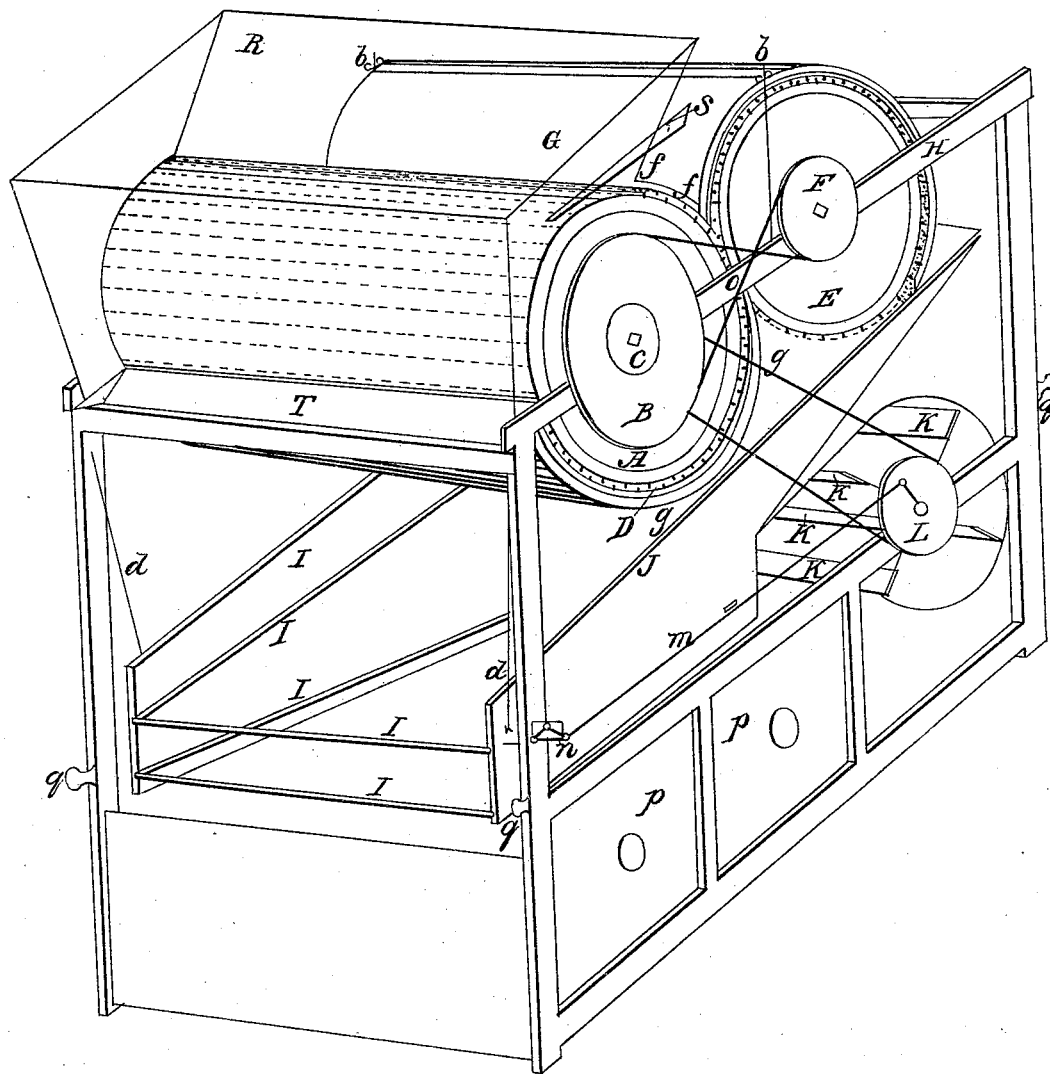


P. COOK.  
Clover Huller.

No. 2,423.

Patented Jan'y 17, 1842.



# UNITED STATES PATENT OFFICE.

PETER COOK, OF WESTFIELD, NEW YORK.

## CONSTRUCTION OF MACHINE FOR CLEANING GRAIN, &c.

Specification of Letters Patent No. 2,423, dated January 17, 1842.

*To all whom it may concern:*

Be it known that I, PETER COOK, of Westfield, county of Chautauqua, and State of New York, have invented a new and Improved Mode of Hulling and Cleaning Clover Seed; and I do hereby declare that the following is a full and exact description of the construction of the machine and the operation of the same, reference being had to the annexed drawings, making a part of this specification in which a perspective side and end view is given of the machine. The frame is three feet two inches high, four feet long, two feet four inches wide. "A," is the main cylinder lying horizontally across, and perpendicular to the frame of the machine twenty inches in diameter, twenty-three and a half inches long, built on an iron shaft, one and a half inches square and three feet long, heads of cylinder of wood three inches in thickness and covered longitudinally with lays or staves two inches thick and all of hard wood, covered with sheet-iron through which are driven iron spikes one and three-fourths inches long, three-eighths inch wide and one-fourth inch thick, in latitudinal rows, three-fourths of an inch apart and two inches between the spikes in rows. The spikes projecting three-eighths of an inch from the surface-journals of the said shaft are four inches from each end, two inches long resting on metal boxes 15 inches from the end of the frame; the main driving pulley three inches thick, nine inches in diameter on the end of said shaft opposite the view hereto annexed and outside the journal thereon to which pulley the power is applied.

"B," is a driving pulley fourteen inches in diameter and two inches thick on the end of the shaft of cylinder "A," outside the journal (and a smaller pulley "C" herein-after mentioned) giving motion to cylinder "E," by cross belt from pulley "B" around pulley "F."

"C," is a driving pulley four inches in diameter on the end of the shaft of cylinder "A," outside the journal and inside of pulley "B," giving motion to fan "K," by a belt from pulley "C," around pulley "L."

"D," is a concave of ten and a half inches radius two feet long under cylinder "A," made of two inch plank lined with sheet iron, through which iron spikes are driven meshing with rows on cylinder "A," and is

fastened with screws at "a," "a," to the frame through the lips of circular plates of iron "g," "g" on each end of concave.

"E" is a cylinder sixteen inches in diameter twenty-three and a half inches long, built in like manner and like materials as cylinder "A" parallel to cylinder "A" nineteen inches from its center to that of "A," resting on a shaft with journals and boxes the same as that of cylinder "A."

"F," is a swinging pulley on the end of the shaft of cylinder "E," outside the journal receiving the said cross belt from pulley "B."

"G" is a concave plane over cylinder "E," two feet long, with a radius of eight and a half inches made in two parts parting at "H" the lower piece "s" eight inches wide and extending down to the shoe "J," "J," the upper piece extending from H, over cylinder E to within two inches of the top of the frame between cylinders A and E, constructed of like materials and in like manner with concave D and performing a similar office over cylinder E, to concave D, under cylinder A, and is supported at "H," "H" by lips of the circular plate of iron on the ends of the concave turned outward and screwed to the frame, and further supported, and graduated by the rods "b," "b," perpendicular to the frame running through a lip of iron on the concave with a thumb screw above and a nut below. It also has sheet iron heads to confine the dust.

J, J, is the shoe, (containing two screens) twenty inches wide and four feet long with grooves inside to receive the screws and suspended under the cylinders A and E, with an inclination of two inches to the foot, by means of a hook and staple at the center of the back upper end to the center of the cross girt of the frame back of cylinder "E" and by two wires "d, d," with hooks and staples at the ends of the wires, having a vibratory motion of two and a half inches at the lower end. I, I, are two screens one of them nineteen inches wide and twenty-eight inches long and shoved into grooves in the shoe three and a half inches from the upper edge of the shoe, the other of them nineteen inches square and shoved into grooves in the shoe three inches and a half below the upper screen at the lower end and five and a half inches from the upper screen

at the upper end of lower screen. Screens made of wire cloth twelve meshes to the inch.

"K K K K" are wings of the fan which is made on a wooden shaft two inches square banded at the ends and running on iron journals in metal boxes on the side girts of the frame. The fan is twenty inches long lying under the back end of the shoe and parallel with the cylinders and inclosed in a shell or curbs except the side next the back ends of the screens where there is an aperture of five inches deep and twenty inches wide through which the wind passes between and below the screens.

"L" is a receiving pulley six inches in diameter one inch and a half thick placed on the end of the shaft of the fan outside the journal, receiving the belt from the driving pulley "C." On the outside of pulley L is the crank screwed on to the end of the shaft J of the fan K, which by means of the connecting rod "m," and elbow "n" with a hook "o" fastened to the other arm of the elbow running through the leg of the frame and fastened to the lower end of the shoe by a staple, gives the vibratory motion above mentioned.

"p p" are boxes to receive the clover seed ten inches square and twenty-six inches deep each.

"q q q" are handles of the machine.

"R," is the hopper where the machine is fed two feet long fourteen inches high and twenty inches broad with slide "s" running the whole width of the hopper to graduate the feed.

At "T," is a depression or angular sink running the whole length of cylinder "A" formed by turning from the cylinder "A," the sheet iron lining of concave "D" to an angle of 45° depression with the cap of the frame the edge nearest the cylinder being the highest and one-half inch from the surface of the cylinder, it being 4 inches from that edge to the lower angle of the sink. The lower angle of the sink is formed by the portion of sheet iron turned from the cylinder and the front side of the hopper

extending down to the lower edge of the said portion of sheet iron and with it making an acute angle, which depression or angular sink is wholly below the throat of the machine, into which any hard or heavy substance which may come in contact with the teeth of the machine will by the centrifugal force of the cylinder be thrown and thus remain without further endangering the safety of the machine.

The hopper "R," is fastened to the frame by hooks and staples and the sides extend back to the center between cylinders A, and E, and is cut circular from "f to f," on to which circle is sprung a board forming a curb for the back of the cylinder "A," from f to f.

The operation of the machine is such that it may be driven by horse or other power as convenience may require and can easily be removed from place to place. The chaff or hull which contains the seed is put into the hopper "R," and passes between the cylinder "A" and concave "D" and over the cylinder "E" between it and concave "P," by which the seed is disengaged from the chaff or hull, so as to separate easily as it passes over and through the screens "I, I," when the wind from the fan "K" blows off the chaff and dust and the clean seed is deposited in the boxes "p" "p" the motion of cylinder "A," should equal eight hundred revolutions per minute.

What I claim as my improvement and invention and desire to secure by Letters Patent is—

The combining of two hulling cylinders the concaves of which are arranged as set forth (viz. under one cylinder and above and partly surrounding the second cylinder) with a fan and shoe containing one or more screens in the manner set forth, said cylinder being plain in a horizontal position over the shoe and constructed of unequal diameters as described.

PETER COOK.

Witnesses:

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