(No Model.)

C. T. SCHRAMM.

MACHINE FOR TREATING GRAIN.

No. 244,823. Patented July 26, 1881.

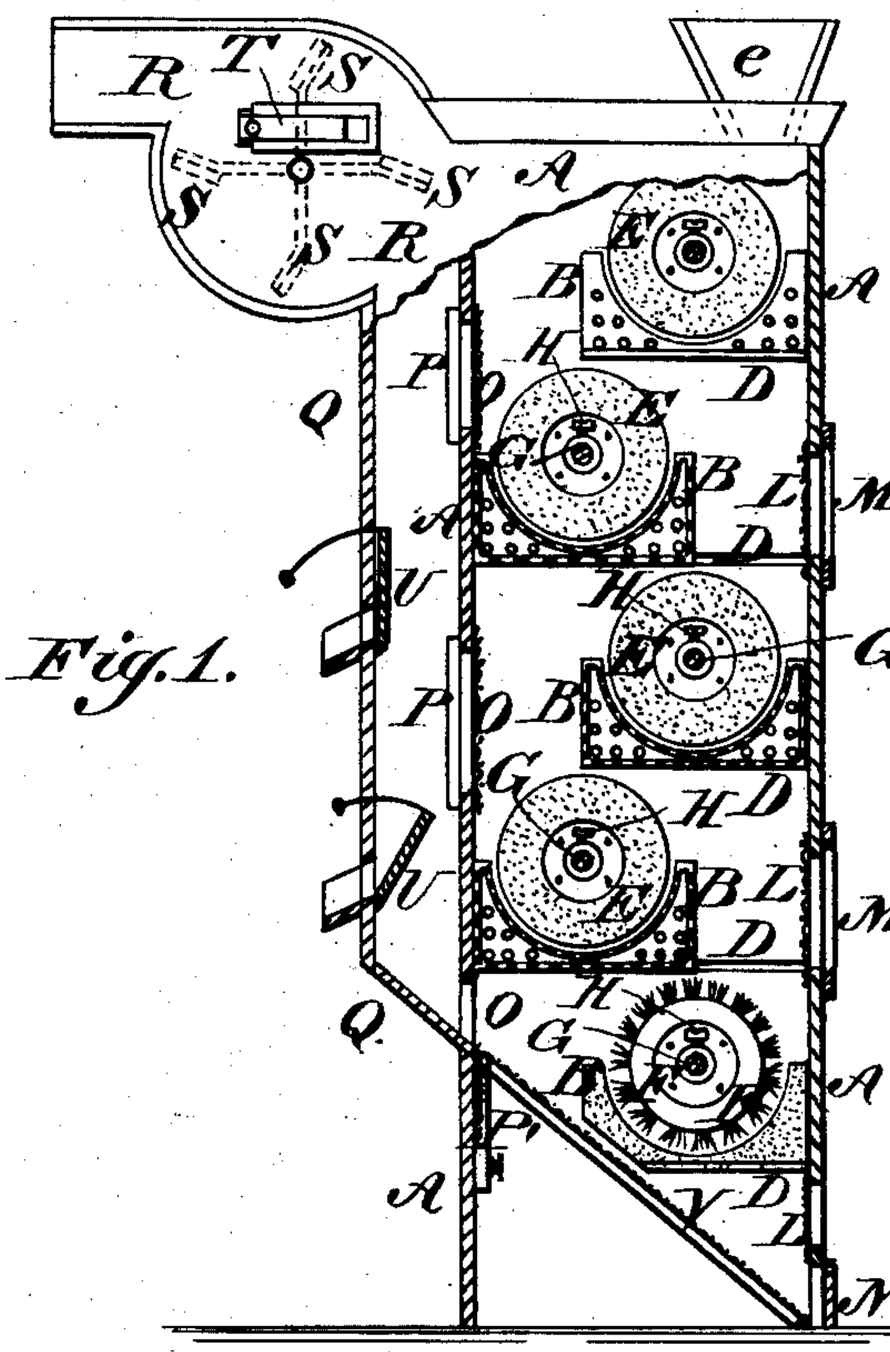


Fig. 1.

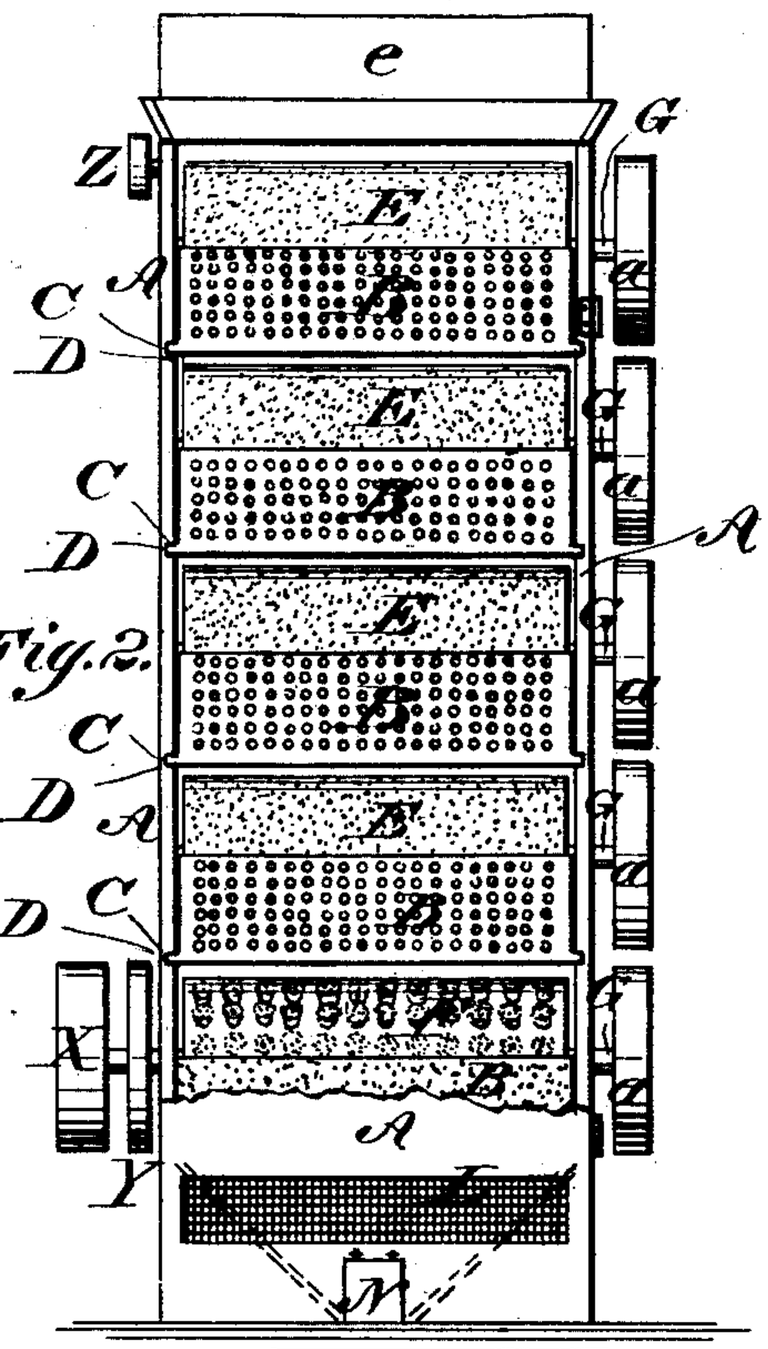


Fig. 2.

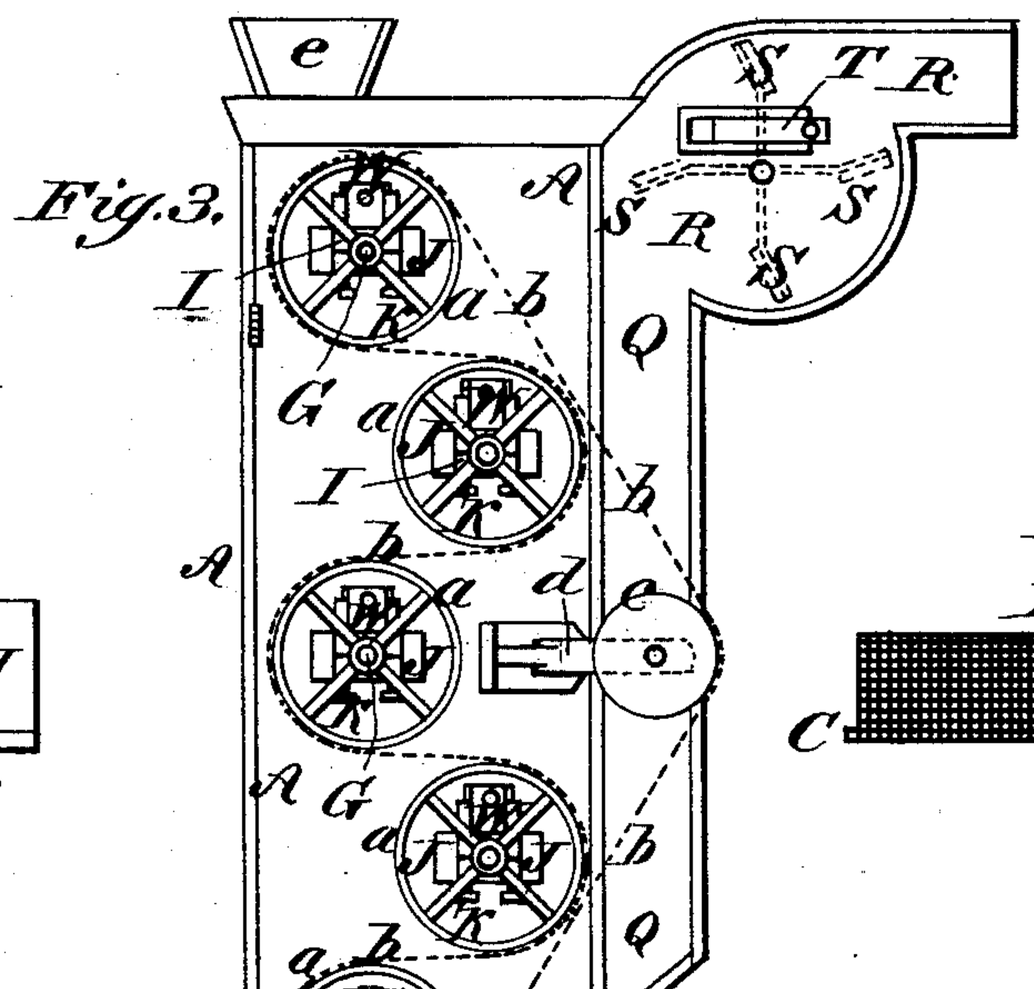


Fig. 3.

Fig. 4.

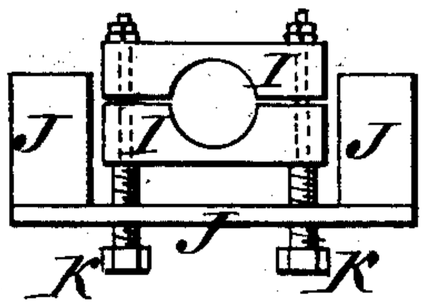
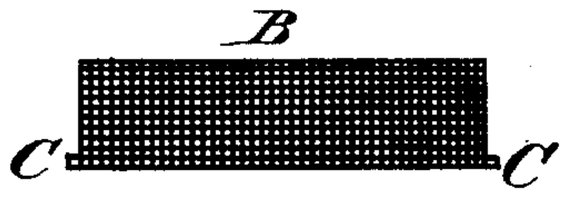


Fig. 5.



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CHARLES T. SCHRAMM, OF PONTOOSUC, ILLINOIS.

MACHINE FOR TREATING GRAIN.

SPECIFICATION forming part of Letters Patent No. 244,823, dated July 26, 1881.

Application filed January 12, 1881. (No model.)

To all whom it may concern:

Be it known that I, CHARLES THEODORE SCHRAMM, of Pontoosuc, in the county of Hancock and State of Illinois, have invented a new and useful Improvement in Machines for Treating Grain, of which the following is a specification.

Figure 1 is a side elevation of my improvement, the casing being shown in section. Fig. 2 is a front elevation of the same, the front casing being broken away. Fig. 3 is an elevation of the reverse side of the machine. Fig. 4 is an elevation of one of the bearings. Fig. 5 is a front elevation of one of the concaves.

Similar letters of reference indicate corresponding parts.

The invention consists in combining an air-flue and sliding screens, the flue provided with two openings and hinged plates, as hereinafter described.

A represents the casing of the machine. B are five concaves, which are made of perforated or corrugated iron or of steel-wire cloth. For hulling grain one or more of the concaves B can be made of emery. The concaves B have tongues or flanges C formed upon their ends to enter grooves D in the sides of the casing A, and thus support the said concaves in place. In each of the concaves B, except the lowest one, is placed an emery cylinder, E. In the lowest concave B is placed a brush-cylinder, F. The cylinders E F are placed upon shafts G, to which they are secured by set-screws H. The journals of the shafts G revolve in bearings I placed in boxes J secured to the sides of the casing A. K are screws which pass through screw-holes in the bottom of the bearing-box J, and have shoulders formed upon them to rest against the lower bearing I, so that the cylinders E F can be adjusted closer to or farther from the concaves B, as the work to be done may require.

The smaller parts of the screws K that pass through the bearings I have nuts upon their upper ends, so that the wear of the bearings I can be taken up by adjusting the said nuts. The front of the casing A is made separate to serve as a door, and is hinged at one edge to the edge of the side casing, so that the said door can be conveniently opened to give access to the interior of the machine. In the front of the casing A, below the first, third, and fifth concaves B, are formed openings L covered by screens to admit air. The two upper openings L are provided with slides M, so that the ingress of air through the said openings can be prevented when desired. In the front of the casing A, below the lowest opening L, is formed the discharge-opening for the grain, which opening is provided with a self-acting hinged air-valve N, which is opened by the flow of the wheat and is shut by the pressure of the air. In the rear side of the casing A are formed three openings, O, the two upper openings being provided with stationary screens and air-tight slides P, and the lower opening being provided with a screen, P′, to allow the air to pass from the interior of the machine into the air flue or trunk Q, secured to the rear side of the casing A, and opening at its upper end into the casing R of the fan-blower S. In the side of the casing R is formed an opening closed by a slide, T, so that the force of the draft of air through the machine can be regulated as required.

In the rear side of the air-flue Q are formed two openings, which are provided with hinged plates U, to serve as discharge-spouts or hoppers to receive the cheat and heavier refuse, and also the lighter kernels of grain, when grading grain, and to discharge them into receivers. The hinged hoppers or spouts U can be opened or closed, as may be required. Within the casing A, below the lowest concave B is placed an inclined screen, V, down which the grain passes to the discharge-opening, and which allows any emery-dust or particles of metal worn from the concaves B or cylinders E to escape. In the sides of the casing A, opposite the ends of the cylinders E F, are formed openings closed by slides W, to give access to the set-screws H for convenience in securing the said cylinders to and releasing them from the shafts G. To one end of the lowest shaft, G, is attached a pulley, X, to receive the driving-belt, and to the said end is also attached a pulley, Y, to receive a belt, which also passes around a pulley, Z, attached to the end of the fan-shaft for driving the fan.

To the ends of the shafts G, at the other side of the machine from the drive-pulley X, are attached pulleys *a* to receive the belt *b*, which

is passed around the said pulleys *a*, as shown in dotted lines in Fig. 3. The belt *b* also passes around a pulley, *c*, pivoted to bars *d* attached to the casing A adjustably, so that the tension of the belt *b* can be regulated as required. To the forward part of the top of the casing A is attached a hopper, *e*, through which the grain is introduced into the machine.

The machine is designed to be furnished with four metallic concaves and two emery concaves, and with five emery-cylinders and one brush-cylinder. In arranging the machine for work the cylinders are placed in the concaves and the concaves are slid into their places. The shafts G are then inserted and the cylinders secured to them by the set-screws H. For smutting, scouring, and polishing wheat, four metallic concaves and one emery concave, and four emery-cylinders and one brush-cylinder are used. For grading grain the two air-tight slides P are closed, and the sliding screen P′ and the hinged plates U are opened, so that the air-blast will carry the lighter kernels of grain into the air-flue Q, and allow them to fall into the spaces above the hinged plates U, and thus pass out into receivers. In hulling buckwheat and other grain, five emery-cylinders, three metallic concaves, and two emery concaves are used, and the lowest sliding screen P′ is opened.

I am aware that it is not new to use pairs of rolls arranged at different elevations about a central point and an inclined sieve below each pair of rolls.

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

The combination of the sliding screens P and the air-flue Q, the latter provided with two openings, and hinged plates or hoppers U, as and for the purpose specified.

CHARLES THEODORE SCHRAMM.

Witnesses:
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W. H. SCHRAMM.