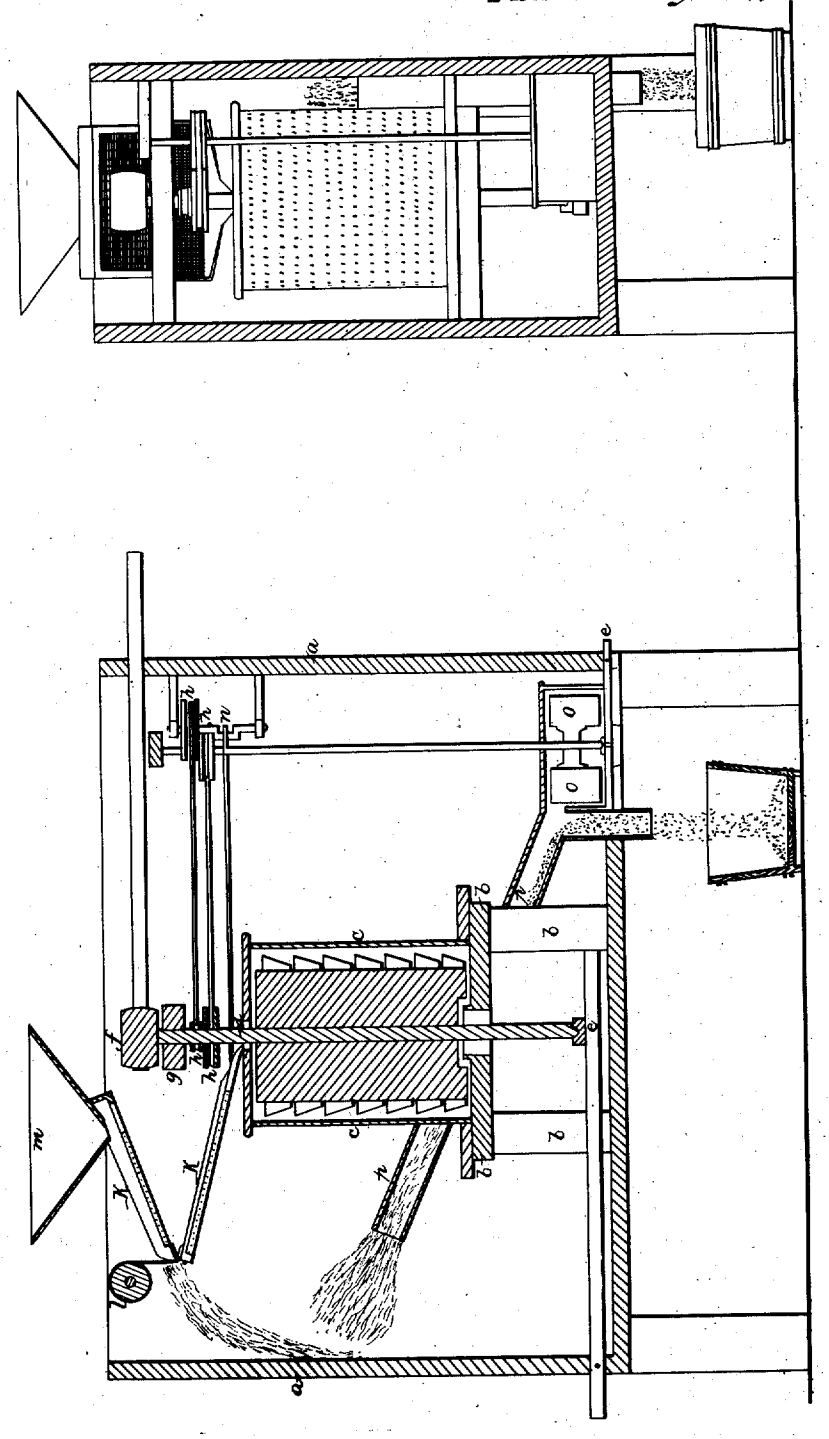
6720X

Weed & Fellows.

Smut Mill.

NO PRINTED SPECIFICATION AVAILABLE

Patented Aug. 23, 1831.



Aug 23 1831 6720X 471

Henry Wood & Stephen Fellows, of Sandwich New Hampshire

Letters Patent.

The schedule referred to in these Letters Patent and making part of the same containing a description in the words of the said Henry Wood, & Stephen Fellows themselves of their improvement in the common smutt mill or machine called the Improved portable Smutt Machine

To all to whom these presents shall come,

Be it known that we Henry Wood & Stephen Fellows both of Sandwich in the County of Strafford and State of New Hampshire, have invented a new and useful improvement in the common Smutt Mills or machine called the improved Portable smutt Machine, for the purpose of cleansing grain before grinding, and that the following is a full and exact description of the construction and operation of the said Machine as invented or improved by us.

1st, We form a box or chest of suitable boards or planks, with nails, pegs, or dovetails in the common way, It is four feet in length one and one half feet in width, with a depth of two feet nine inches, though these proportions may vary and be a little more or somewhat less, to accommodate the wish of the constructor, or to suit the exigencies of the case. The box or chest is supported upon pedestals, feet, or legs, about one foot long; upon one side is a movable door for the convenience of cleaning out the dust and chaff. The box may be covered when desired

2d, We then fasten with nails or otherwise upon the bottom and near the centre of said chest two blocks of wood about eight inches high and ten inches apart, we fasten upon the top of these blocks a board some larger than the diameter of the curve and cover the top of this board with sheetiron or some other suitable metallic substance we have a round opening in the centre of the above named board and iron about three inches in diameter, to receive the spindle of a cylinder, and to admit air into the curve, around this opening is raised a ridge or eminence to prevent the grain from wasting

3d, We then make a circular curve of sheet iron or other suitable metal

substance about fourteen inches high, and twelve inches in diameter perfectly
full of holes either square oblong or round from the circumference towards the
centre, so as to form sharp points or eminences upon the inside thereof, the
ends of which curve may be of a size, or the lower end may be the largest.
This curve is made to shut down upon the cover of the block aforesaid
& to preserve the ends round and keep them steady by means of a plank
cut circular to conform thereto, and extend to the sides of the chest. A cap
cover is made to said curve in two pieces with a hole through the centre
sufficiently large for the spindle of a cylinder & to receive the grain
from a receiver, and an opening is also made in one edge of the curve at the
bottom for the grain to pass out,

4th. We then form a cylinder of solid wood or otherwise to be placed within
the said curve as hereinafter described the lower end of
which cylinder is formed hollow with a rim on the edge for the purpose
of shutting down around the ridge or eminence above described. The circum-
ference of this cylinder, we then cover with tin, sheet iron, or other suitable
metallic, smooth or made rough like a grater, or in some cases it may be
without said covering, the cylinder is armed or roughened with metallic
heads, metallic stumps or other hard eminences about five inches long
and one inch wide at one end and about one half inch wide, at the other
and somewhat resembling the letter V, We then mark straight parallel lines
around the cylinder an inch apart, commencing within one inch from the
bottom, and insert the said metallic heads, stumps or eminences into the
same either at right angles thereto or slanting upon said marked lines
thus, (/) for the purpose of longer retaining the grain in the curve, so
that said heads &c. when placed would form diagonal lines, and project
out upon the cylinder, three fourths of an inch. Or that part of the said
heads, stumps, or eminences, which project from the cylinder and which
strike the grain, may be made rough somewhat like a rasp, several
nails driven in a cluster may answer as a substitute for the heads, stumps
or eminences. Or in another way we cover the cylinder with sheet iron or other
suitable metallic substance cut into oblong strips about one inch wide, so
that are one half inches long with the ends square or diagonaling as we

shape. about three quarters of an inch of one end, is bent outwards on a line parallel with the other end, forming an eminence and resembles the Letter L. the longest end is then confined upon the cylinder, so that when placed there and which are bent outwards gauge the same as the stump or eminence before described and may be roughened by punching if necessary.

5th. The other make an iron shaft or spindle about two feet six inches long and one inch in diameter, which passes through the centre of said cylinder, and extends out through the bottom about eight inches resting on a metallic cup or box placed in a bridgetree near the bottom of said chest; which bridgetree passes through one side of the chest and is used for the purpose of regulating the cylinder, the upper part of the shaft or spindle, is made to revolve in a block of wood called a "plummer block" extending across the chest near the top. Upon that part of the spindle which extends above the plummer block, we affix a wheel or drum for the purpose of carrying said machine with a band or belt, which wheel or drum, is four inches in diameter, one and one half inches thick, or of such a size as the speed requires. Upon said spindle we affix one wheel about two inches in diameter and one inch thick, and another immediately below and adjoining thereto, four inches in diameter, and one inch thick, both of which last mentioned wheels are between the said plummer blocks and cylinder close to the block.

The shaft together with the cylinder when completed must be placed perpendicularly in the centre of the curve leaving about one third of an inch space between the eminency of the cylinder and there of the curve.

6th. We have two small reins, one over the other fastened together and hung in such a manner that the upper or coarse one descends from the curve with the lower end open, the other descends towards the curve, the upper one receiving the grain from a hopper of common form, and retains the seeds which pass off into the chest, and prevents the grain to fall upon the second. The foul seeds pass through the second reins into the chest and the grain is conducted through the cap or covering of the curve.

The end of the reins frame nearest from the curve is hung with a strap or line fixed to a roller for the purpose of regulating the feed, the other end rest upon the cap or cover of the curve. These reins are shaken by a cam or

attached to a small crank near the end of the chest opposite to the fan
the arm of which crank is about one third of an inch long. Adjoining the
of this crank is a wheel four inches in diameter which receives and is ca
ried by a band from a wheel on the said cylinder shaft two inches
diameter.

2ly. We form a spout about three feet long which stands somewhat ob
agonally with the lower end placed so as to receive the wind from a p
with the under part shortest, to let the grain fall through the bottom o
the chest or it may be conducted out at the side. The spout then passes
up by the lower part of the curve with a hole in one side opposite the op
ing in the curve for the purpose of receiving the grain, it then continues
about five feet through which the chaff is blown into the chest.

3ly. We also make a curve for a fan about eight inches in diameter
and four inches deep and place it perpendicularly upon the bottom
of the chest at the end opposite the sieve, near the corner, through the
bottom of the chest, in the centre of this curve is made a circular hole t
inches in diameter to admit air into the curve, In this curve upon th
edge near the top is made an opening corresponding with the spout
Also we have a fan as large as will operate in this curve made o
wood or sheet iron attached to a wooden or iron shaft, which stands p
allel with the spindle of the cylinder, and has a wheel near the upper
about four inches in diameter, and one inch thick to receive a belt tha
passes around a wheel on the spindle of the cylinder of the same si

This shaft or spindle rests upon a bridge tree affixed to the bott
of the chest and revolves therein and at the top it is fastened simil
to that of the cylinder, The curve of the fan, is covered with a board m
in two pieces. What we consider new in said Machine a
for which we ask an exclusive privilege is, Firstly placing the mach
in a chest, Secondly the shape of the heads &c. Thirdly in making them
rough, Fourthly the manner of placing them in the cylinder, Fifthly
the driving of the nails in clusters, Sixthly the cutting of the sheet iro
&c into strips and making them rough like a rasp or grate.

Advantages. What we consider as advantages derived this machi

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possessing above the common exact Machines, are the following.

Firstly — The saving of expense — secondly, it takes less power to operate the same — Thirdly. in leaving the dust retained in the chest, Fourthly it is smaller and more portable, Fifthly, it may be put in operation with a belt by almost any other machinery with very little expense.

Sandwich April 26th A.D. 1831. —

Witness
N. G. Norris
Aaron B. Hoyt

Henry Reed
Stephen Fellows

1890 nov

C?
C.J.W.