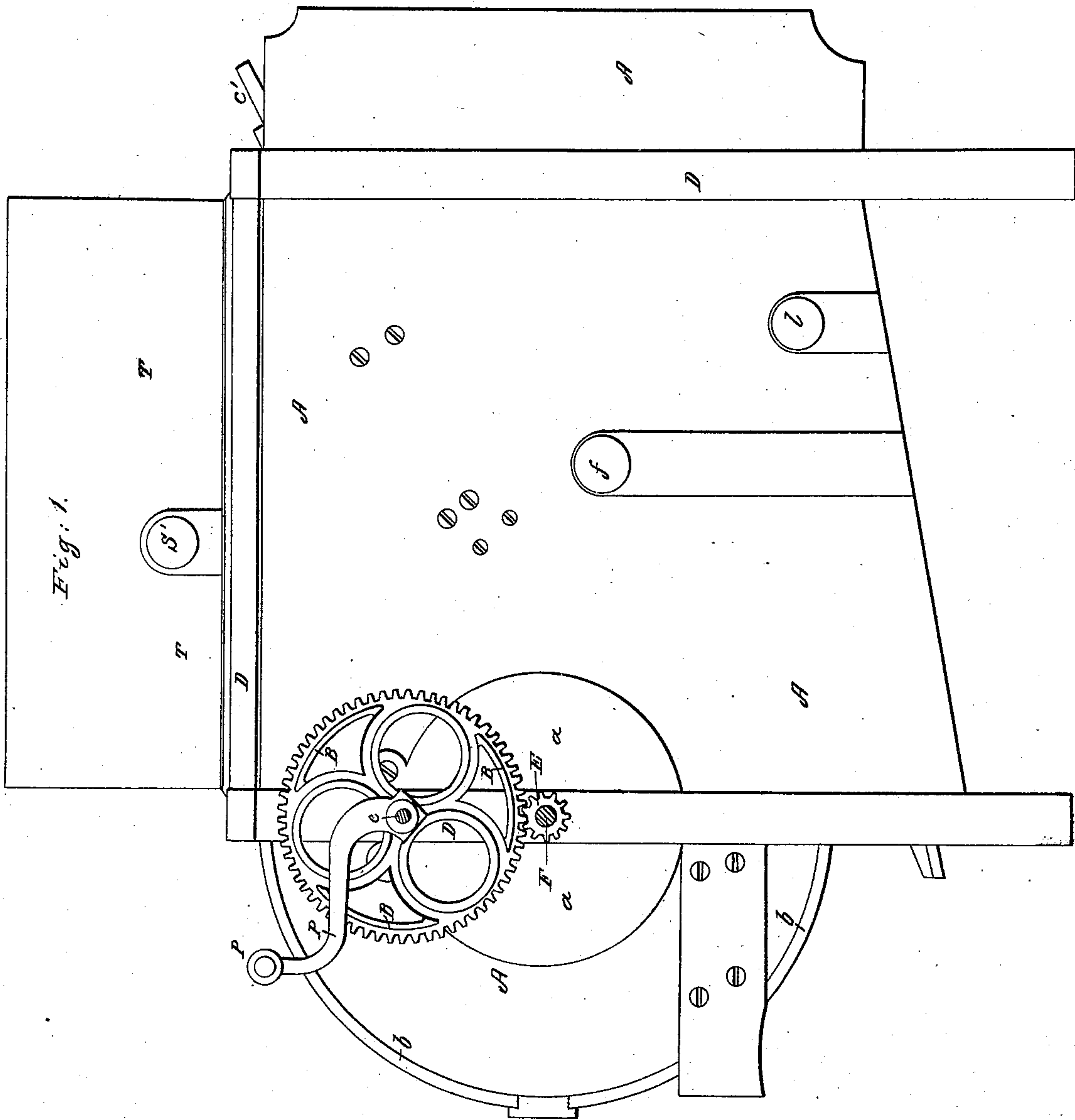


T. C. GLEASON.
Grain Cleaning Machine.

3 Sheets—Sheet 1.

No. 23,838.

Patented May 3, 1859.



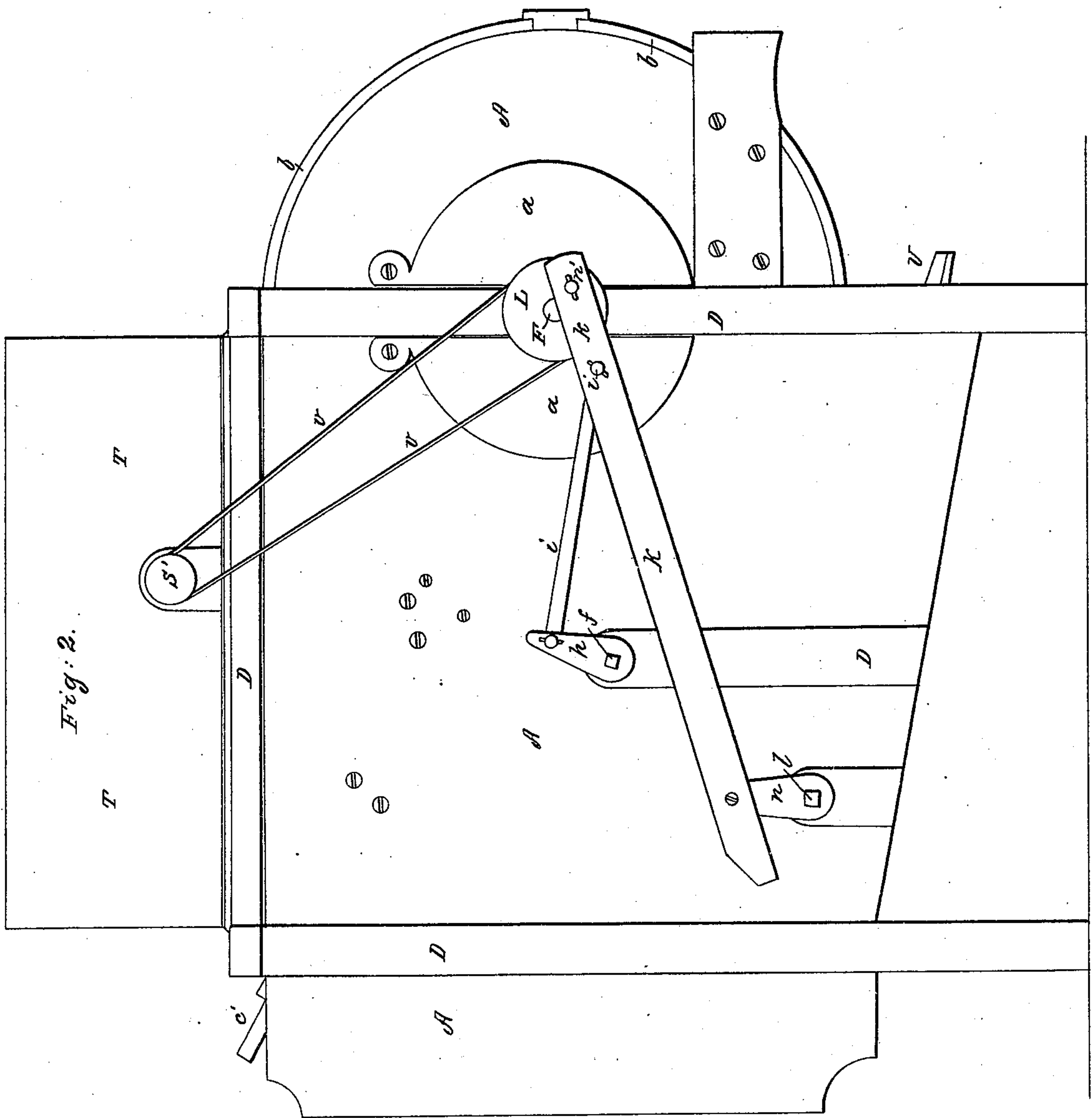
Witnesses:
W. A. Thompson
Orange Owens

Inventor:
T. C. Gleason

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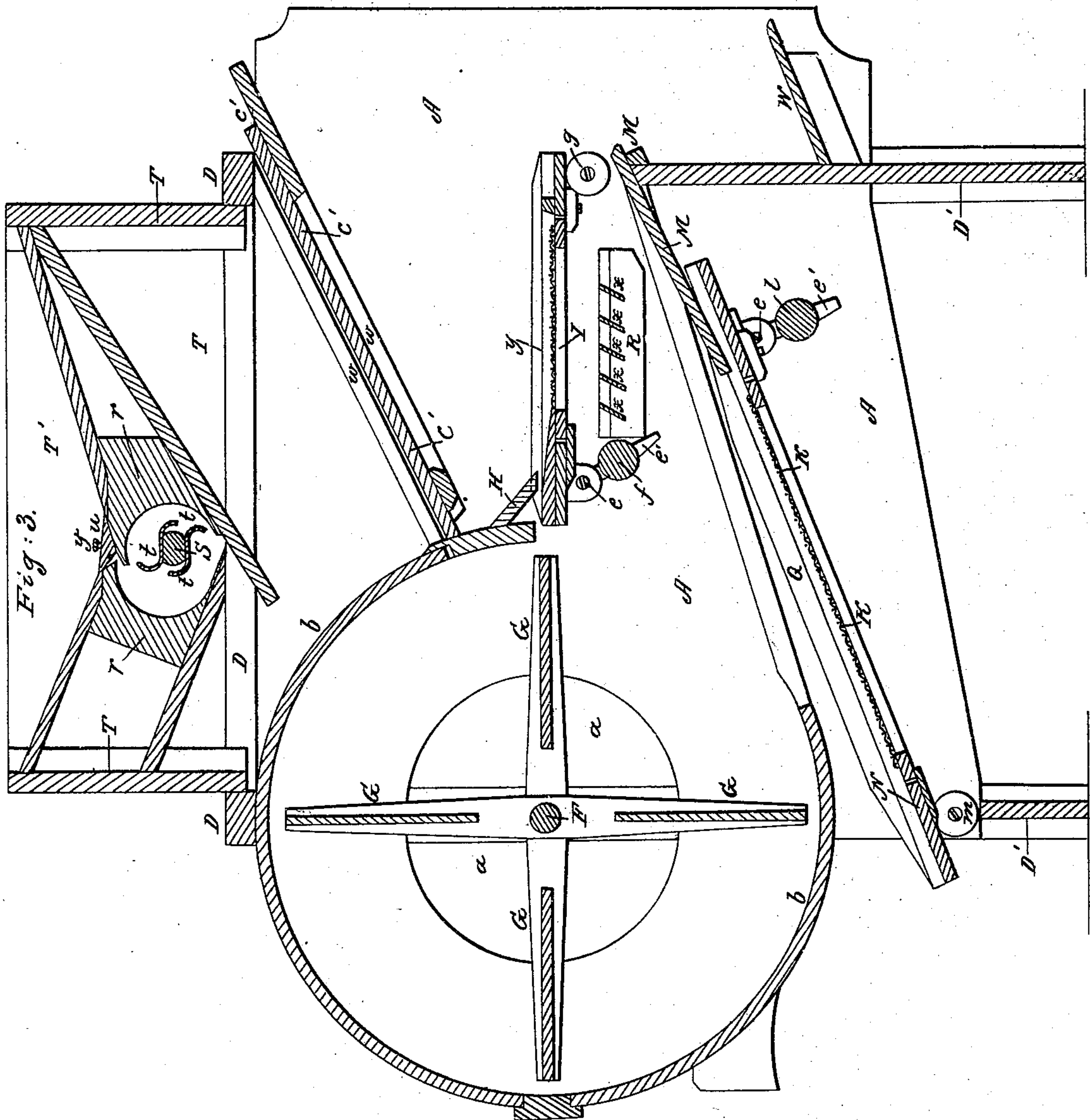
Witnesses:
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Orange Owens.

Inventor:
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T. C. GLEASON.
Grain Cleaning Machine.

No. 23,838.

Patented May 3, 1859.



Witnesses:
A. Lathrop.
Orange Owens.

Inventor:
J. C. Gleason.

UNITED STATES PATENT OFFICE.

THOMAS C. GLEASON, OF ROCHESTER, NEW YORK.

MACHINE FOR CLEANING GRAIN.

Specification of Letters Patent No. 23,838, dated May 3, 1859.

To all whom it may concern:

Be it known that I, THOS. C. GLEASON, of Rochester, county of Monroe, in the State of New York, have invented a new and useful Improved Machine for Cleaning Grain; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in certain improvements in machinery for cleaning grain as will be hereinafter more fully described.

To enable those skilled in the art to make and use my machine, I will now proceed to describe its construction and operation.

In the accompanying drawings forming part of this specification—Figure 1, represents a side elevation of my improved machine. Fig. 2, a reversed side view of the same—and Fig. 3, a vertical longitudinal section through the center, similar letters denoting the same parts in the different views.

A, represents the body or case of the machine which may be made of the form represented being semicylindrical at one end to conform to the fan wheel located therein (as will be presently described.)

B, is the main driving gear which has its bearing on a stud, *c*, projecting from the frame, D, of the machine, and which meshes into and drives the pinion, E, on the shaft, F, of the fan, G, said fan is constructed in the ordinary manner and is supplied with air as desired by opening and shutting more or less, the gates *a, a*, in the case of the machine. The hopper is formed by the wheel case, *b*, sides of body and sliding board, *c'*, (see Fig. 3,) the slide board, *c'*, runs in suitable ways in the inner sides of the case of the machine and may thus be adjusted to allow any required flow of grain to pass through the aperture at, *d*.

H, is a chute board over which the grain passes from the hopper into the screen, I, said screen is constructed pretty much as usual and is hung at one end by links, *e*, to a rock shaft, *f*, while at the other it is supported by friction rolls, *g, g*,—on the outer end of the rock shaft, *f*, is a crank, *h*, from which extends a connecting rod, *i*, to the bar, *k*, (see Fig. 2).

K is a secondary and finer screen located below the screen, I, as seen at Fig. 3, which

is also hung at one end to a rock shaft, *l*, and supported at the other by friction rolls, *m, m*, on the outer end of shaft, *l*, is a crank *n*, from which passes a connecting bar, *k*, to the crank pin, *n'*, in the face of the pulley, L, (on the main driving shaft).

M is a removable apron (see Fig. 3,) the object of which will be hereinafter described.

R are two side pieces which support a series of inclined strips or vanes *x, x, x*, which are for the purpose of dividing and directing the current of air (coming from the fan, G,) up through the screen, I, the vertical frame pieces it will be observed extend down below the case of the machine at, D', and form supports for the same. T, is a removable box constituting with its attachments a detachable smut machine which may be made to operate in connection with the mill as will be presently explained. This box, T, is so constructed as to just fit inside of the upper frame work, D, of the machine (see Fig. 3) and is furnished with a horizontal transverse shaft, S, in one end of which is formed a pulley, S', which is belted at pleasure by the band, *v*, to the pulley, L, on main shaft, F, (see Fig. 2) said shaft, S, is located near the center, longitudinally and near the bottom vertically of the box, T, and has arranged upon the smut extractors, *t*, made in the usual manner. Around the shaft, S, or smut wheel properly is formed a case by the two concave pieces, *r, r*, which open at the top and bottom to admit the grain from the hopper, T', and to allow it to escape below into the main hopper of the machine. M, is an apron or board to catch the heaviest portion of the stuff blown out of the first screen, I, the light part passing entirely out of the machine.

The operation is as follows (the smut attachment, T, supposed, detached from the machine) the grain is elevated into the hopper of the machine (formed as before mentioned) and the board, *c'*, being properly adjusted flows down onto the board, H, from thence onto the first screen, I, which is kept constantly vibrating longitudinally by means of mechanism as before described, a constant blast of air from the fan, G, meanwhile passing through said screen (directed by the vanes, *x, x*, as already mentioned) which blows out all the chaff, the grain then passes down to the apron M, from thence to the second screen K, when it is again sepa-

rated, said screen, K, vibrating longitudinally as described of, I, and the fine material passes through, while any coarser passes in and is discharged at the end of the screen
5 (at N,) see Fig. 3. If desired the apron or guide board, M, may be taken out, when any light stuff which might remain in the grain would be blown back and not fall into the screen, K. When it is desired the smut
10 attachment, T, may be placed over the mill (as shown in the drawings) when the smut will be extracted from the grain in the usual way, and the grain then pass on to and through the mill as before described.
15 Having described the construction and operation of my machine what I claim therein

as new and desire to secure by Letters Patent is

The arrangement of the screens I, and K, vibrating longitudinally with the fan, G, 20 removable apron M, and detachable smut cleaner T, the whole made to operate in conjunction as specified for the purposes set forth.

In testimony whereof I have hereunto set 25 my hand and seal this twenty-first day of October 1858.

T. C. GLEASON. [L. s.]

Witnesses:

A. LATHROP,
ORANGE OWENS.