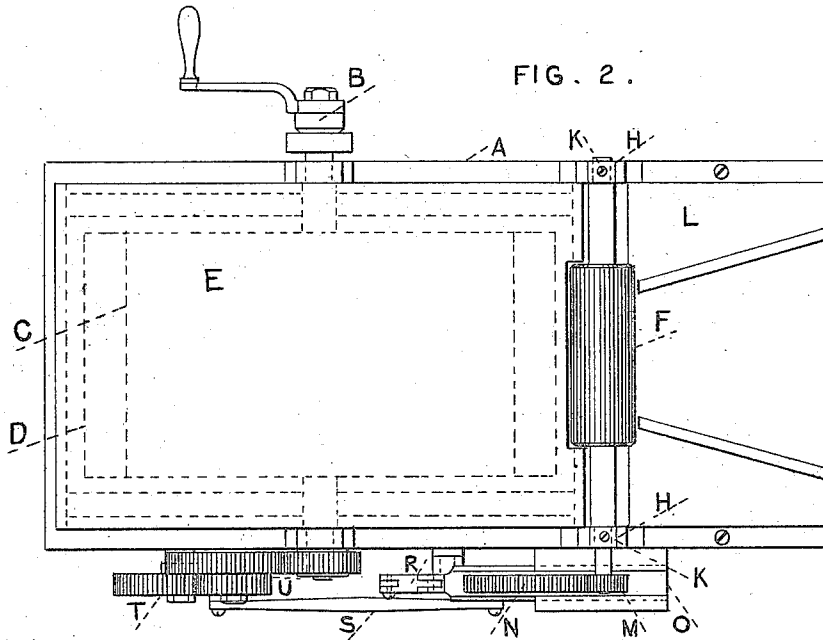
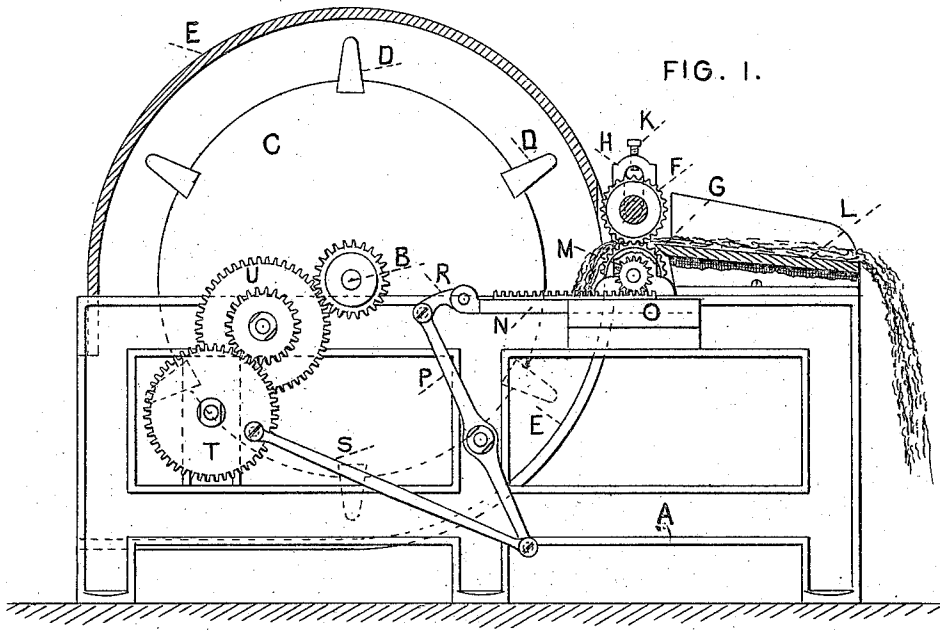


J. STEWART.
FLAX AND HEMP MACHINE.

No. 172,519.

Patented Jan. 18, 1876.



WITNESSES.
Charles Hall
Boyd Elvst

John Stewart

INVENTOR.

UNITED STATES PATENT OFFICE.

JOHN STEWART, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN FLAX AND HEMP MACHINES.

Specification forming part of Letters Patent No. **172,519**, dated January 18, 1876; application filed June 18, 1875.

To all whom it may concern:

Be it known that I, JOHN STEWART, of Brooklyn, county of Kings and State of New York, have invented certain Improvements in Machines for Dressing Flax, Hemp, &c., of which the following is a specification:

This invention has for its object the dressing or cleaning of fibrous materials, as flax, hemp, &c., after leaving the brakes; and the invention consists in the use of a reciprocating set of feeding or guiding rolls, with a continuously-revolving beating-cylinder, by which the broken shives are driven or beaten from the lint, as will hereinafter appear.

Figure 1 is a side elevation of the machine, and Fig. 2 is a plan view of the same.

The frame, as at A, is preferably made of iron, and upon it, in suitable bearings, is mounted a shaft, as at B, which carries the beating-cylinder C, which is merely a plain cylinder, either of wood or metal, which is provided with a number of beaters, as at D, which consist of ribs of hard wood, or other similar substance, placed parallel to the axis of the cylinder, and whose outer edges extend out from the surface of the cylinder, to serve as beaters in a corresponding concave that nearly surrounds the cylinder, as shown at E. Said beaters revolve in close proximity to a pair of guide-rolls, as at F and G, mounted in suitable housings, as at H, which are furnished with set or binding screws, as at K, for pressing the rolls together, there being some kind of elastic boxes or caps between the journals of the upper roll and the set-screws, to compensate for the unequal thickness of the material as it is fed to the machine from a table, as at L, which also has converging sides to convey the broken flax, &c., toward the center of the machine or the beating-cylinder, as shown at Fig. 2. Said rolls are furnished with fluted surfaces, fitting into each other as toothed wheels, so that they revolve together, and the lower roll has upon a projecting end of its axis a small pinion, as at M, all which receives motion from a toothed rack, as at N, which is fastened upon a plate that works in a dovetailed groove in a bracket, as at O, that projects from the

frame, and is attached thereto. Said rack receives motion from a vibrating lever, as at P, which is pivoted near its center to one side of the frame, and one end of said lever is attached to the rack-plate by a link, as at R, and the other end is connected to a crank-pin by a rod or bar, as at S, said pin being mounted upon the outer face of a gear-wheel, as at T, which engages with a pinion on the shaft of the beating-cylinder through suitable intermediate gearing, as at U, for reducing the speed, it being necessary that the said beater shaft or cylinder should make a great many revolutions to the one of the crank-wheel, or to each reciprocation of the rack, as at N.

Now, it is evident that as the rack is caused to reciprocate, the feed or guide rolls will also alternate their motion, first carrying the material forward and into contact with the beaters on the cylinder, and between them and the concave, and then by a reverse motion withdrawing it, and so on, acting until the operation is completed.

As the action of the feed-rolls is as great in one direction as the other it will be found at times quite convenient to feed the material forward at an angle to the axis of the rolls, so that when the beaters sweep it down in the concave it will not be entirely withdrawn from the machine by reversing the motion of the rolls, and for this reason the sides of the table are greatly inclined, and so also that two persons may attend the machine at the same time.

I therefore claim—

1. In a flax or hemp dressing machine, the combination of a pair of reciprocating feed-rolls with a continuously-revolving beating-cylinder, substantially as described, and for the purposes set forth.

2. The combination, with the upper feed-roll F and the lower feed-roll G, having the pinion M, of a rack and its lever, the beating-cylinder, and suitable intermediate gearing, substantially as described.

JOHN STEWART.

Witnesses:

CHARLES WALL,
BOYD ELIOT.