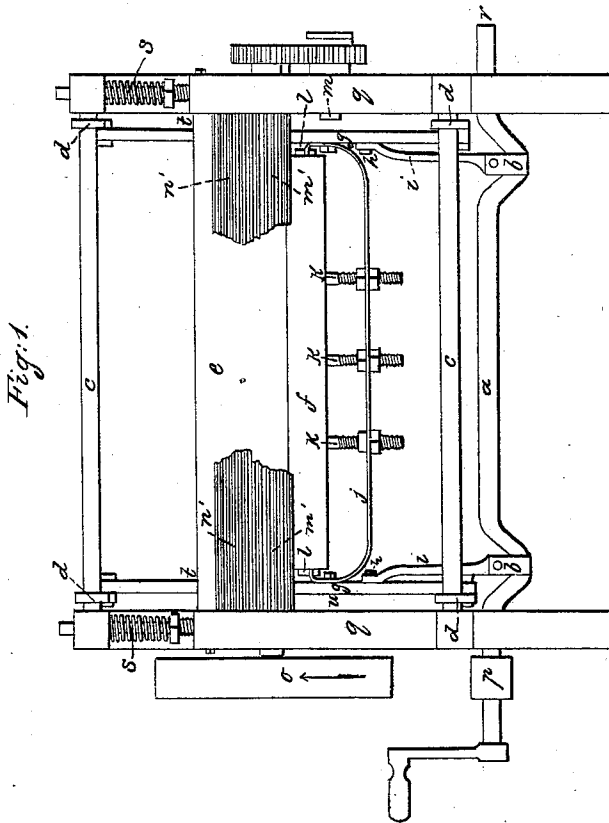
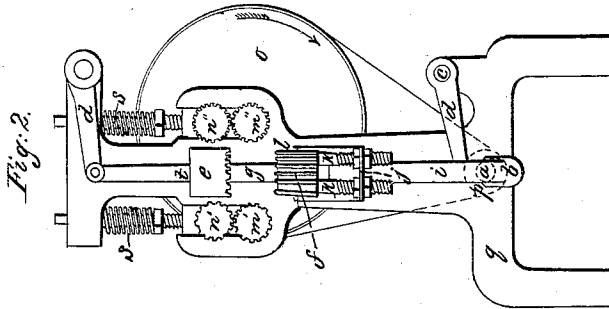
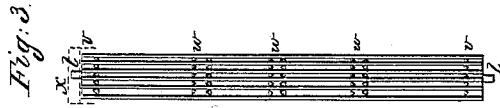


O. S. LEAVITT.

Hemp Brake.

No. 10,033.

Patented Sept. 20, 1853.



UNITED STATES PATENT OFFICE.

O. S. LEAVITT, OF MARCELLUS, NEW YORK.

IMPROVEMENT IN HEMP-BRAKES.

Specification forming part of Letters Patent No. 10,033, dated September 20, 1853.

To all whom it may concern:

Be it known that I, OLIVER S. LEAVITT, of Marcellus, in the county of Onondaga and State of New York, have invented a new and useful Improvement in Machines for Breaking Hemp and Flax; and I do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a front elevation; Fig. 2, a longitudinal sectional view, and Fig. 3 a top view, of the part of the machine called the "beater"—the same letters referring to like parts in the several drawings.

My improvement consists in machinery by which a sheet of hemp or flax straw is passed lengthwise, from a feed cloth or table placed before the machine as desired, beneath a beam fluted on the lowerside, first coarser and growing gradually finer, while a beater composed of a number of blades corresponding with the number of flutes in the beam, resting on a spring, is made to strike rapidly into the grooves of the fluted beam, the blades standing upon their edges, and fastened together in such manner as to allow the shives to fall freely through the spaces between them.

The driving-shaft *a*, with cranks *b b*, is connected by pitmen *i i* with the upright pieces *g g*, which, by the motion of the cranks, carry the beater *f* up and down, connected with the spring *j* by the pieces *k k k*, said spring being made of spring-steel or other elastic metal and connected with the pieces *g g* by bolts, which pieces are attached at each end to arms *d d d d*, connected to two rock-shafts, *c c*. The beater *f*, as it rises by the action of the cranks, strikes the material—hemp or flax—impressing it into the grooves or flutes on the lower side of the beam *e*, which is firmly attached by bolts to the frame *q q*, and which contain openings at

t t for the passage of the pieces *g g*, the two pairs of fluted rollers *m' n'* and *m'' n''* being left open in the center to show the position of other parts in Fig. 1, which rollers are for the purpose of passing the hemp or flax under the piece *e*, which rollers may be geared to the desired speed by connection with the shaft *a* by a belt running over the pulleys *p o*, or otherwise, said rollers being connected by gearing at the ends. The beater *f* is kept in its true position by the pieces *l l*, working in the slides attached to the pieces *g g*. The spiral springs *s s* are for holding down the top rollers. The blades of the beater are fastened together by bolts or rivets, as at *u u w w w*, Fig. 3.

The dotted lines at X show the position of the end of the spring *j* and slot for the guide *l*. Blocks of various thickness are placed between the slats of the beater or blades, being farther apart at the left hand, or those where the flax or hemp straw is first acted upon, and approaching closer together toward the right, the rollers being so geared as that the material shall in its passage receive as many blows from the beater as may be found necessary.

I do not claim as my invention the beating of flax or hemp straw into grooves for the purpose of divesting it of the shives or woody portion thereof, or the use of rollers for moving the material to be broken, as that has been done before; but

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

The combination of a reciprocating beater with parallel blades set at decreasing distances from each other, with a fixed bar fluted or serrated to correspond with the blades and spaces of the beater.

OLIVER S. LEAVITT.

Witnesses:

CHESTER MOSES,
GEO. N. KENNEDY.