

(No Model.)

2 Sheets—Sheet 1.

B. B. BERSCHIED.
THRASHING MACHINE.

No. 496,848.

Patented May 9, 1893.

Fig. 1.

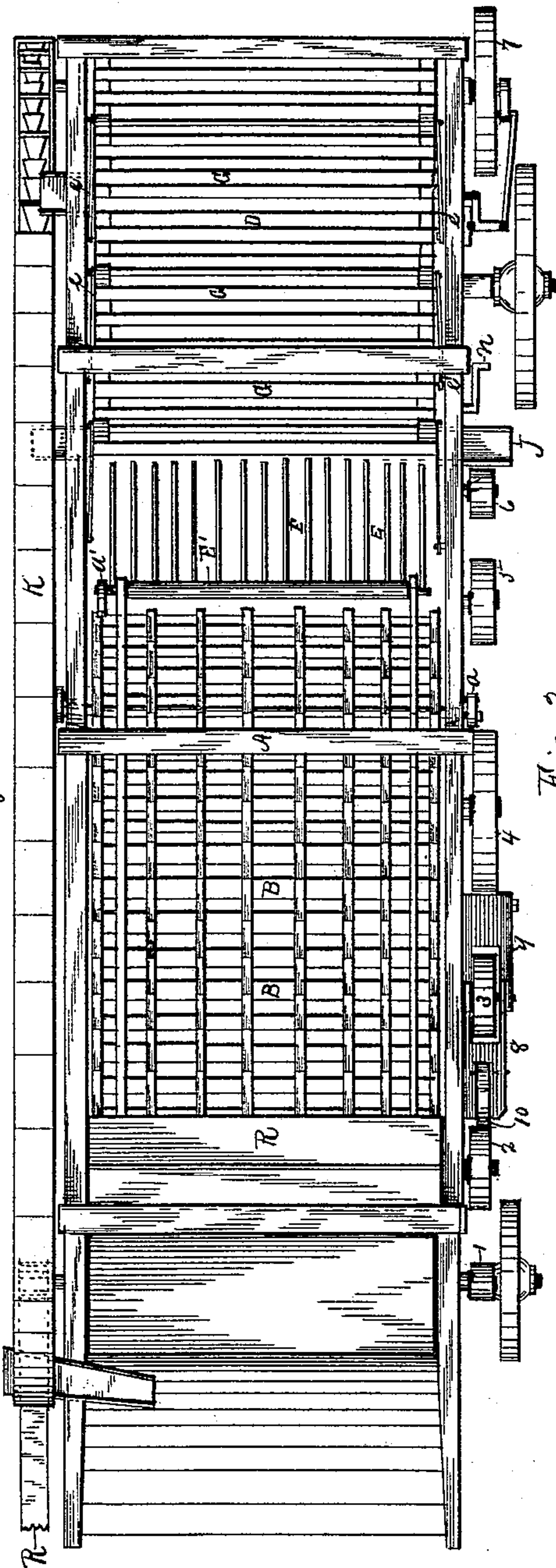
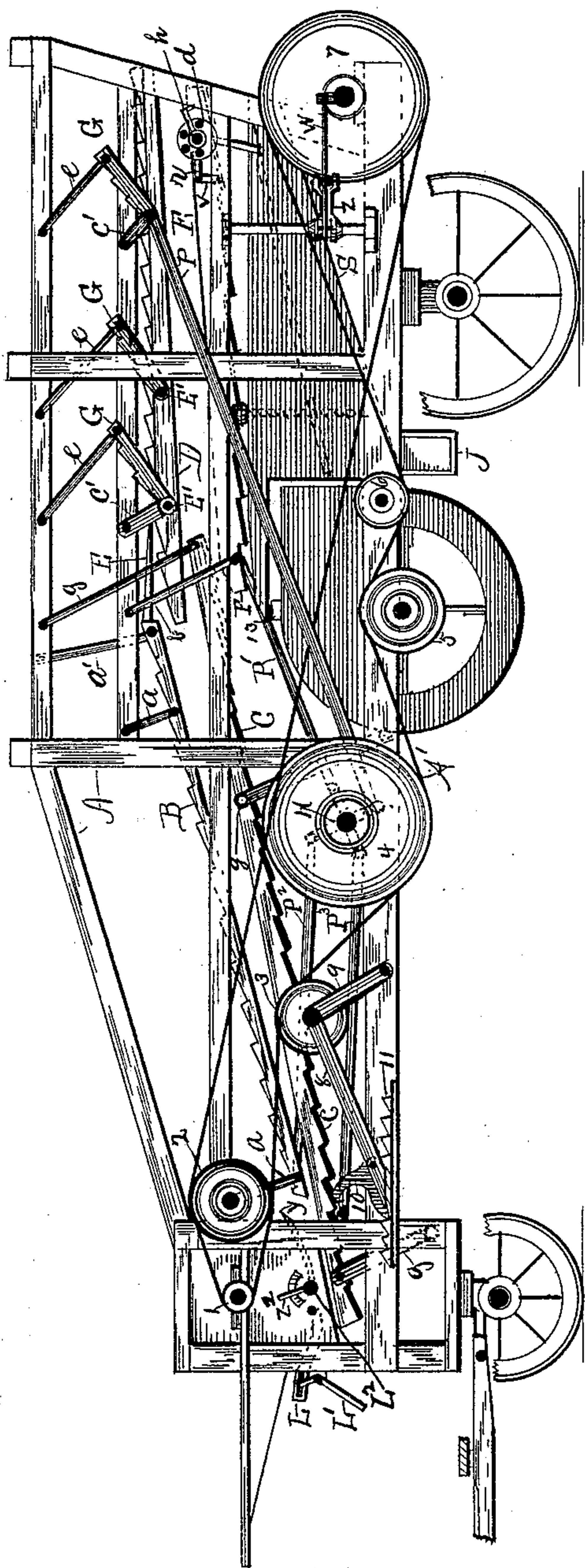


Fig. 2.



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UNITED STATES PATENT OFFICE.

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THRASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 496,848, dated May 9, 1893.

Application filed May 18, 1892. Serial No. 433,488. (No model.)

To all whom it may concern:

Be it known that I, BERNARD B. BERSCHIED, a citizen of the United States of America, residing at Joliet, in the county of Will and State of Illinois, have invented certain new and useful Improvements in Thrashing-Machines, of which the following is a specification, reference being had therein to the accompanying drawings and the letters and figures of reference thereon, forming a part of this specification, in which—

Figure 1 is a top plan view. Fig. 2 is a side elevation; and Figs. 3, 4, 5, 6, 7, 8, and 9 are detail views of the working parts of the machine.

This invention relates to certain improvements in thrashing machines which improvements are fully set forth and explained in the following specification and claim.

Referring to the drawings A represents the frame of the machine supported on ordinary truck wheels and having an ordinary cylinder driven by a belt a' . One belt A' is shown on the opposite side of the machine in Fig. 2, which drives all the working parts of the machine. Starting with pulley 1 on the cylinder shaft said belt passes over pulley 2 of the beater R, shown in Fig. 1, under pulley 4 of the crank shaft H, over pulley 5 of the fan shaft, and pulley 7, the shaft of which bears a crank connected by means of pitman w with bell crank z connected with the shoe S for vibrating it in the ordinary manner. The pulley 6 is an idle pulley and pulley 3 is for tightening belt A' . Said pulley 3 is journaled in the upper end of the arms 8 and 9, forming a toggle, one end of which is pivotally attached to frame A, while its opposite end is provided with a pawl 10 for engaging the toothed rack 11, so that pulley 3 may be elevated and lowered by means of said toggle, and maintained at the proper height by means of said pawl and rack.

B and D are swinging straw carriers, for conducting the straw to the rear end of the machine. The carrier B consists of a series of notched parallel bars provided on their undersides with crossslats as shown in Figs. 1, and 8, and is suspended from the arms a pivoted at their upper ends to the frame A of the machine. Said straw carrier has a rock shaft E'

at its upper end journaled at either end in the two outer notched bars of said carrier, which rock shaft is provided with a series of rearwardly extending spaced fingers E. Said rock shaft has secured to it at one end the arm a' which is pivotally connected at its upper end to frame A, so that when said straw carrier swings, said fingers will vibrate vertically for the purpose of tossing the straw and passing it along to the next straw carrier D. The said straw carrier B is vibrated by means of one of the cranks of the crank shaft H to which it is connected by means of a pitman P^2 .

The straw carrier D is located at the rear of straw carrier B and receives the straw therefrom, and is suspended by means of the arms C' so it can be vibrated by means of one of the cranks of crank shaft H to which it is connected by means of pitman P. Said straw carrier D is shown in Figs. 1, 2 and 5, and consists of several parallel bars arranged parallel with each other, and provided on their upper sides with a series of crossslats, triangular in cross section, and arranged apart from each other so that grain may drop between them. Said straw carrier D is provided on its upper side with the auxiliary tossing straw agitators, G, similar in construction to that of straw carrier D, and having their inner ends pivotally connected to carrier D, and their outer ends elevated and suspended at an angle with carrier D by means of the rods e having their upper ends pivoted to the frame A, so that when carrier D vibrates, the auxiliary carriers G will be given a tossing motion to toss the straw up as it passes along over them, to separate it from the grain.

C is a vibrating grain floor or carrier shown in longitudinal section in Fig. 7, and is supported at each end near its four corners on the arms, g , having their lower ends pivotally connected to frame A, and the said carrier is vibrated by means of one of the cranks of crank shaft H through the medium of pitman P^3 connecting it with said crank. Said grain carrier is located immediately below the straw carrier B, and has its lower end extend under the concave of the cylinder, while its upper end extends over the chaffer F, and is constructed as shown in Figs. 2 and 7, and

consists of two sides provided on their under sides with a notched floor as shown in Fig. 7 for moving the grain forward as it is vibrated.

F is what is termed a chaffer for receiving the grain and chaff, and separating the grain from the chaff, and is shown in perspective in Fig. 4 and consists of a pair of parallel sides having a notched floor on their under sides connecting them, which floor is perforated for permitting the grain to drop through said perforations to the sieve of the shoe below. The rear end of the chaffer F is provided with a series of inwardly inclined tail boards T^2 for catching the over spill of grain from the perforated floor and conducting it to the sieve below. The inner end of said chaffer F is suspended from the arms b having their upper ends pivoted to frame A, while its outer end is suspended by means of arms v from cranks r of a cross shaft which may be rotated by means of a crank h for the purpose of elevating and lowering the rear end of said chaffer to accommodate it to wet or dry grain. When said crank h is turned it may be held in any position by means of inserting a pin in any one of the holes in the circuiter plate d , attached to the outer side of the machine frame, and through which said shaft passes and is journaled, and shown in Fig. 2, and which crank is shown in perspective in Fig. 4. Said chaffer is located immediately below the straw carrier D, and is vibrated by means of one of the cranks of crank shaft H to which it is connected by means of the pitman P' .

S is the shoe having its inner end pivotally supported at 13 on the top of the fan case, while its rear end is suspended and vibrated in the ordinary manner. The sieve i of the shoe has its outer end supported on the cranks of a cross crank shaft which may be rotated by means of a crank 12 as shown in Fig. 3, and the crank held by any suitable means for the purpose of elevating and lowering the outer end of the sieve to accommodate it to wet or dry grain. The inner sides of the shoe are provided with screw shafts m set in a recess in the sides of the shoe and passing through a nut z' secured to the sides of the sieve, and designed to be rotated by means of the bevel gears y and crank u , for the purpose of vertically adjusting that end of the sieve.

J is a tilting discharge spout located so as to receive the grain from the sieve of the shoe and discharge it in either direction. This

spout is pivoted at its center between two parallel boards one of which is shown at J' which are suspended from the frame A by means of the rods r' , and the said spout and its suspended frame are connected to the shoe by means of a bar r^2 , shown in broken lines in Fig. 9, or in any other suitable manner, for the purpose of causing the grain discharge spout to be vibrated with the shoe so as to prevent its being clogged with wet or unclean grain, and the tilting spout permits the grain to be discharged from either side of the machine.

Underneath the rear part of the cylinder is arranged a rock shaft L^2 which is provided with a series of rearwardly extending spaced fingers y , shown in Fig. 2. These fingers curve slightly upward at their outer ends, and serve to conduct the straw to the straw carrier B, and they are intended to be elevated or lowered at their outer ends by means of rotating the shaft to which they are attached, and holding it rotated by means of an arm z^2 on its outer end and a notched segment for holding said arm at any desired place. The concave L is hinged at its rear side, and is free at its forward side so that it may be vertically adjusted at its forward side by means of a crank L' engaging an extending slotted arm of the concave as shown in Fig. 2. This adjustment of the concave is for the purpose of setting it up nearer, or farther from the cylinder to accommodate the machine to any kind of straw whether wet or dry, coarse or fine, and also furnishes means for cleaning out the cylinder and concave when clogged, or to repair them readily in case of accident.

K is an elevator for returning the tailings back to the cylinder to be again run through the machine.

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

In a thrashing machine the combination of the frame A, shoe S, screw rods m , bevel gears y^3 crank n , sieve i , having nut z' , for receiving said screw shaft, and crank 12 for adjusting the rear end of said sieve substantially as and for the purpose set forth.

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