

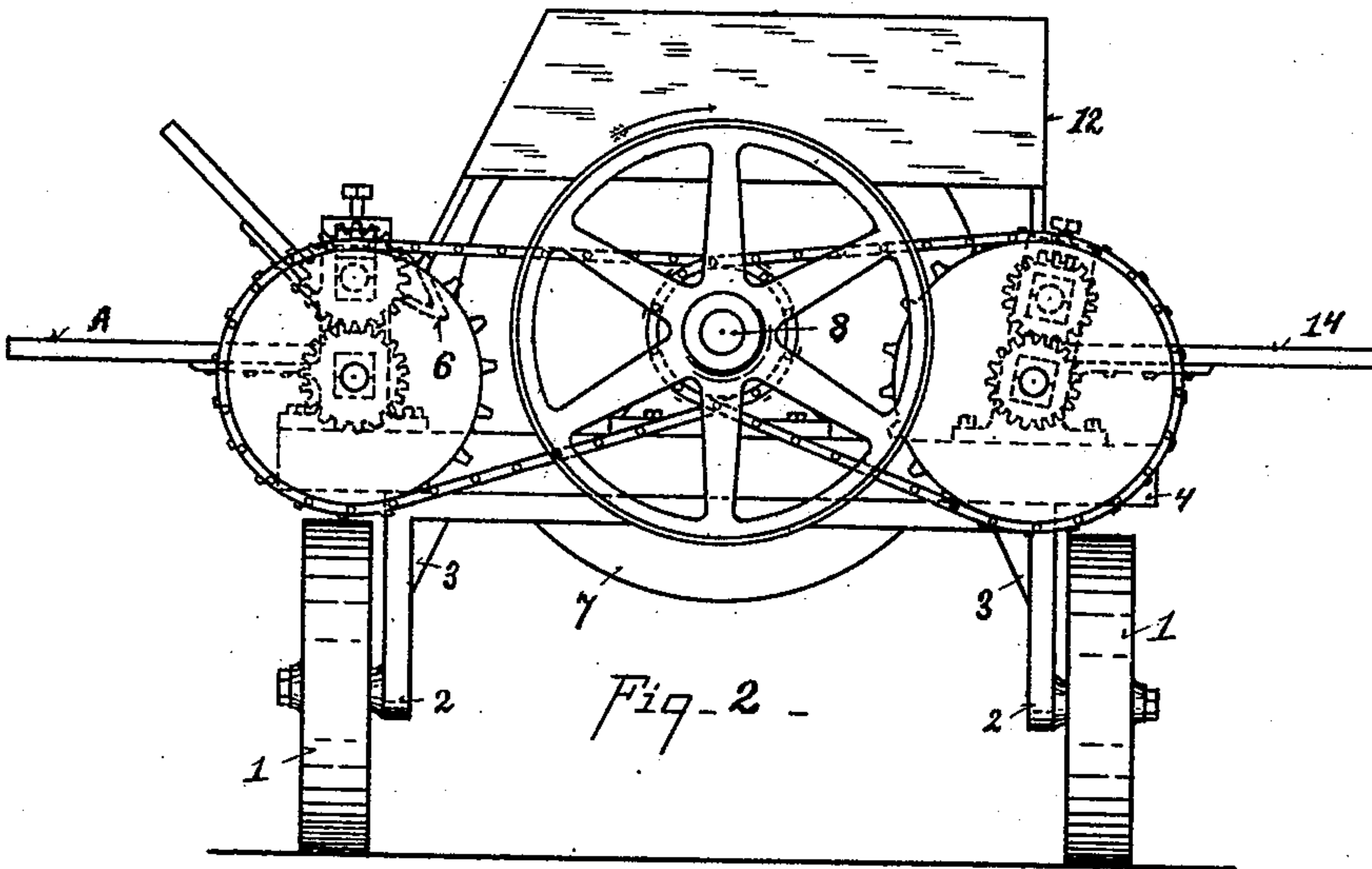
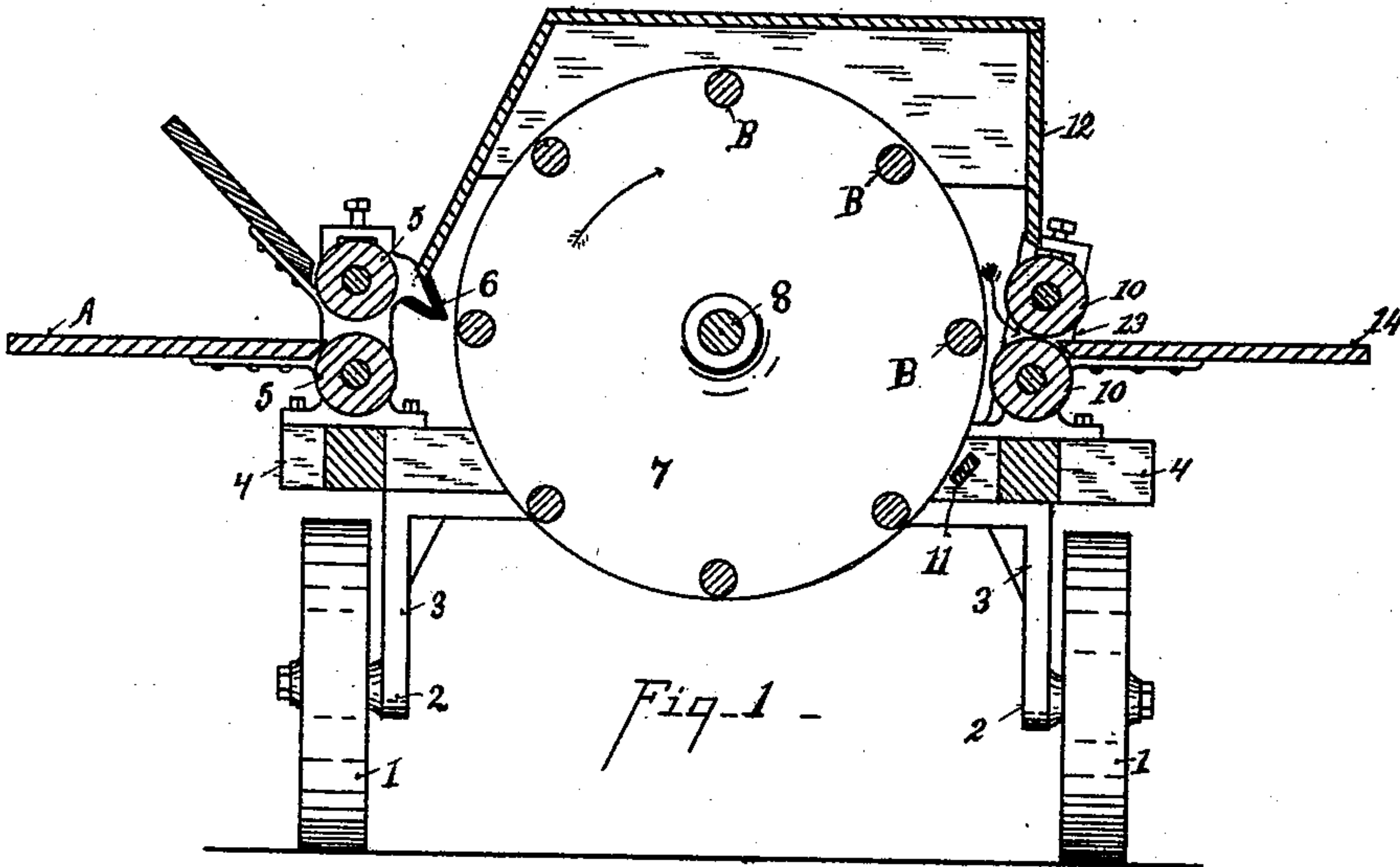
(No Model.)

2 Sheets—Sheet 1.

J. J. HAWKINS.  
HEMP BRAKE.

No. 465,433.

Patented Dec. 15, 1891.



Witnesses

*M. Miles*  
*T. Simmons*

Inventor

*John J. Hawkins*  
By *his* Attorneys *Wood & Boyd*

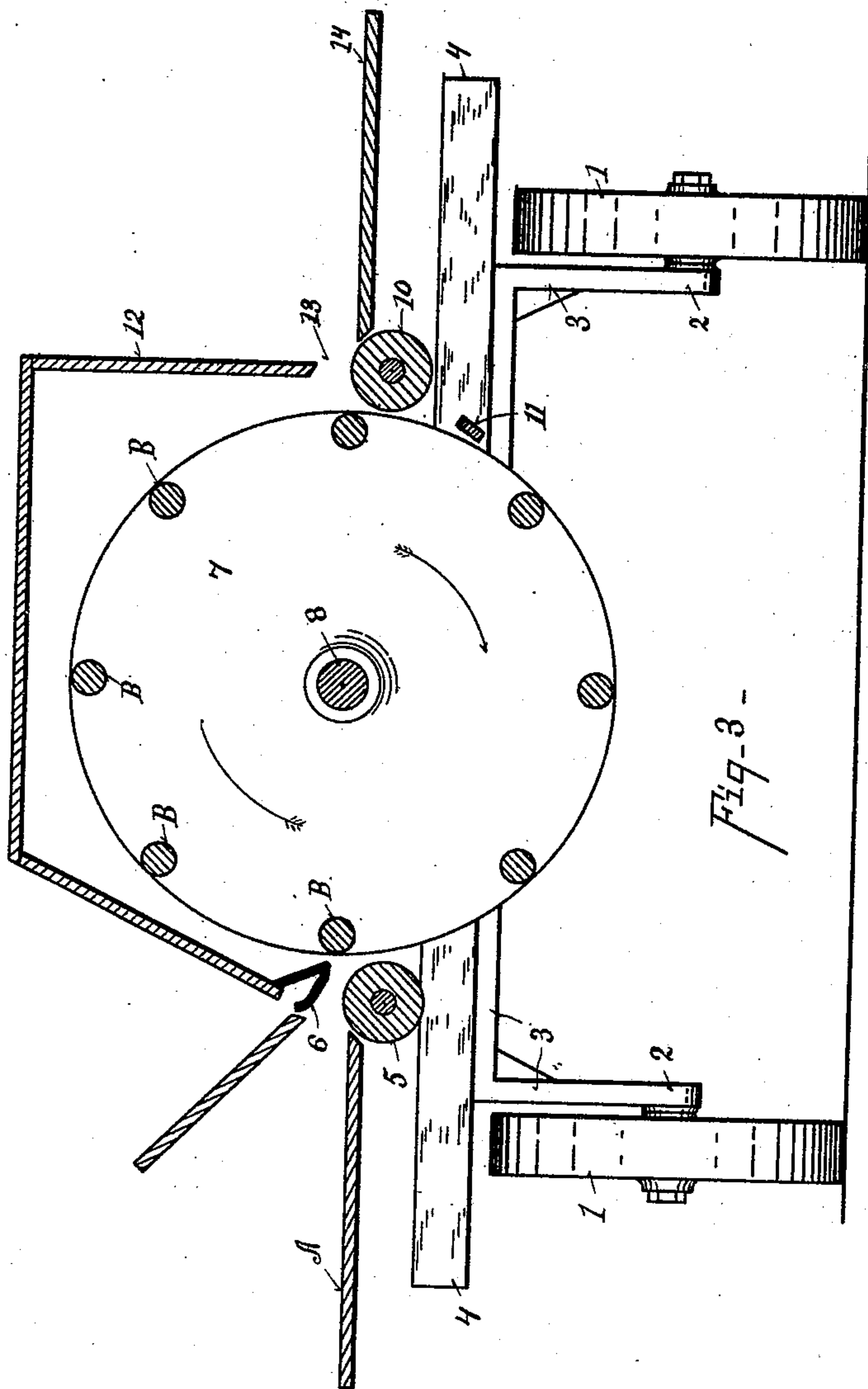
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# UNITED STATES PATENT OFFICE.

JOHN J. HAWKINS, OF NEWARK, ASSIGNOR TO JOSIAH O. WARD, OF ORANGE,  
AND WILBUR HUNTINGTON, OF MONTCLAIR, NEW JERSEY.

## HEMP-BRAKE.

SPECIFICATION forming part of Letters Patent No. 465,433, dated December 15, 1891.

Application filed November 26, 1890. Serial No. 372,690. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN J. HAWKINS, a citizen of the United States, and a resident of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Hemp-Brakes, of which the following is a specification.

My invention relates to hemp-brakes which employ a rotary beater, a stationary breaker, and a feeding roll or rolls for breaking and cleaning the hemp.

The object of my invention is to provide a machine in which hemp can be continuously fed and have the stalks broken, the hurds cleaned from the broken stalks, and the hemp delivered therefrom. In my former patent, granted May 13, 1890, No. 427,764, I have shown a rotary beater and mechanism for driving the same; but said beater draws the hemp in over a stationary breaking-bar by the force of the breaker and employs flexible pressing-blades to press the hemp down upon the beater.

My invention herein described works upon a different principle and is more satisfactory in results.

The various features of my invention will be fully set forth in the description of the accompanying drawings, making a part of this specification, in which—

Figure 1 shows a sectional side elevation of my improvement. Fig. 2 is a side elevation of my improvement with the casing of the machine removed to show the driving mechanism. Fig. 3 is a modification of Fig. 1.

1 represents the ground-wheels.

2 is the axle, which is journaled to the main frame 3.

4 represents the bed upon which the working parts of said apparatus are mounted.

5 represents front feed-rolls.

6 represents a stationary breaking-bar that is supported transversely in front of a rotary beater and riddle above the path of the material fed thereto and in such position as to project inward and downward toward said beater and riddle.

7 represents one of the heads of the revolving beater, which is journaled upon the shaft 8.

B represents breaking-bars which are se-

cured to the heads 7. Said beater is revolved by any suitable power.

10 represents delivery-rolls, and 11 a breaking-bar at the rear end of the machine.

12 represents a curb or housing.

13 represents an opening through which the hemp is delivered onto the table 14.

A represents a feeding-table on the front end of the machine.

It will be seen that the arrangement of the rotary heads 7 and attached breaking-bars B is such as to form a revolving beater and riddle or cleaner for removing hurds from the hemp.

Fig. 3 is a modification of Fig. 1, showing only one feed and one delivery roll. This will accomplish the work indifferently well; but the form shown in Fig. 1 is the preferred form of construction.

Mode of operation: Hemp-stalks are laid upon the table A and fed in by the rollers 5. They are caught by the breaking-bars B and carried up against the stationary breaking-bar 6. In practice I prefer to have the feed-rolls 5 driven much slower in speed than the revolving beaters, so that the break-bars B will strike the hurds off an inch and one-half or so in length and break them in two. If the feed-rolls are omitted or driven at too high speed, the hemp is pulled through too rapidly and it is not sufficiently broken. By employing one or more feed-rolls 5 this objection is avoided. It is desirable to keep the stream or flow of broken fibers loose after they have been acted upon by the stationary bar 6 and to be whipped by the revolving breakers B, so as to allow the hurds to drop out as they pass over it. If flexible blades or aprons or other devices are employed to hold the hemp down upon the beating-bars B, they prevent the hurds from dropping out; but if the said hemp in its passage from the breaking-bar 6 to the delivery-roll 10 is allowed to be agitated by the beater-bars B they shake them and cause the hurds to drop out. When the hemp reaches the delivery-roll 10, it turns in the direction indicated by the arrow and is carried out through the opening 13. By employing the curb over the beater the hemp is partially cleaned by the beater, which thus

performs the double function of breaking and cleaning. The hurds which pass out the delivery-rolls are easily shaken off.

Having described my invention, what I claim is—

1. In a hemp-brake, the combination of a feeding-roll, a rotary beater and riddle composed of the heads 7 and attached beater-bars B, and a stationary breaking-bar 6, rigidly supported in front of said rotary beater and riddle above the path of the material fed thereto and projecting toward the beater and riddle, substantially as described.

2. In a hemp-brake, the combination of a feeding-roll 5, a rotary beater and riddle composed of the heads 7 and attached beater-bars B, and the stationary breaking-bar 6, supported transversely in front of said rotary beater and riddle above the path of the material fed thereto and projecting inward and

downward toward the beater and riddle, substantially as described.

3. In a hemp-brake, the combination of the stationary breaking-bar 6, a rotary beater and riddle composed of the heads 7 and beater-bars B, and a delivery-roll 10, substantially as shown and described.

4. In a hemp-brake, the combination of the feeding-rolls 5, the stationary breaking-bar 6, a rotary beater and riddle composed of the heads 7 and beater-bars B, the delivery-rolls 10, and the curb or housing 12, substantially as shown and described.

In testimony whereof I have hereunto set my hand.

JOHN J. HAWKINS.

Witnesses:

H. O. CHAMBERLIN,  
JACOB V. BOOZE.