T. H. MURPHY.

HEMP BRAKE.

No. 36,667. Patented Oct. 14, 1862.

Fig: 1

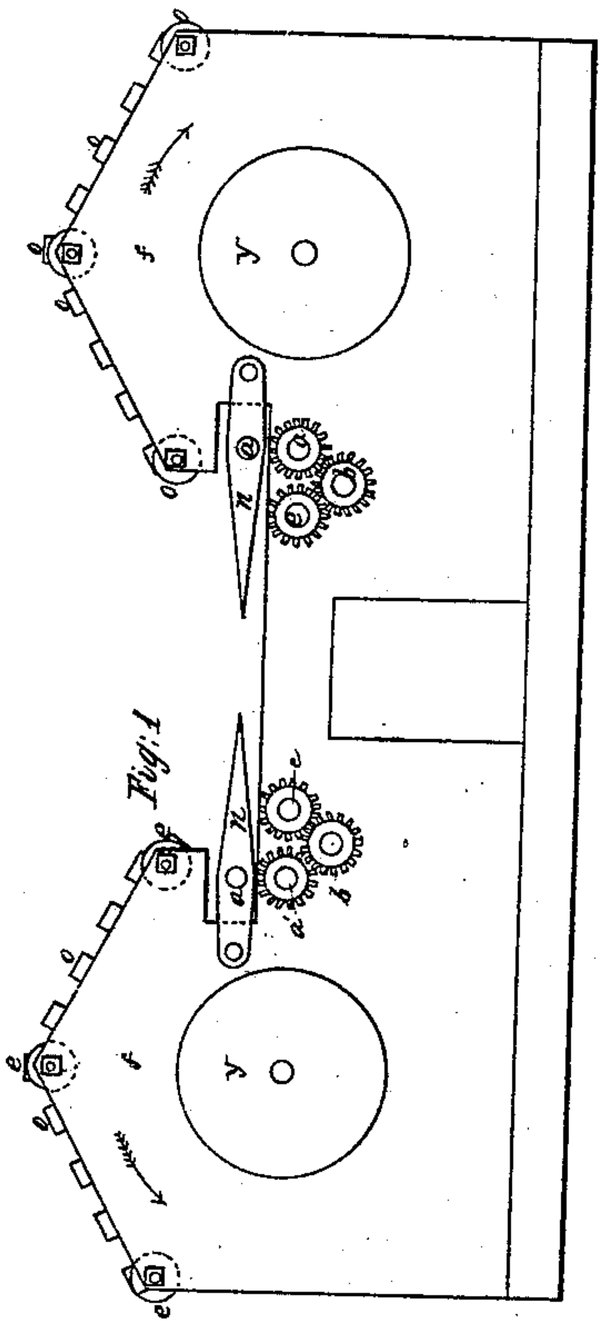


Fig: 2

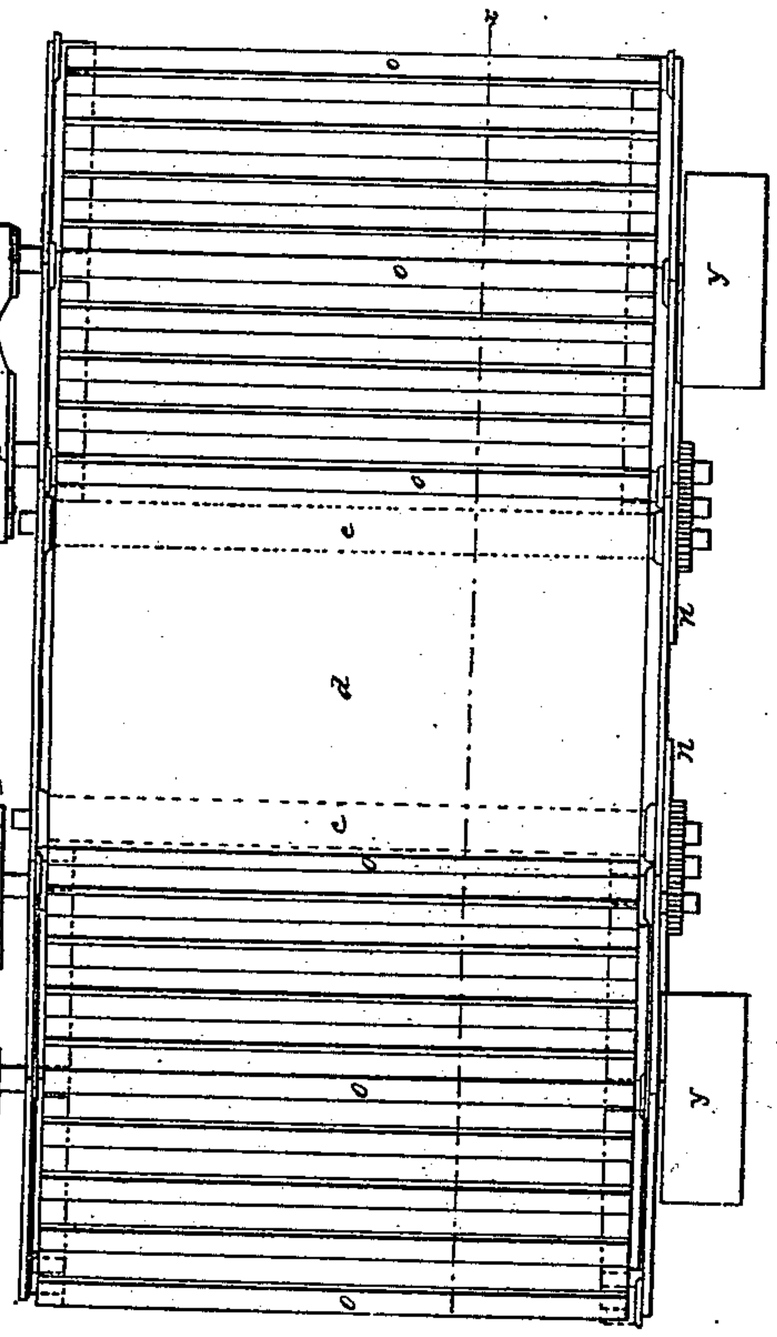


Fig: 3

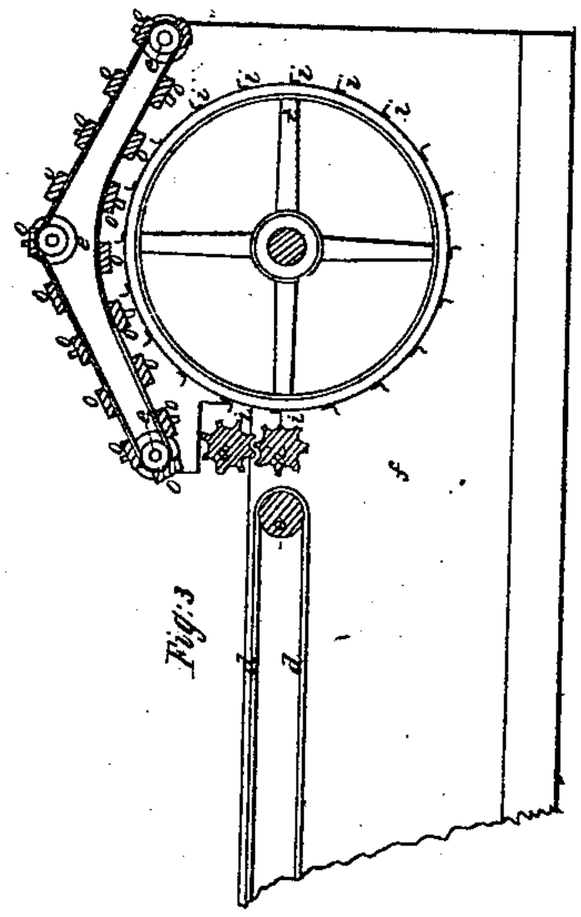
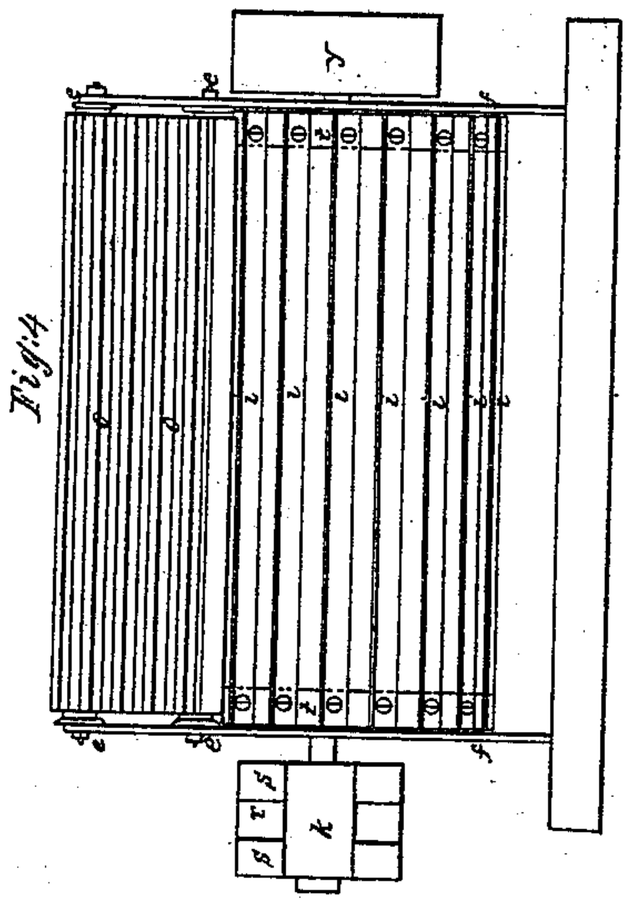


Fig: 4



Witnesses
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THOMAS HAMILLEO MURPHY, OF NEW ORLEANS, LOUISIANA.

IMPROVEMENT IN HEMP-BRAKES.

Specification forming part of Letters Patent No. **36,667**, dated October 14, 1862.

To all whom it may concern:

Be it known that I, THOMAS H. MURPHY, of the city of New Orleans, parish of Orleans, and State of Louisiana, have made a new and useful Improvement in Hemp-Brakes; and I 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 same letters being used to designate the same parts shown in the respective views, in which—

Figure 1 is a side elevation. Fig. 2 is a top view; Fig. 3, a sectional elevation showing the internal arrangement, and taken from line *x* in Fig. 2; Fig. 4, an end elevation.

The machine, as indicated by the drawings, has two separate breaking arrangements, and made with a view of acting on each end of the hemp-stalks alternately, one machine breaking the stalks for one-half the length; and after this has been done the other machine is made to operate on the other end to complete the operation without a change of position of the fibers. If, however, a single machine only is desired, and which will require the hemp to be reversed on the table, so that each end can be acted on, this arrangement can be secured through making a single breaking apparatus, the same as shown by Fig. 3, and having the table *d* carried out a suitable length, to suit the length of the stalks of hemp or the subject to be acted on, as such a brake made single or double can be used for breaking such like fibrous substances without any material change of construction.

The breaker *t* is mounted on the shaft, having pulleys *y* and *k* at either end, and, as seen by Figs. 3 and 4, makes a cylinder working between the side frames, *f f*. This cylinder has on its surface parallel breakers, *i*, that act on the stalks as the hemp is passing in between the fluted feeding-rollers *a a'*, and, in running in the direction indicated by the arrows, carry the fibers over the top of the cylinder, where they are acted on by the breakers *i*, in connection with the revolving worker mounted above the cylinder. This worker is made in part of flexible bands moving over pulleys *e e e* at each end. To these bands are attached the bars *o*. As the cylinder revolves, the breakers *i*, striking the bars *o*, impart a corresponding motion thereto. When the stalks are sufficiently broken, the fibers are, by the joint action of the breakers *i* and bars *o*, thrown into a parallel position and subjected to a scutching action, and thereby cleaned and separated.

The feed-rollers *a a'* move simultaneously with table *d*, these being geared by wheels. (See Fig. 1.) The fluted roller *a'* has wheel *a'*, on one end and three pulleys (marked *s s r*) on the other. This shaft or roller is driven by pulley *k*, having two bands—one crossed, and the other straight, so either can be used to change or stop the motion of the feeding. The wheel on *a'* drives an intermediate wheel, *b*, which drives wheel *c*, mounted on the roller of the feed-table. Therefore the movement of roller *a'*, controls the movement of the table. The upper feed-roller, *a*, is mounted in levers *n n*, one placed on each side of the machine. This roller can be weighted in order to clamp the stalks, so they will not be drawn through farther than sent in by the feeding movement, and, so soon as this is suspended, hold the fibers in a permanent position to allow the scutching to go on, as before stated; and when one end has been cleaned the movement of the feed mechanism is reversed, to bring the other end into the other machine, if two machines are used, or, if not, to draw out the stalks, which are then turned for the other ends to be acted on in the same way.

The pulleys *s s* are loose on the shaft, and the pulley *r* a fast one. In changing the bands, they are to be operated on by any well-known device used in shifting bands from loose to fast pulleys.

The movement given to the machine by the power used to drive it, is communicated through a band acting on pulley *y*, a double machine requiring each its band for this purpose.

After this my description, what I claim as new, and desire to secure by Letters Patent, is—

The combination of the reversible apron *d* with two sets of rotary breakers, *i*, flexible workers *o*, and feed-rollers *a a'*, all constructed, arranged, and operating substantially in the manner set forth, so as to operate upon opposite ends of the stalks without reversing their position.

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Witnesses:

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