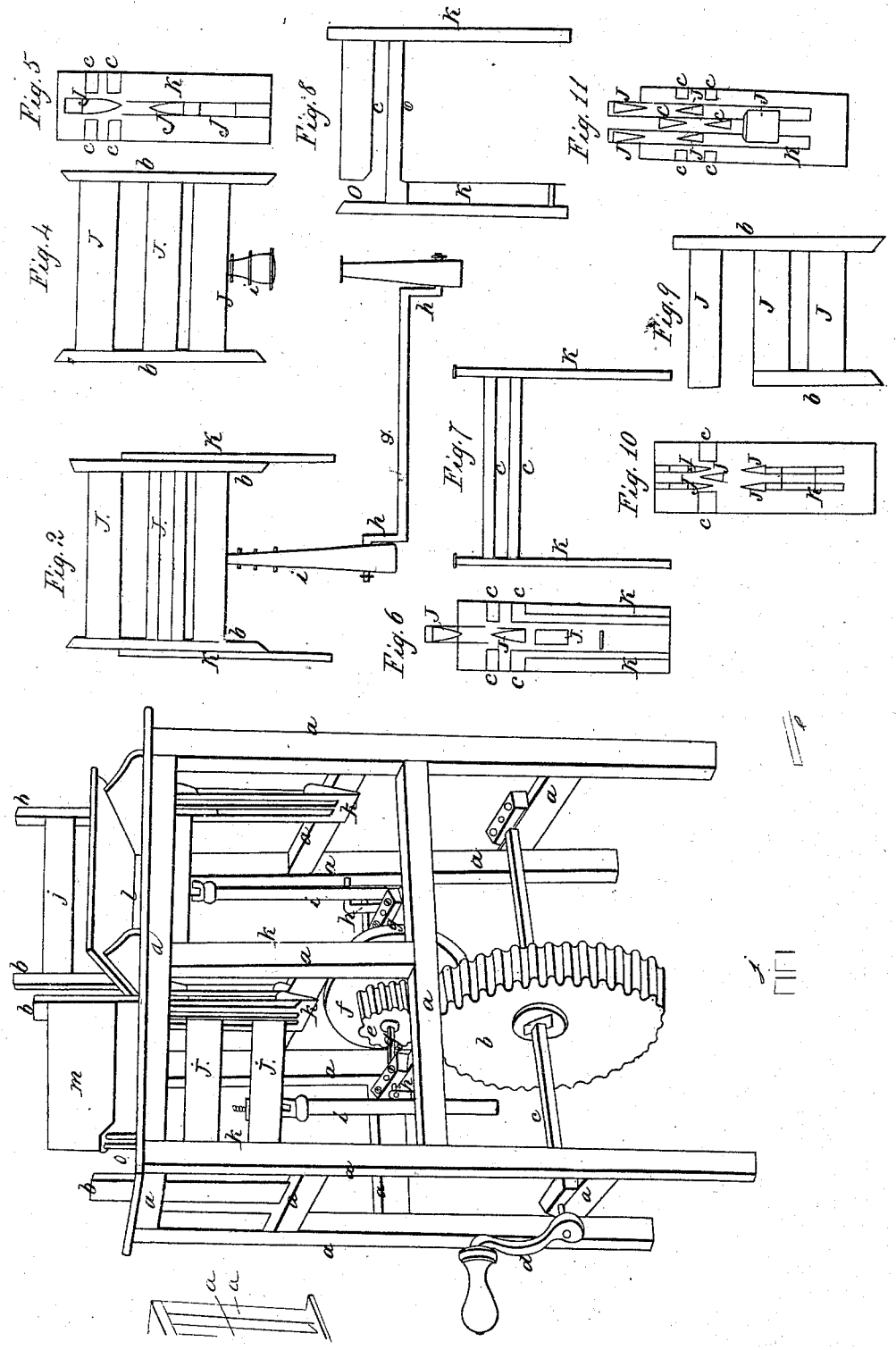
C. B. BUTLER.

HEMP BREAKER.

No. 3,402. Patented Jan. 6, 1844.



UNITED STATES PATENT OFFICE.

C. B. BUTLER, OF LINCOLN COUNTY, TENNESSEE.

IMPROVEMENT IN HEMP BREAKERS AND CLEANERS.

Specification forming part of Letters Patent No. **3,402**, dated January 6, 1844.

To all whom it may concern:

Be it known that I, CONSTANT B. BUTLER, of the county of Lincoln and State of Tennessee, have invented a new and useful Machine for Breaking and Cleaning Hemp and Flax; and I do 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 perspective view.

The machine consists of two parts—to wit, the cleaning and breaking parts.

First. Breaking part: Fig. 4 represents a side and perpendicular view of the movable breakers or sash. I I are two breakers or blades inserted into uprights *b b* at the distance of six inches, one above the other; black line I, a cross-beam, to which pitman *i* is attached.

Fig. 7 is a side and perpendicular view of the fixed breakers, there being four in number; C C, the upper set, inserted into fender-posts K K, the horizontal distance from each other being three inches. The lower set is similar to the upper, and is fixed three inches from the upper.

Fig. 2 is a side and perpendicular view of Figs. 4 and 7 combined, showing the operation of Fig. 4 as it works in Fig. 7. The movable breakers I I pass one and one-half inch above and below the stationary breakers. The hemp or flax, when placed on the lower set of stationary breakers, receives a downward stroke from the upper movable breaker I, and an upward stroke from the lower movable breaker I, the whole being connected with shaft *g* by means of pitman *i*.

Fig. 6 is an end view of Fig. 2; K K, fender-posts; C's, ends of stationary breakers inserted in them; I I, the movable blades, with the sash up; Fig. 5, same as Fig. 6, but showing the position of the blades at the time the downward stroke is given.

Fig. 8 represents the stationary breakers of the cleaning part, there being two sets, as C C, each set having three breakers three inches apart. The sets are also three inches from each other, and inserted into fender-posts. K K, Fig. 9, represent the movable blades that work in Fig. 8, there being two sets, each set having two blades three inches apart horizontally. The sets are also three inches from each other, Fig. 9. When placed within Fig. 8 between K K, an open space is made at O to receive the lint.

Fig. 10 gives an end view of Figs. 8 and 9 combined, showing the operation of Fig. 9 as it works in Fig. 8, I I I I corresponding with movable blades while acting upon stationary breakers C's with the downward stroke.

Fig. 11 gives a similar and corresponding view with Fig. 10 with the upward stroke.

In Figs. 10 and 11, K's show the fender-posts, and the cleaning part operates in the same manner as the breaking part.

In Fig. 1 that portion of the operative part of the machine which is attached to the left-hand end of the shank *g* by means of the pitman *i* represents the breaking part, and that which works at the opposite end the cleaning part; *e*, the ~~mouth~~ or hopper, through which the hemp or flax is admitted. The other letters in the operative parts of the perspective correspond with those in the constituent parts. The frame should be adjusted to the operative parts of the machine, as represented in the drawings. Its usual dimensions are five feet long, three and one-half feet wide, and four and one-half feet high. The machine is propelled by the master-wheel *b*, working on a pulley or wallower on the balance-wheel shaft, as shown by reference to Fig. 1. The shaft and crank are so arranged that giving a stroke of twelve inches the breaker ascends, while the cleaner descends. One revolution of the wallower gives two strokes with the breakers, and two with the cleaner. The hemp or flax is applied to the breaking part with the hand giving it a slight pressure, and is received by a second person on the opposite side, when it is fully prepared for the cleaning process. The machine makes two hundred and twenty strokes per minute, and by the double motion of the cleaning and breaking parts it makes four hundred and forty strokes per minute, which is one of the advantages of the upward and downward strokes.

For cleaning and breaking flax, the dimensions of the machine should be considerably lessened, and the swords placed closer to each other.

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

The construction of the brake by which the hemp and flax is acted upon in the upward as well as downward stroke, thus acting

on the opposite sides of the hemp—that is to say, the combination of the upper and lower permanent breakers or rests with the upper or lower blades attached to the movable sash, this being the principle of the invention, and which I desire to secure.

In testimony whereof I have hereunto subscribed my name and affixed my seal, in the presence of witnesses, this 3d day of June, 1843.

C. B. BUTLER. [L. S.]

Witnesses:
MARTIN W. OAKLEY,
JOHN ELLIOTT.