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SPECIFICATION AVAILABLE

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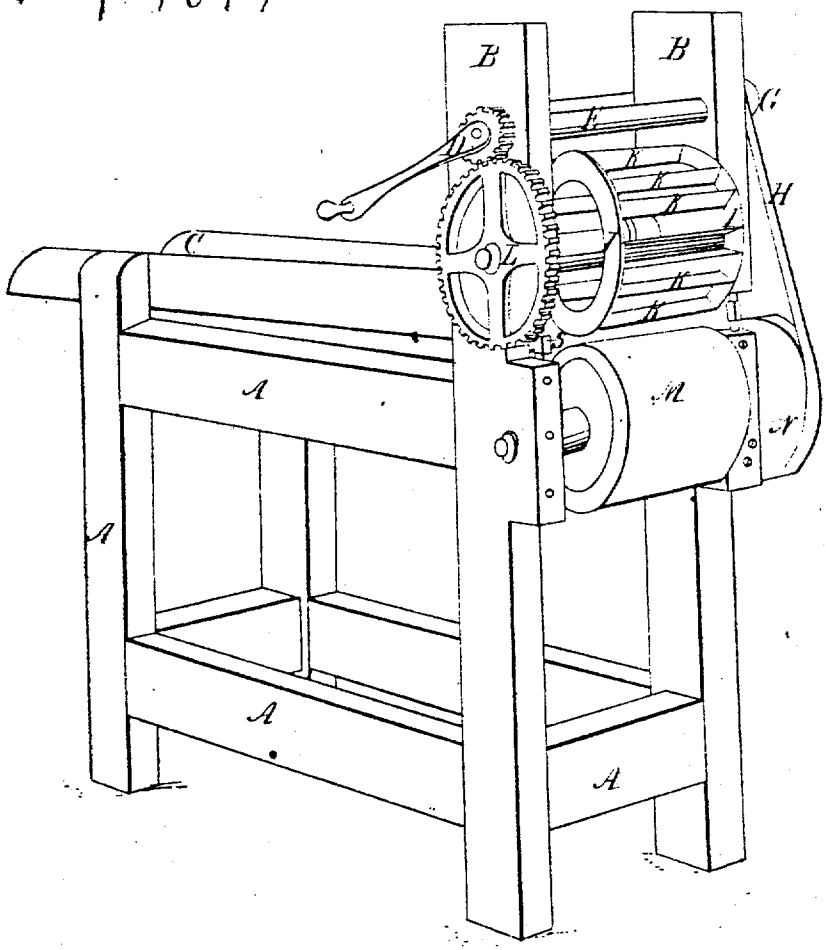
B. R. Greene.

Straw Cutter.

X 83/346

Patented Aug. 8, 1833.

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W. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

1701X Aug 8, 1833

Benjamin R. Greene of Warwick R. Island.
Letters Patent

The Schedule referred to in these Letters Patent making part of the same containing a description in the words of the said Benjamin R. Greene himself, of his improvement in the machine for cutting straw &c.

Be it known that I Benjamin R. Greene of Warwick in the County of Kent, State of Rhode Island Providence plantations, have invented a new useful machine for cutting or chopping straw hay or other articles for horses, other cattle, that the following is a full exact description of the construction operation of said machine reference being had to the drawing thereof hereto annexed.

AAAA represent the frame of the machine which can be raised at the pleasure of the maker or owner. BB are two upright posts in said frame, upon which are secured the braces of the axles or gudgeons, of the cylinder, hereafter described. Between these posts the trough is secured, which conveys the substance to be cut or chopped to the knives. C. is the trough. D. the crank on the outer side of one of the posts B. by which motion is communicated to the machine.

E. the pinion or axle of the crank, extends thro both said posts BB — on the outer side of one of said posts next the crank is a small cog wheel F. fastened to said axle, or pinion turning with it. on the other end of said axle or pinion, on the outer side of the other post is a small blank wheel G. made fast to said axle or pinion, also turning with it over which passes a band H. giving motion to another blank wheel N. on the pinion or axle of the leaden cylinder, hereafter described, giving motion to said cylinder. The object use of these wheel, band, is to give to said leaden cylinder a motion either faster or slower, than the motion of the cylinder hereafter described, on which the knives are fastened, in order that said knives may not continue to come in contact with said leaden cylinder, at the same points of its circumference, as the machine is operated.

II. represent the rims or edges, of a cast iron wheel or cylinder, in which are inserted the knives KKKKK, in number proportioned to the circumference of said wheel or cylinder, viz the fewness with which it is desirable, to cut the straw hay or other substance. The edges of these knives project, say one eighth of an inch, beyond said

wheels or cylinder, twenty in width to insure sufficient strength, according to the size of the machine. They extend lengthwise of said cylinder, or from wheel to wheel, & are held firm at each end, by clasp bolts, or otherwise.

The sides of the knives, are in right lines from the circumference of said wheels or cylinder, to the center of the axle of said wheels or cylinder. Their edges are ground with a bevel forward, the side where they first meet the substance to be cut.

These wheels or cylinder, moves between said posts BB. the axle, passing thro' boxes attached to them - outside the post next the crank on said axle, is a cog wheel D playing into and receiving its motion from the small cog wheel E attached to the axle of the crank, as before described - M represents another cylinder, covered with lead, the axle of which, passes thro' the slide boxes c.c. attached to the posts BB. — .

The surface of this cylinder, in the operation of the machine must be kept against the edges of the knives, in the other cylinder. It is drawn & held in its proper position by the screws SS - The upper ends of these screws turn in & bear against the boxes of the axle of the wheels, or cylinder II. & the lower ends screw into nuts, in the boxes of the cylinder M. The object & use of these screws, is to draw the two cylinders together when their surfaces are worn away, by the operation of the machine & their diameters diminished. The straw, hay, or other substances, to be cut, passes between these cylinders, & in its passage, is cut into pieces of the length of the distances between the knives. The knives are taken out when they are to be ground -.

The advantages of this machine, over machines made for the same purpose, are the ease with which it is operated, the facility with which any quantity of hay, or straw may be cut - the length of time, it may be used, without needing to be ground or sharpened, the edges of the knives, never coming in contact with one another, but only with a soft metal & the substance to be cut, but more than all, in the fact that in case a stone or other hard substance, concealed in the substance to be cut, is brought in contact with the knives it will injure only a small part of the machine & the owner by inserting a new knife in place of the one injured is delayed in this operation but a very short time, or he can continue his operation without that, the effect of that injury being only to let the substance to be cut, pass the injured knife without being severed - What I claim as new & as my own invention in the above described machine & for the use of which I ask an exclusive privilege, is the construction of machine for cutting or chopping straw or hay for cattle &c. &c. having the knives

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inserted in or fastened to the circumference of a cylinder revolving on its own axis, the cutting edge of said knives coming in contact with the circumference of another cylinder of lead or other soft metal, revolving on its own axis, cuts or severs the substances passing between them, the surfaces of these cylinders being held in contact by side bows, screws, &c drawn together by the same means, when worn away, by use.

Witnesses
Charles F Searle
William R. Staples

Benjamin R Greene

1173 mdn

Or in portfolio

Exd