

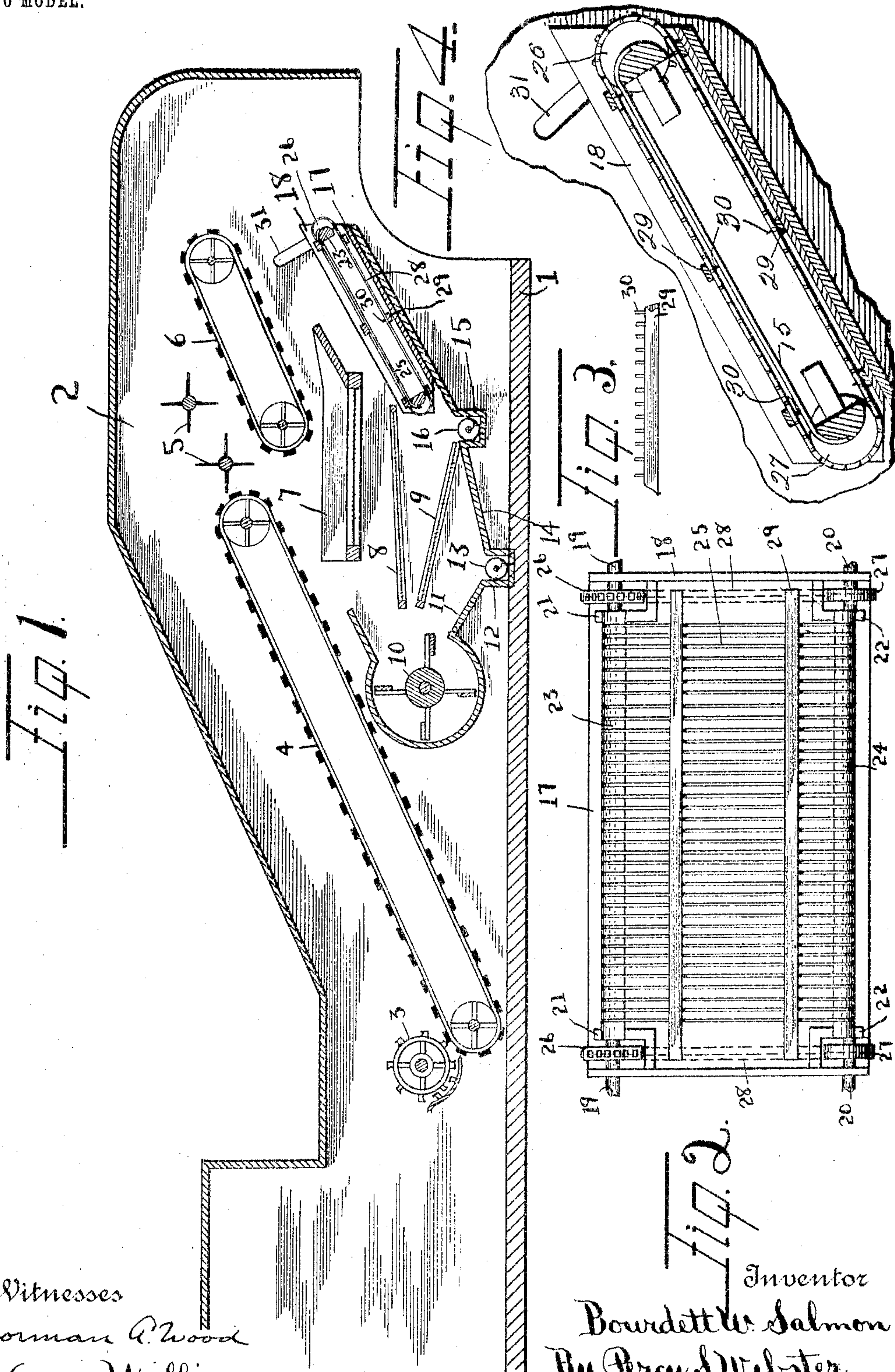
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B. W. SALMON.
THRESHER.

APPLICATION FILED JULY 22, 1904.

NO MODEL.



Witnesses
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Fig. 2.
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UNITED STATES PATENT OFFICE.

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THRESHER.

SPECIFICATION forming part of Letters Patent No. 776,619, dated December 6, 1904.

Application filed July 22, 1904. Serial No. 217,682. (No model.)

To all whom it may concern:

Be it known that I, BOURDETT W. SALMON, a citizen of the United States, residing at French Camp, in the county of San Joaquin, State of California, have invented certain new and useful Improvements in Threshers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and the figures of reference marked thereon, which form a part of this specification.

My invention relates to certain improvements in apparatus for more perfectly threshing, separating, and cleaning the grain; and it consists mainly in a peculiar device located at the rear of the thresher, whereby the great waste of grain, which is common with most machines of this character, may be lessened and indeed almost entirely done away with.

This device and its position in the machine I have fully illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal sectional view of the trunk of a threshing-machine, showing on its inside all the requisite parts, including those embodying my invention. Fig. 2 is a top plan view of my improved grain-saving device detached and enlarged. Fig. 3 is a side elevation of a portion of a carrier-slat of my improved grain-saving device, showing teeth thereon. Fig. 4 is a fragmentary view, in section and on an enlarged scale, of my improved grain-saving device.

Similar numerals of reference indicate corresponding parts in the several views.

1 designates one of the supporting-beams of the main frame of the machine, and 2 the usual casing or trunk within which are contained the threshing-cylinder, carriers, pickers, and other parts common to a threshing-machine.

3 designates the cylinder, and 4 the usual grain-carrier, at the discharging end of which and slightly elevated above are located the usual pickers 5.

6 is the usual straw-carrier, and 7, 8, and 9 are a series of sieves provided with meshes of proper dimensions.

10 is the usual fan, and 11 is an inclined floor extending downwardly into a trough 12, in which is located an auger 13. 14 is another inclined floor extending from the trough 12 to a trough 15, in which is an auger 16. Into the trough 15 the rear end of the sieve 9 discharges.

Directly back of the trough 15 is arranged my improved grain-saving device, constructed, preferably, as follows: A casing consisting of a floor or bottom 17 and sides 18, attached thereto, is suspended on shafts 19 and 20, which are seated in the said sides 18 and in angular offsets 21 and 22, respectively, which offsets are attached to the sides 18. Said shafts extend outside the trunk 2, where are located suitable sprocket-wheels connected to the running-gear by suitable means. Such construction is not shown in the drawings. On the offsets 21 cross-bars 23 are bolted or otherwise suitably fastened. Cross-bars 24 are similarly attached to the offsets 22. Wires 25 are stretched across the upper side of the cross-bars 23 and 24 at suitable distances apart, said wires being embedded in or otherwise fastened to said cross-bars. On the shaft 19, between the sides 18 and the offsets 21, are rigidly attached sprocket-wheels 26. On the shaft 20, between the side pieces 18 and the offsets 22, are rigidly attached pulleys 27. Link belts connect the sprocket-wheels 26 to the pulleys 27, on which belts are fastened cross-slats 29, which slats are adapted to slide on the wires 25 and on the floor 17. In one side of one or more of said slats 29 are embedded teeth 30, said teeth alternating between the wires 25. The periphery of the sprocket-wheels 26 and the pulleys 27 extend a little upward and outward from the cross-bars 23 and 24, so that when the slats 29 reach sprocket-wheels and pulleys they will be raised up, and thus allow the teeth 30 to pass said cross-bars without coming in contact with them. A slot 31 is located in each side of the

trunk 2, through which slots the shafts 19 extend, so that the outer end of my improved grain-saving device may be vertically raised or lowered for the purposes as hereinafter set forth.

The operation is as follows: As the separated and better-threshed portion of the grain falls through the sieves into the trough 12 and is conveyed into the usual machine-cleaner and as the coarser and dirtier grain is discharged into the trough 15, from which it is conveyed back to the cylinder by the usual means, the blast from the fan 10, blowing the chaff, straw, and weeds out of the rear end of the thresher, brings them in contact with and onto the wires 25 of my grain-saving device, in which event if there be any kernels of grain in said chaff, straw, and weeds they will fall between said wires onto the floor 17, and the slats 29 being in motion and sliding over such floor will carry them down into the trough 15. The teeth 30 at the same time passing between the wires 25 keep such wires free from weeds or other debris, which are ejected from the wires by the rotation of the slats 29.

In clean grain the rear end of my improved grain-saving device may be as low as possible; but in dirty weedy grain that end may be raised in the slots 31 to any angle or pitch necessary.

The great trouble with most threshers is that when a sufficiently strong blast is obtained from the fan to keep the sieves free from weeds and straw it invariably blows a great deal of grain along with such weeds and straw out of the rear end of the machine, and thus a great loss is entailed; but by the use of my improved grain-saving device it will readily be seen that most, if not all, of this waste is obviated.

I have shown sufficient of one style of a threshing-machine to fully illustrate my invention. It may, however, be utilized in most of the machines now in use, as it is adapted thereto.

I have above entered into a detailed description of the construction and relative arrangement of parts embraced in the present and preferred embodiment of my invention. I do not desire, however, to be understood as confining myself to such specific detail, as such changes may be made in practice as fairly fall within the scope of my claims.

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

1. In a thresher the combination with means for threshing and separating the grain, of a grain-saving device located at any suitable desired point in the machine and consisting essentially of an open trough composed of a floor and of sides attached thereto sustained in the casing of the machine and adjusted at

one end, angular offsets from the inner ends of such sides, cross-bars fastened on such offsets, wires stretched across the tops of such bars, shafts seated in said sides and offsets, sprocket-wheels attached rigidly to one set of said shafts, pulleys rigidly attached to the other set of shafts, link belts connecting said sprocket-wheels and pulleys, slats secured on such belts, teeth on one side of one or more of said slats, said sprocket-wheels being adapted to be connected with the driving power of the thresher.

2. In a grain-saving device for threshing-machines the combination of a floor, sides attached to such floor, offsets at the inner ends of said sides, shafts seated in the sides and offsets, one of said shafts being journaled in the sides of the casing of the threshing-machine and the other shaft passing through slots in the casing, sprocket-wheels on one set of shafts, and pulleys on the other, link belts connecting said sprocket-wheels and pulleys, slats suitably arranged on said belts and adapted to slide on said floor, means for catching the grain and depositing it on said floor, said floor being arranged so as to connect with any trough or other means for receiving and conveying away the grain, and means for driving said sprocket-wheels all as set forth.

3. The combination within the trunk of a thresher of the cylinder 3, the grain-carrier 4, the picker 5, the straw-carrier 6, the fan 10, the inclined floor 11 the trough 13 containing the auger 16, the casing, composed of the floor 17 and sides 18 attached to such floors, suspended on the shafts 19 and 20 seated in the sides 18 of the casing and in the offsets 21 and 22, one of said shafts being journaled in fixed position and the other being movable in slots in the sides of the thresher-trunk, suitable means for operating said shafts, the cross-bar 23 attached to the offsets 21, the cross-bar 24 attached to the offsets 22, wires 25 attached to the cross-bars 23 and 24, the pulleys 27 of the shaft 20, the sprocket-wheels 26 of the shaft 19, the link belts 28, connecting the sprocket-wheels 26 with the pulleys 27, and the slots 31 in the sides of the thresher-trunk all substantially as desired.

4. The combination in a threshing-machine, of a grain-saving device located within the trunk of the machine and adjacent the fan, said device comprising sides and a floor, cross-bars arranged between said sides, wires carried by said cross-bars, shafts carrying sprockets, said sides and floor being suspended from said shafts, and one of said shafts being journaled in the trunk of the machine, and the other movable in slots in said trunk, sprocket-wheels carried by one of said shafts, pulleys carried by the other of said shafts, link belts passing over said sprockets and pulleys, slats carried by said belts and having projecting

teeth adapted to pass between said wires, said
floor being located below the lower line of
travel of said slats whereby the slats will
sweep grain lodging on the floor into a suit-
5 able receptacle located adjacent the lower end
thereof.

In testimony whereof I have signed my name

to this specification in the presence of two sub-
scribing witnesses.

BOURDETT W. SALMON.

Witnesses:

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