J. Leinweber.

Carding Mach.

No. 54,375. Patented May 1, 1866.

Fig. 1.

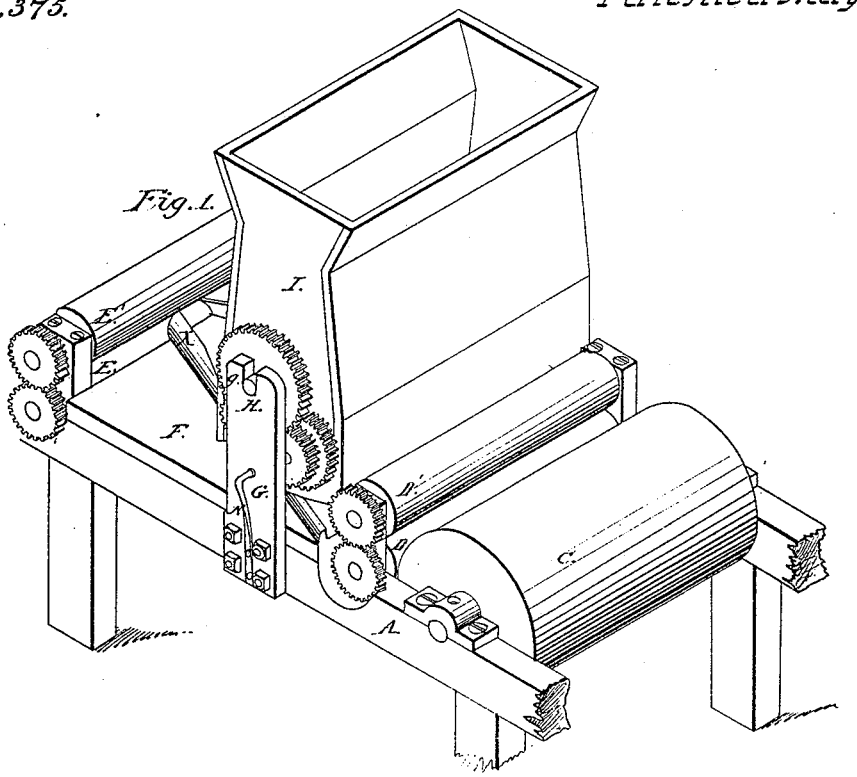
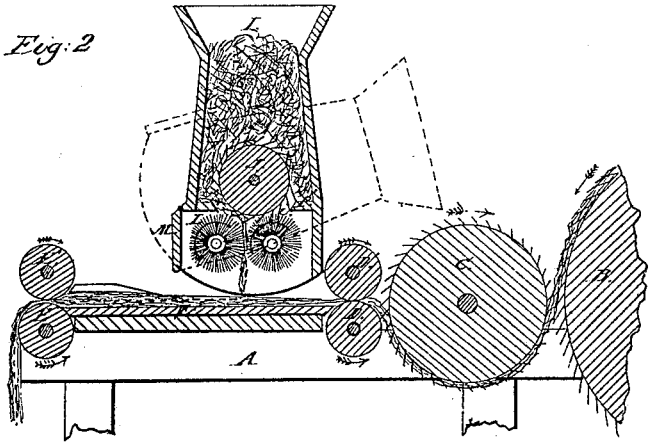


Fig. 2



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UNITED STATES PATENT OFFICE.

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JOHN LEINWEBER, OF LOUISVILLE, KENTUCKY.

MACHINE FOR ENVELOPING HEMP OR FLAX WASTE WITHIN A SLIVER OF LONGER STAPLE.

Specification forming part of Letters Patent No. **54,375**, dated May 1, 1866; antedated December 12, 1865.

To all whom it may concern:

Be it known that I, JOHN LEINWEBER, of Louisville, Jefferson county, Kentucky, have invented a new and useful Mode of Utilizing Hemp-Waste; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

The manufacture of hemp and flax is accompanied by the disengagement of a vast amount of flocculent matter, consisting for the most part of short filaments of the staple. This matter, although regarded as worse than useless, would greatly benefit the ordinary staple if incorporated into its substance, because of its superior richness in the glutinous principle on which the strength of hempen and flaxen fabrics mainly depends. This incorporation it is the object of the present invention to effect.

Figure 1 is a portion of a hemp-carding machine provided with my improvement. Fig. 2 is a transverse section of the same.

A represents a portion of the frame-work on the delivery side of a hemp-carding machine. B is a portion of the main card. C is the doffer. D D′ are the take-off rollers. E E′ are the delivery-rollers. F is the table which supports the sliver on its passage from the take-off to the delivery-rollers.

The above parts may be those of an ordinary carding-machine.

Attached to and rising from the main frame are standards G G′, having at or near their upper ends notches *g*, or other suitable bearings for a horizontal shaft, H, which upholds and forms a center for turning the hopper I when desired, having near its bottom a diaphragm, I′, which has an oblong aperture or slot *i*. That portion of the shaft which is within the hopper carries a cylinder, J, whose periphery is armed with teeth *j*, similar to those of a card.

Journaled horizontally in the hopper I are two cylindrical brushes, K L, of which the brush K is situated in contact with and more immediately under the cylinder J, so as to sweep the teeth thereof, while the brush L is so situated as to coact with the brush K.

The cylinder J may be eleven inches in diameter between the outer ends of the teeth, the brushes K and L being eight inches diameter.

The cylinder J is rotated in direction of the arrow at the rate of thirty revolutions per minute, the brushes K and L being rotated, as per arrows, at the rate of sixty and one hundred revolutions per minute, respectively.

M is a door, which, being lifted, enables the attendant to inspect the brushes and remove any obstructions.

The entire hopper I may be tilted into the position indicated by dotted lines in Fig. 2, so as to enable a thorough examination and cleansing of the operative parts. A catch, N, holds the hopper to its vertical position when at work.

Operation: The feeding mechanism having been set in motion and the hopper I charged with flock, small portions of the latter are continually caught, distributed, and drawn downward by the feeding-cylinder J, from whose teeth they are swept by the brush K, whence they are removed by the rapidly-rotating brush L, and are scattered loosely upon the upper surface of the sliver, whose edges are curled upward and over by means of the funnel-shaped guide, (marked X,) completely enveloping the flock, which thence passes forward in the form of a thin strand or core in the center of the roving.

I have selected for illustration the form which practical test has proved to be effective, but do not desire to restrict the invention to the precise arrangement herein described, as various modifications are possible. For example, the flock feeding and distributing mechanism may be applied at some part of the card on the feed side of the taking-off rollers, and any approved form of feeding and distributing mechanism may be used that will scatter the flock in the requisite equable and attenuated condition upon the surface of the web, lap, or sliver.

I claim herein as new and of my invention—

1. The mode of enveloping the waste of hemp or flax in a sliver of the longer staple, substantially as set forth.

2. The provision in or attachment to a hemp or flax carding machine of the flock feeding and distributing mechanism I J K L, substantially such as described.

3. The flock-feeder capable of being partially rotated upon the shaft H for access to the delivering mechanism, in the manner explained.

In testimony of which invention I hereunto set my hand.

JOHN LEINWEBER.

Witnesses:
JOHN M. SMITH.
GEORGE DIBBLE.