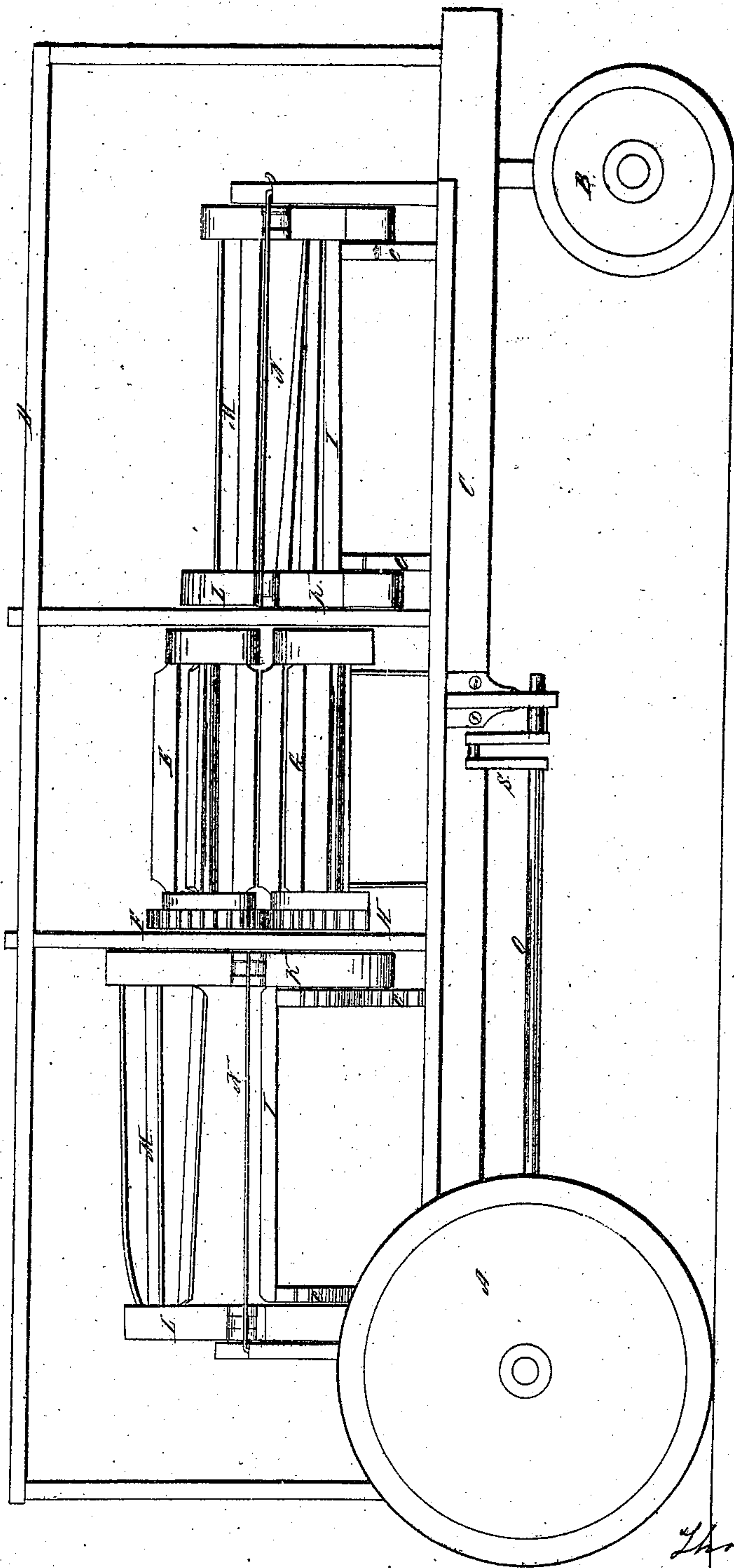


T. L. Fortune.
Hemp Brake.

N^o 43,654.

Patented Jul. 26, 1864.

Fig. 1.



Witnesses:
George H. Gregory
Oellaadaniel

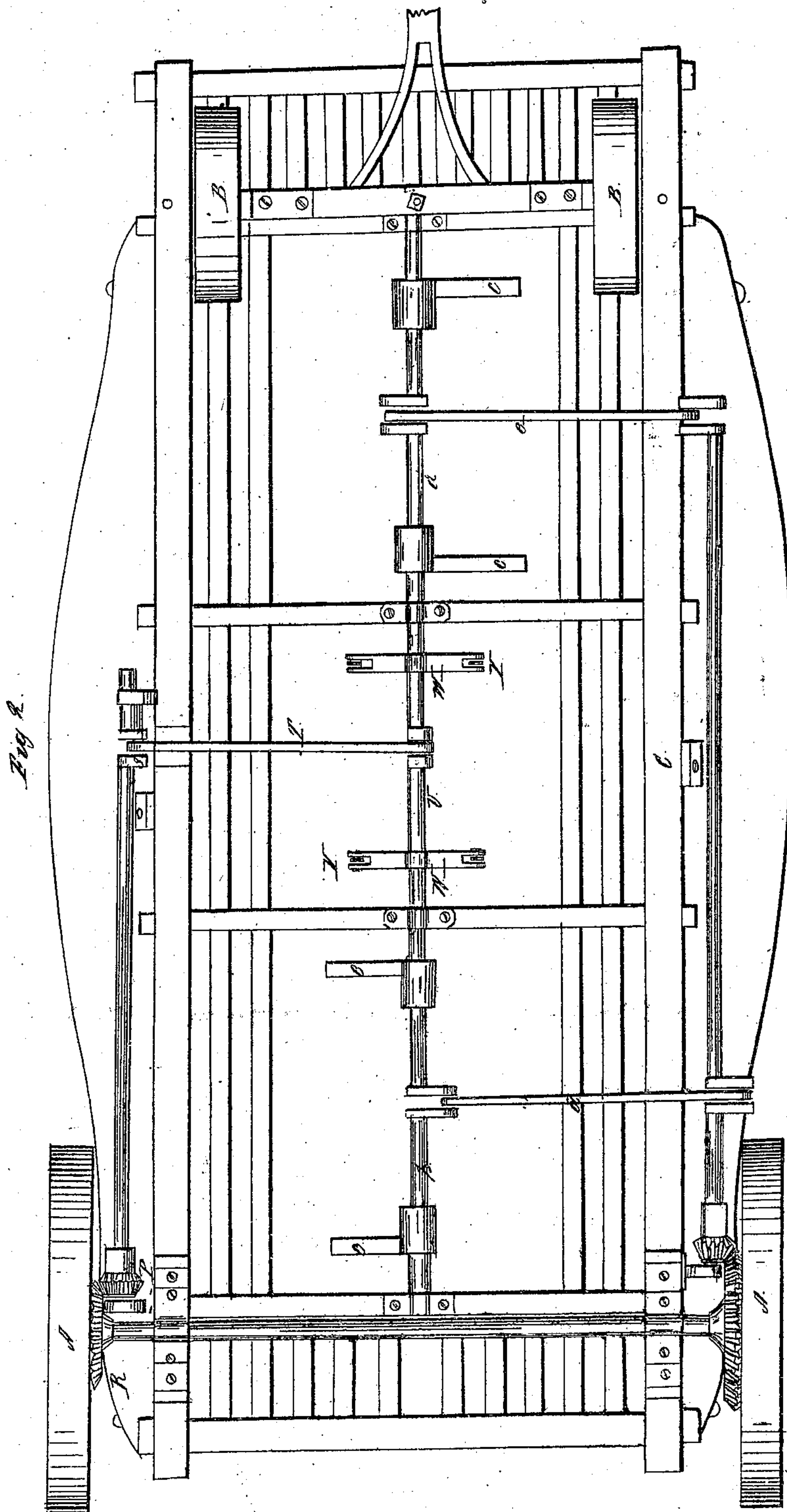
Inventor:
Thos L. Fortune
by Daniel Breed

T. L. Fortune.

Hemp Brake.

N^o 43,654.

Patented Jul. 26, 1864.



Witnesses:
G. B. Smith
B. Smith

Inventor:
Thomas L. Fortune
by his Attorney
Daniel Breed

T. L. Fortune.
Hemp Brake.

N^o 43,654.

Patented Jul. 26, 1864.

Fig 4

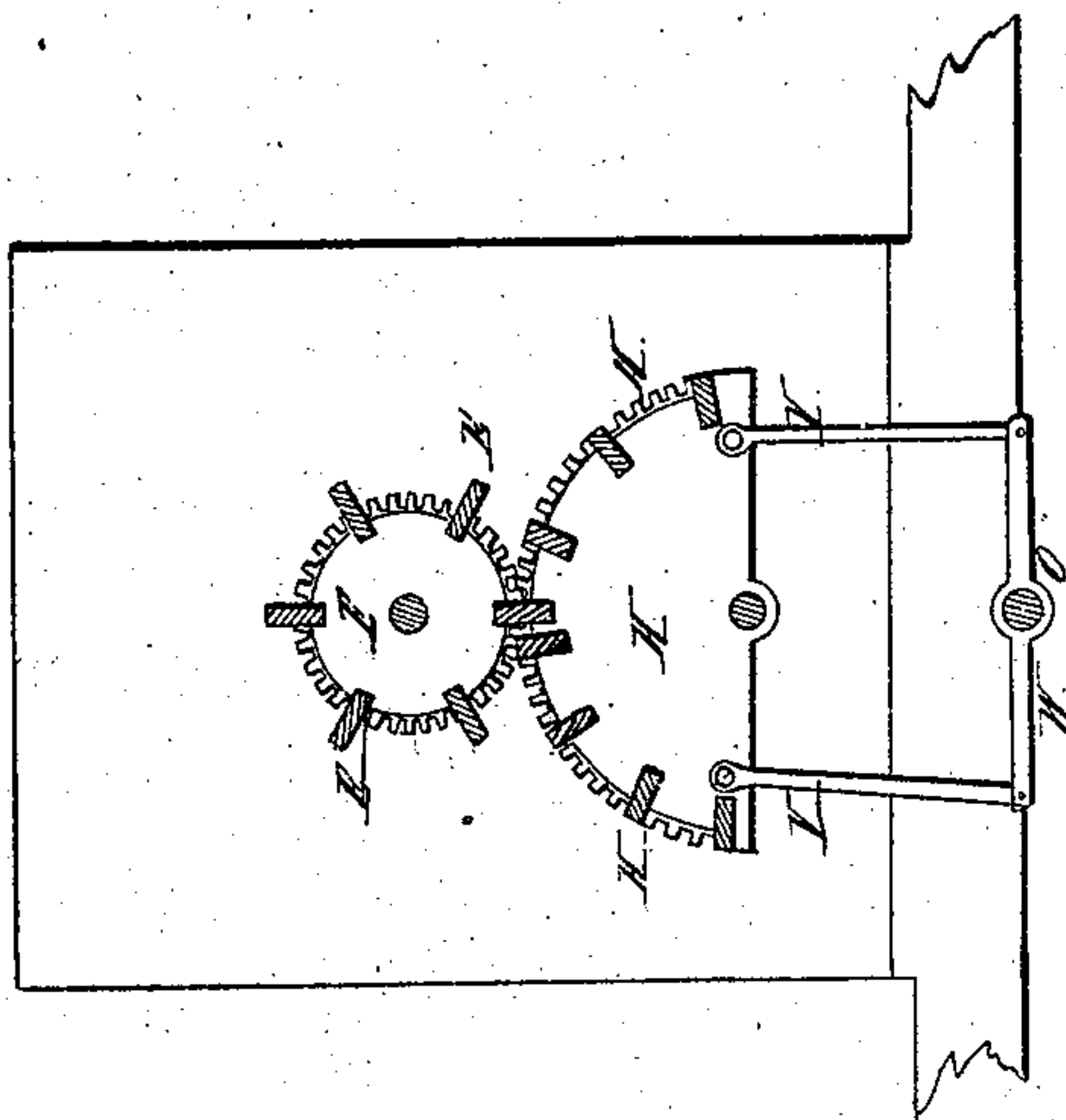
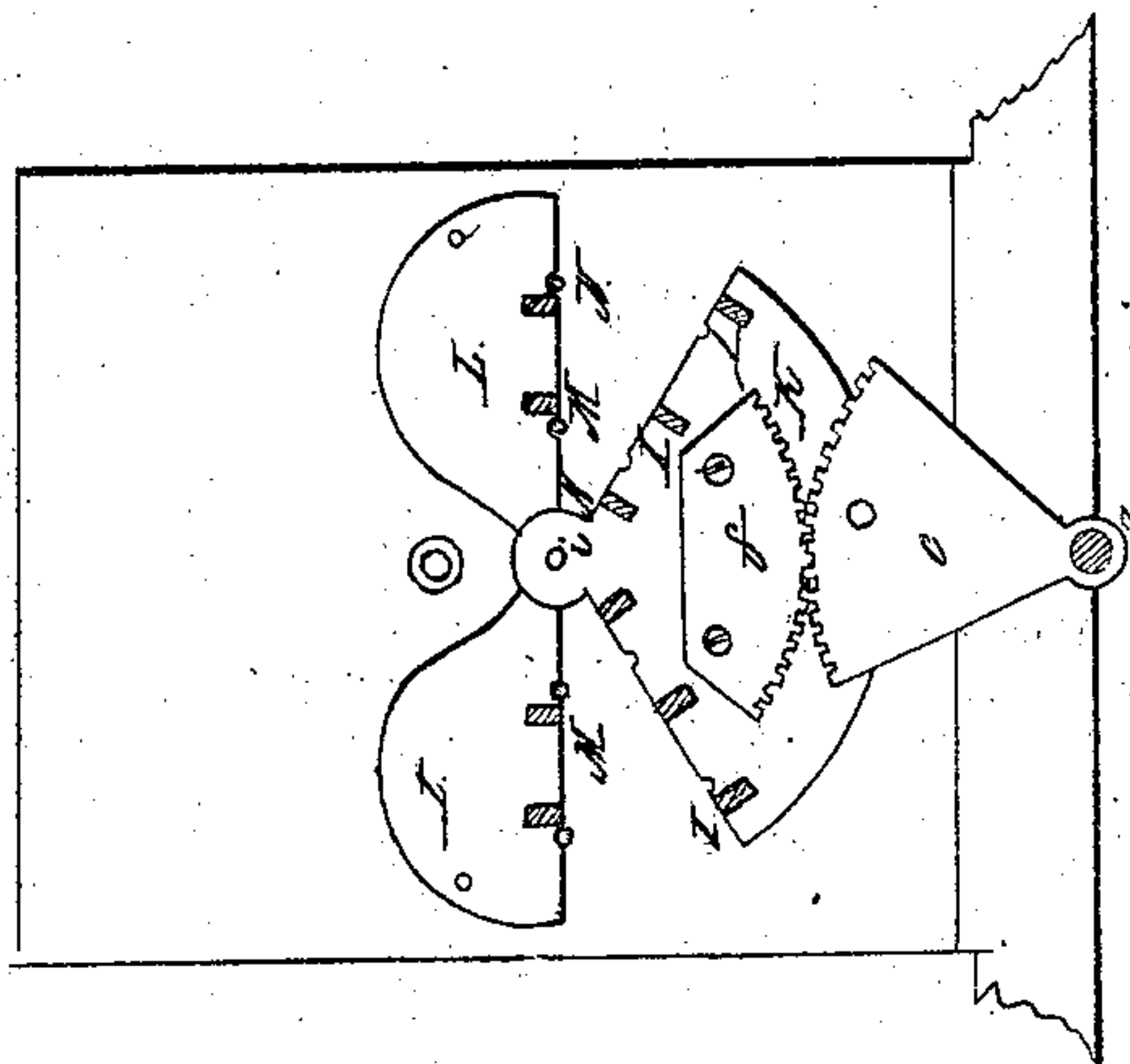


Fig 3



Witnesses:
George W. Gregory
O. L. Redman

Inventor:
T. L. Fortune
Daniel Brecht
Atty.

UNITED STATES PATENT OFFICE.

THOS. L. FORTUNE, OF WESTON, MISSOURI, ASSIGNOR TO HIMSELF, AND
GEO. T. CHALLISS, OF ATCHISON, KANSAS.

IMPROVEMENT IN HEMP-BRAKES.

Specification forming part of Letters Patent No. 43,654, dated July 20, 1864.

To all whom it may concern:

Be it known that I, THOMAS L. FORTUNE, of Weston, in the county of Platte and State of Missouri, have invented a new and useful Improvement in Portable Hemp-Brakes; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists, first, in the combination of the hemp-brake with a wagon, gearing being so arranged as to operate the brake by means of the traveling wheels of the wagon; secondly, in the combination of a hemp-cleaner with a wagon; and, thirdly, in certain peculiar arrangements of devices for hemp-brakes and for operating the same.

In the accompanying drawings, Figure 1 is a side elevation of my machine. Fig. 2 is a bottom view of the same. Fig. 3 is a vertical section through the cleaners, showing the gearing by which they are operated. Fig. 4 is a vertical section through the brake, also showing the cog-gearing by which the brake is operated.

In the construction of my machine I make a strong wagon with wheels A B, (as seen in Fig. 1,) and a frame, C, provided with up-rights on which are supported rails D. I prefer making the floor of the wagon of slats. Upon the frame C is mounted the hemp-brake and cleaners, which are so geared to the wagon that they are all set in motion when the wagon is drawn forward in the usual manner.

My machine, as seen in Fig. 1, is intended to accommodate four workmen—two on each side—riding upon the wagon.

In the middle of the machine is arranged a circular or reel-shaped beater, having knives or beaters E, and a cog-wheel, F, for operating the same. Under this beater is a semi-circular beater of larger diameter, having beaters or knives G, and a toothed segment, H, which gears into the teeth of wheel F and communicates motion thereto. The lower beater is rocked backward and forward, as will be hereinafter explained, and carries with it the upper beater. The hemp may be introduced between these beaters on either or both sides of the machine.

On each side of the brake is placed a double

beater or cleaner, consisting of two upper hinged beaters, L M, Figs. 1 and 3, and a lower beater, I K, of larger diameter. This lower beater has two sets of knives or swords, I, or two working-faces, and is rocked backward and forward, so as to alternately strike each of the upper beaters. By this rocking or swinging stroke the beaters are brought in contact at both ends and throughout their whole length at the same time, and with a uniform stroke from end to end. The upper beaters being hinged at i, Fig. 3, they receive the lower beater with an elastic stroke limited by the weight of the upper beaters.

The hemp to be cleaned is laid upon the wires N, the beaters L M being raised for the introduction of the hemp. The knives or swords M are set nearer together at one end of the beater than at the other, in order to facilitate the cleaning, by at first using the ends of the beaters where the knives are more distant from each other, and afterward using the other ends of the beaters as the hemp becomes more flexible and nearly cleaned.

The arrangement of the gearing and the mode of operating the brake and cleaners are shown in Figs. 2, 3, and 4. A bevel gear-wheel, R, is attached to the wagon-wheel A, and gives motion to the pinion P, crank-shaft O, and crank S, Figs. 1, 2. By means of the connecting-rod T, motion is communicated to the rock-shaft U, which, being thus rocked back and forth, gives a rocking motion to the arms W, Figs. 2 and 4. These arms being connected by rods Y to the beaters H, Fig. 4, the latter is also rocked back and forth, carrying with it the beaters E, as already mentioned. In like manner, a crank-shaft, Z, receives motion on the opposite side of the wagon, as shown in Fig. 2, and by means of rods d e motion is communicated to the rock-shafts a and b and to the cogged arms c, Figs. 2 and 3. As these arms c rock back and forth, the under beaters or sectors, I K, receive a rocking motion by means of the cog-gear f, Fig. 3. Thus the two sets of beaters are put in motion. The two pinions on the shafts O and Z are held in place by set-screws, and may be moved back to throw them out of gear at pleasure when the machine is to be transported without operating.

My machine is intended to travel over the field by horse-power; carrying four workmen, who, as the hemp is cleaned, hang the same upon bars D. At proper periods of time the cleaned hemp may be deposited, or it may be carried from the field on the machine. In this way the expense of collecting the hemp before cleaning is avoided. Of course, my machine could be operated by stationary power.

One advantage of my machine is the positive motion of the brake, which completely breaks the hemp at the first stroke. On the contrary, the cleaners not only have a limited or elastic stroke, but the beaters L M may be raised at pleasure by the workmen, thus giving them complete control of the cleaners, and enabling them to withdraw the hemp from the cleaners and shake the same, and again replace it under the beaters, thus hastening the process of cleaning.

The floor of the wagon is made of slats inside of the rail C, but solid outside of the rail, in order to cover the cog-wheels, pinions, and other gearing, and thus protect them from the falling dirt and refuse matter. The unslatted part of the floor projects considerably beyond the rail C, in order to give room for the workmen.

I do not broadly claim a portable hemp-brake, or a brake mounted upon a wagon for mere transportation; but I believe it is new to employ a wagon as a motive power to operate a hemp-brake and cleaners.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. A hemp-brake operated by a wagon, substantially in the manner and for the purposes set forth.

2. The peculiar arrangement of the cogged arms c, in connection with the shafts a and b, substantially as described.

3. The use of the under beater, K, when rocked back and forth against the upper beater or beaters, substantially in the manner and for the purposes set forth.

4. The use of the hinged upper beaters, so arranged as to yield to the force of the under beater when the stroke of the latter is sufficient to lift or swing up the upper beaters, substantially as set forth.

THOS. L. FORTUNE.

Witnesses:

EDM. F. BROWN,
DANIEL BREED.