

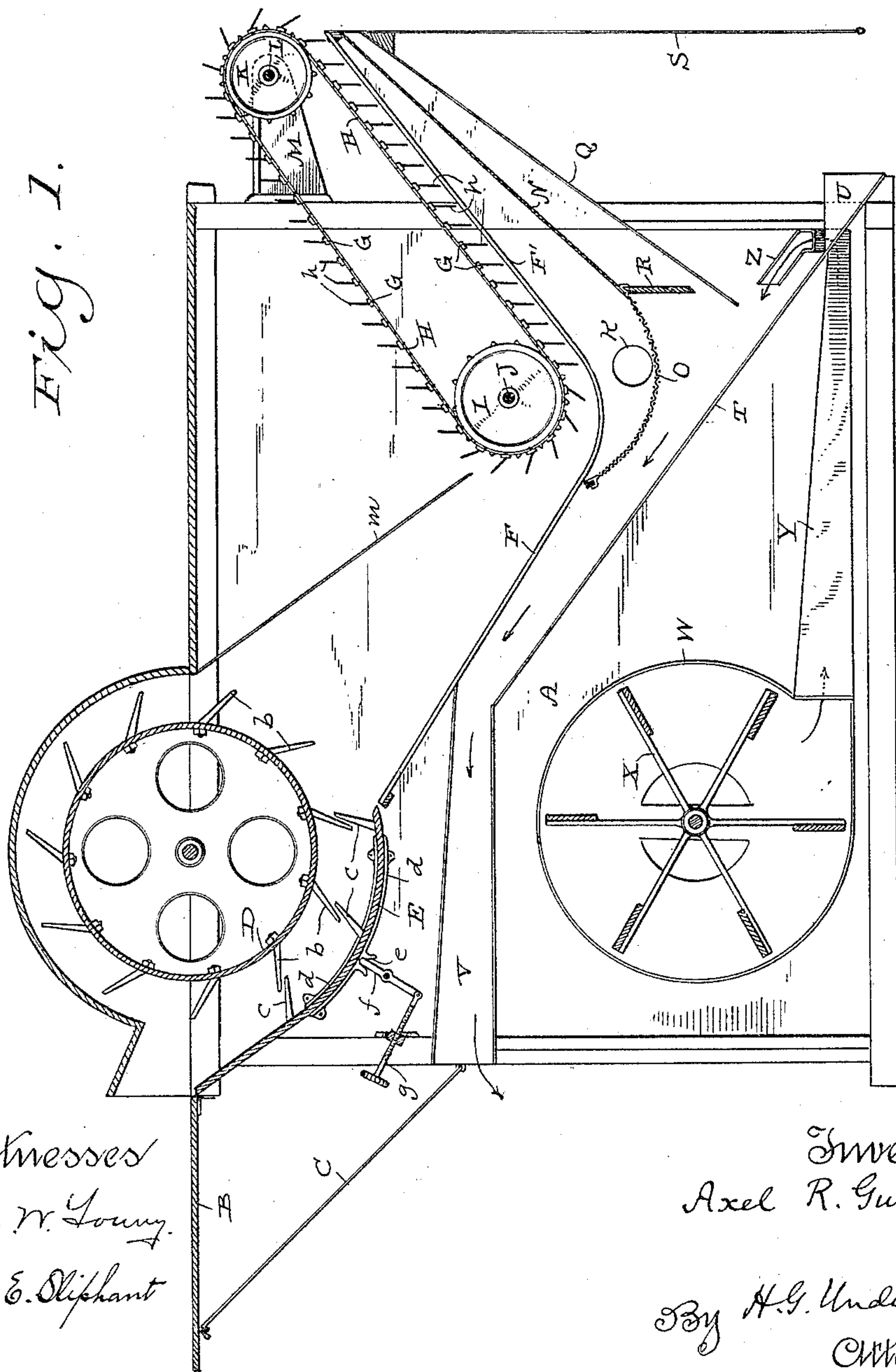
(No Model.)

2 Sheets—Sheet 1.

A. R. GUSTAFSON.
THRASHING MACHINE.

No. 446,643.

Patented Feb. 17, 1891.



Witnesses
Geo. W. Young.
N. E. Oliphant

Inventor
Axel R. Gustafson

By H. G. Underwood.
Attorney

(No Model.)

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Fig. 2.

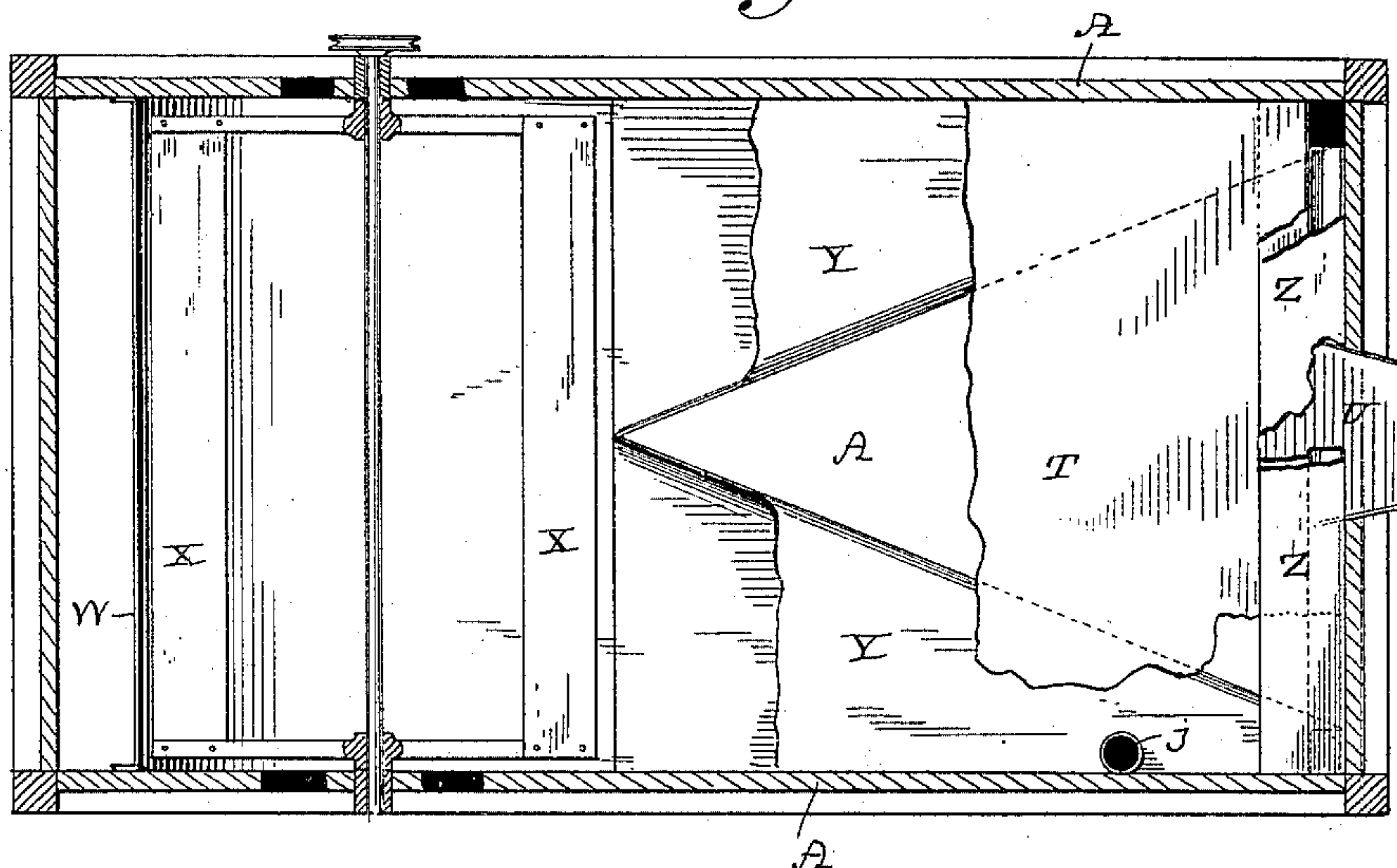
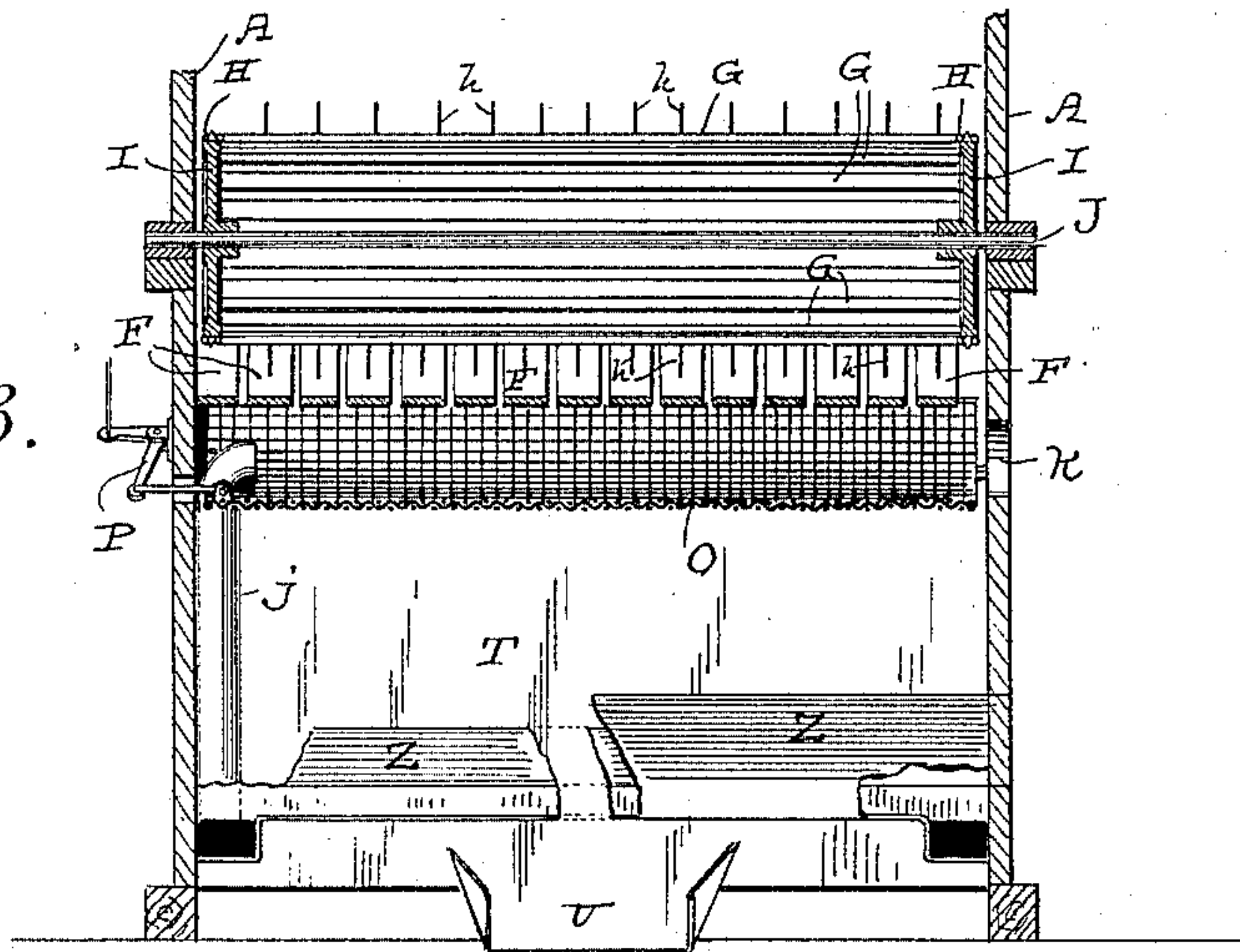


Fig. 3.



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UNITED STATES PATENT OFFICE.

AXEL R. GUSTAFSON, OF ASHLAND, WISCONSIN, ASSIGNOR OF ONE-FOURTH
TO WILLIAM F. ANDERSON, OF NEGAUNEE, MICHIGAN.

THRASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 446,643, dated February 17, 1891.

Application filed March 7, 1890. Serial No. 342,951. (No model.)

To all whom it may concern:

Be it known that I, AXEL R. GUSTAFSON, of Ashland, in the county of Ashland, and in the State of Wisconsin, have invented certain
5 new and useful Improvements in Thrashing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to thrashing-machines,
10 being designed as an improvement on what is set forth as my patent, No. 417,175, dated December 10, 1889; and it consists in certain peculiarities of construction and combination of parts, to be hereinafter described with reference to the accompanying drawings, and
15 subsequently claimed.

In the drawings, Figure 1 represents a vertical longitudinal section of a thrashing-machine constructed according to my invention;
20 Fig. 2, a horizontal section of the same with parts broken away, and Fig. 3 an end view of the machine partly broken away and partly in section.

Referring by letter to the drawings, A represents the casing of the machine, provided with a hinged feeding-table B, the latter being held up in position for use by means of stay-rods C, secured to said casing so as to swing down when it is desirable to drop said
30 feeding-table, this construction being illustrated in Fig. 1.

Arranged within the casing A, adjacent to the feeding-table B, is the thrashing-cylinder D, provided with a series of angularly-disposed teeth *b*, that are arranged to pass between similar teeth *c* on a segmental plate E, supported in guides *d* upon the inner sides of said casing eccentric to said cylinder, and the plate is provided with a socket *e* for the upper end of a pivoted lever *f*, the latter being
40 actuated by a screw *g*, connected to its lower end below the pivot, to adjust said segmental plate.

Extending downward from a point adjacent to the inner end of the segmental plate E is a slat-bottom F, having an extension F' extended up under a straw-carrier that comprises a series of transverse slats G, provided with teeth *h* and secured to link-belt
50 this belting being driven by sprocket-wheels I, arranged on a shaft J within the casing A,

and similar wheels K on a shaft L, having its bearings in brackets M, secured to the rear end of said casing.

Arranged beneath the extension F' of the
55 slat-bottom F is an inclined screen N, having the lower end thereof adjacent to a riddle O, the latter being connected to a bell-crank-actuating lever P, as illustrated in Fig. 3. Arranged below the screen is a chute Q, and depending from the lower end of said screen is a wind-break R, that comes within a certain distance of the chute, while at the same time an apron S is suspended from the upper end of said chute to shield the rear end of the machine against the entrance of straw or other
65 rubbish. The riddle O and chute Q discharge onto an inclined board T, provided with a delivery-spout U, and a flue V extends from the upper end of said board out through the front end of the machine. 70

Arranged within the casing A is the casing W for a fan X, and leading from the fan-casing are two wind-trunks Y, that diverge from a common center and are connected at their
75 outer ends to the extremities of a transverse spout Z, that discharges just above the inclined board T in a line parallel to the latter. By having the two wind-trunks Y diverge from a common center and connected at their
80 ends to the extremities of the transverse spout Z the blast from the fan is equalized throughout this spout, because the delivery of the air from the fan-casing thereto is in two currents toward each other, and there is just as strong
85 a blast at the meeting-point of these currents as at either end of said spout, it being understood that the latter discharges along its length.

Leading up from one of the wind-trunks Y
90 is a spout *j*, that discharges over the riddle O, the wind from this spout finding its final outlet through an opening *k* in the opposite side of the main casing.

A fan, its casing, two wind-trunks diverging from a common center, a transverse spout having its extremities connected to the outer ends of the wind-trunks, an inclined delivery-board arranged in a line parallel to the blast from the spout, and a flue leading from the
100 upper end of said board outside the casing of the machine, as hereinbefore set forth, are

also shown and described as forming parts of the machines specified in my application, Serial No. 346,428, filed April 3, 1890, and also in my application, Serial No. 360,229, filed

5 July 28, 1890.

In the operation of my machine the material to be thrashed is fed in between the teeth on the cylinder B and segmental plate E and slides down the slatted bottom F, a deflector
10 *m* being employed to prevent said material from crowding onto the straw-carrier. The loosened grain falls onto the inclined board T, and is met by a current of air from the spout Z, that separates said grain from the
15 chaff, the latter being carried off through the flue V, while said grain runs down said board to be discharged through the spout U. The straw is taken up by the slatted carrier to be discharged at the rear end of the machine,
20 and any loose grain that may have been carried up by said straw falls through the carrier and extension F' of the slat bottom F onto the screen N, the smaller kernels passing through this screen onto the chute Q, and from
25 thence upon the board T, in front of the spout Z, to be freed from dust or chaff. The larger grain from the screen N falls into the riddle O and through the latter onto the board T, the chaff being carried off by the blast from
30 the spout *j*, that rises from one of the wind-trunks.

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

35 1. In a thrashing-machine, a fan and its casing, two wind-trunks that diverge from a common center and extend forward from the casing, a transverse spout having its extremities connected to the outer ends of the wind-
40 trunks, an inclined delivery-board arranged

in a line parallel to the blast from the spout, and a flue leading from the upper end of said board outside the casing of the machine, substantially as set forth.

2. In a thrashing-machine, a fan and its casing, two wind-trunks that diverge from a common center and extend forward from the casing, a transverse spout connected at its extremities to the outer ends of the wind-trunks, an inclined delivery-board arranged
50 in a line parallel to the blast from the spout, a flue leading from the upper end of the board outside of the machine, a riddle arranged above said board, a flue leading from one of said wind-trunks to a point above the riddle,
55 and an opening in the machine-casing opposite the mouth of the latter flue, substantially as set forth.

3. In a thrashing-machine, an inclined slat-bottom provided with an extension inclined
60 in a direction opposite thereto, a thrashing mechanism arranged adjacent to the upper end of the slat-bottom, an endless straw-carrier arranged above the extension of said slat-bottom, a screen and riddle arranged to receive the grain that falls through the carrier and said extension of the slat-bottom, a chute
65 arranged below the screen, an inclined delivery-board arranged to receive the thrashed grain, and a fan for separating the chaff from
70 said grain, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

AXEL R. GUSTAFSON.

Witnesses:

H. G. UNDERWOOD,
WM. KLUG.