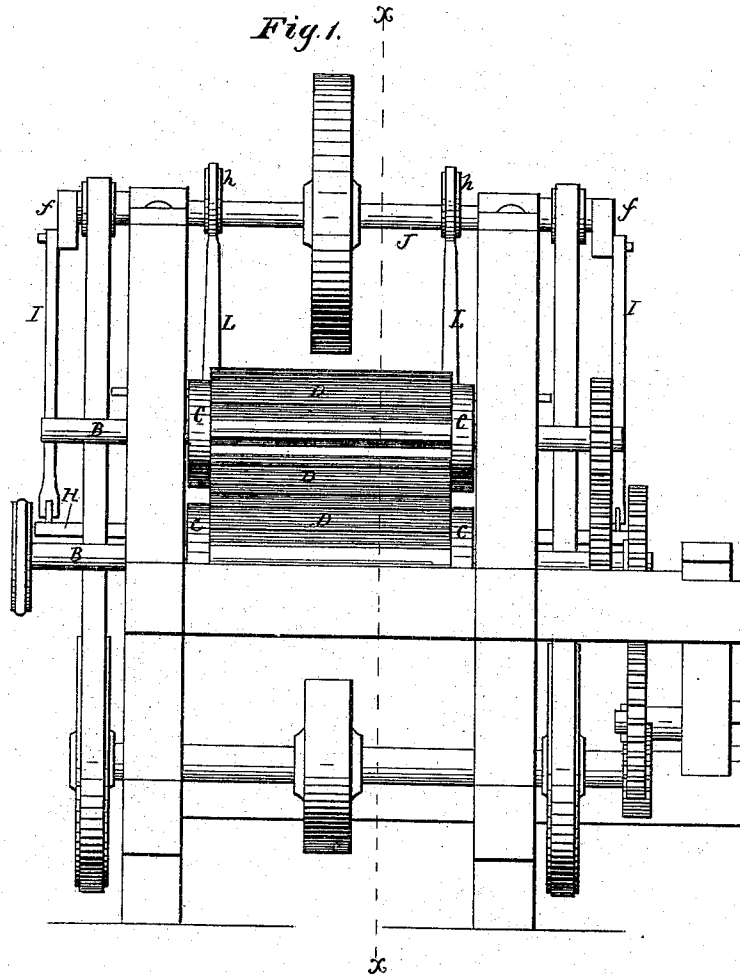


L. E. BURDIN.
HEMP AND FLAX BRAKE.

No. 178,110.

Patented May 30. 1876.



WITNESSES

Henry N. Miller
F. L. Curand

INVENTOR

L. E. Burdin.
By *Alexander Mason*
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Fig. 2.

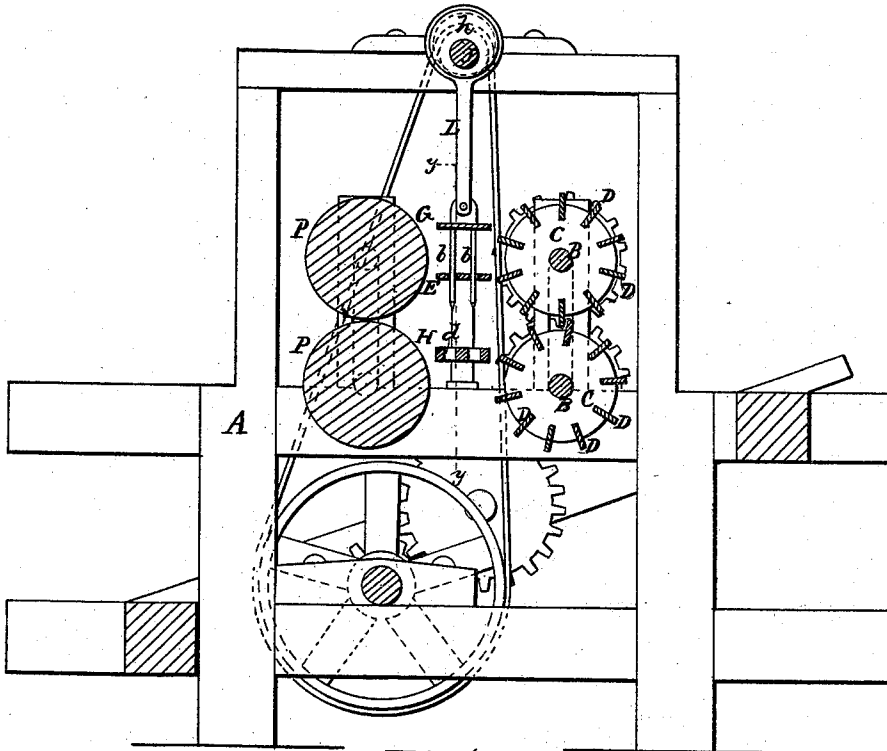
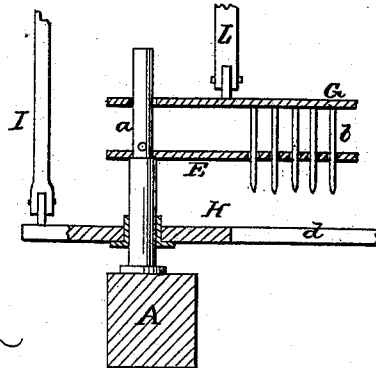


Fig. 3.



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UNITED STATES PATENT OFFICE

LUTHER E. BURDIN, OF PARIS, KENTUCKY, ASSIGNOR OF ONE-HALF HIS
RIGHT TO R. M. KENNEY, OF SAME PLACE.

IMPROVEMENT IN HEMP AND FLAX BRAKES.

Specification forming part of Letters Patent No. **178,110**, dated May 30, 1876; application filed
April 11, 1876.

To all whom it may concern:

Be it known that I, LUTHER E. BURDIN, of Paris, in the county of Bourbon and in the State of Kentucky, have invented certain new and useful Improvements in Hemp and Flax Brakes; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a machine for breaking and cleaning hemp and flax, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a front elevation of my machine. Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is a detailed section of a part thereof.

A represents the frame of my hemp and flax breaking machine, constructed in any suitable manner to contain the various working parts. At each end of this frame there will, in a full-sized machine, be an endless revolving apron, the one at the front end for feeding the material into the machine, and the one at the rear end for discharging the lint. As the hemp or flax is carried in by the apron at the front end of the machine it is caught between two hollow breaking-cylinders, each of which is composed of two solid heads, C C, secured upon a shaft, B, and having a series of metal bars, D D, inserted radially in said heads, and connecting the same, said metal bars being of such width as to leave a suitable space between their inner edges and the central shaft B, and also leaving suitable spaces between the bars, thus forming a hollow cylinder. These cylinders are placed one above the other, and connected and operated by suitable gearing.

The hemp or flax, while passing between these hollow rollers, gets broken, and the hurds fall through the hollow rollers, while

the lint passes onward under a stationary perforated plate or board, E, secured at its ends to two upright posts, *a a*. Above this board E, on the posts *a*, is a vertically-reciprocating board, G, provided on its under side with two or more series of pins, *b b*, which extend vertically downward through the perforations in the board E. Below the stationary board E on the posts *a a* is a pressure-board, H, provided with longitudinal slots *d d*, corresponding in number with the number of rows of pins in the pin-bar G. The pressure-bar H is connected at each end by a pitman, I, with a crank, *f*, on the end of a shaft, J, having its bearings in the top of the frame A. On this shaft is a fly-wheel, K, and also two eccentrics, *h h*, which latter are, by bars L L, connected with the pin-bar G. The cranks *f* and eccentrics *h* are set in opposite directions, so that the two bars G and H will always move in opposite directions—or, in other words, they will always simultaneously move toward the stationary bar E, and simultaneously move away from it.

As the lint passes from between the hollow breaking-cylinders under the stationary bar E, the pressure-bar H ascends, pressing and holding the lint against the under side of said perforated bar E. At the same time the pin-bar G descends, and the pins *b*, puncturing the lint, remove the hurds remaining therein. The bars G and H then move away from the stationary bar E, when the lint is discharged between two smooth rollers, P P, onto the discharge-apron at the rear end of the frame.

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

1. In a machine for breaking and cleaning hemp and flax, the hollow breaking-cylinders, composed of the heads C C, secured upon a central shaft, B, and connected by the radially-inserted plates or bars D, in combination with the perforated fixed bar E, and reciprocating pin-bar G, all constructed substantially as and for the purposes herein set forth.

2. The stationary perforated bar E, the re-

reciprocating pin-bar G, and the slotted reciprocating pressure-bar H, in combination with the stock-crushing device of a hemp or flax breaking machine, substantially as and for the purposes herein set forth.

3. The combination of the shaft J, provided with eccentrics *h h* and cranks *f f*, the connecting-bars L L, pin-bar G, pitmen I I, and pressure-bar H, all substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 11th day of April, 1876.

L. E. BURDIN.

Witnesses:

M. L. STOWELL,

H. A. HALL.