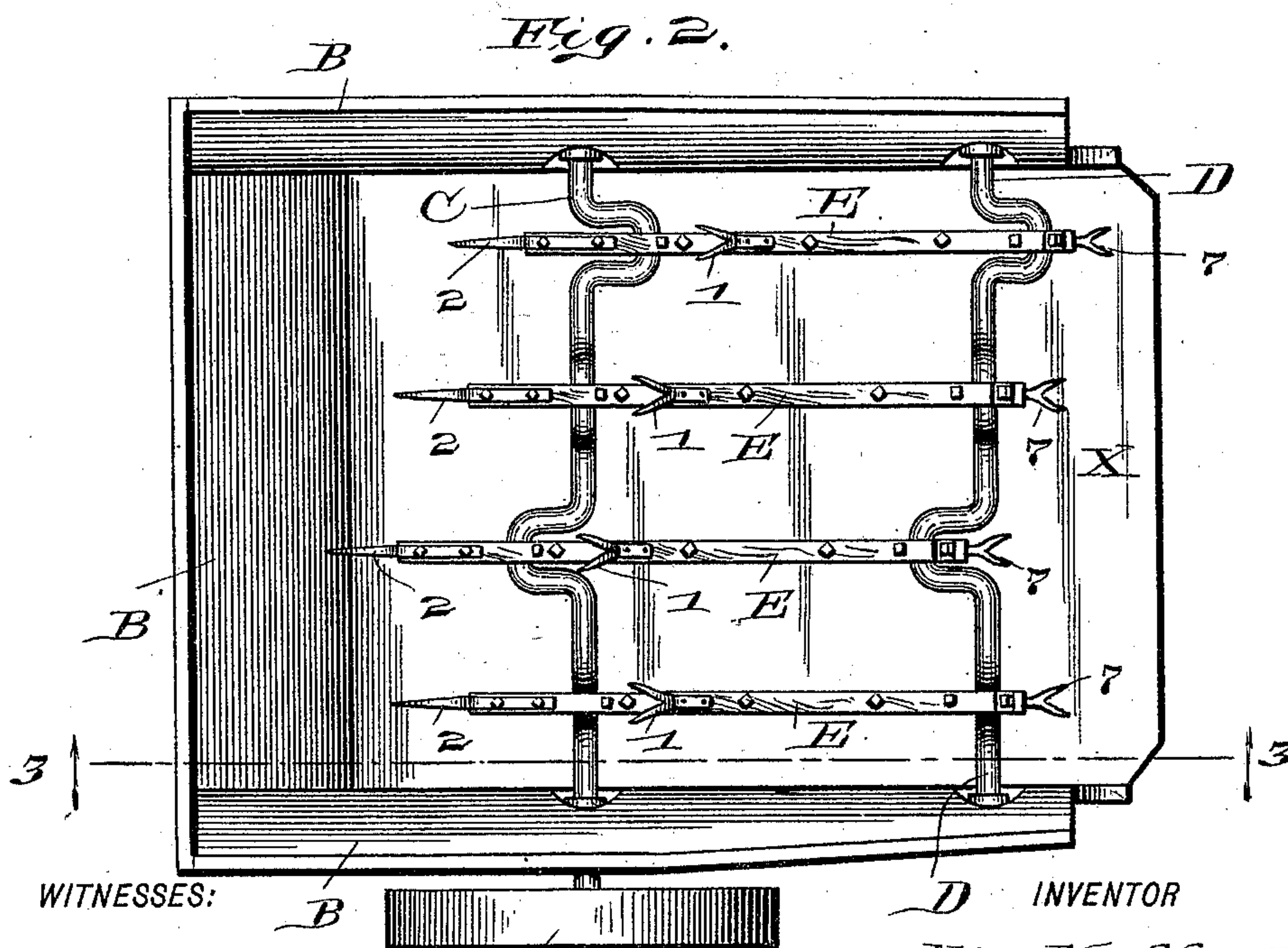
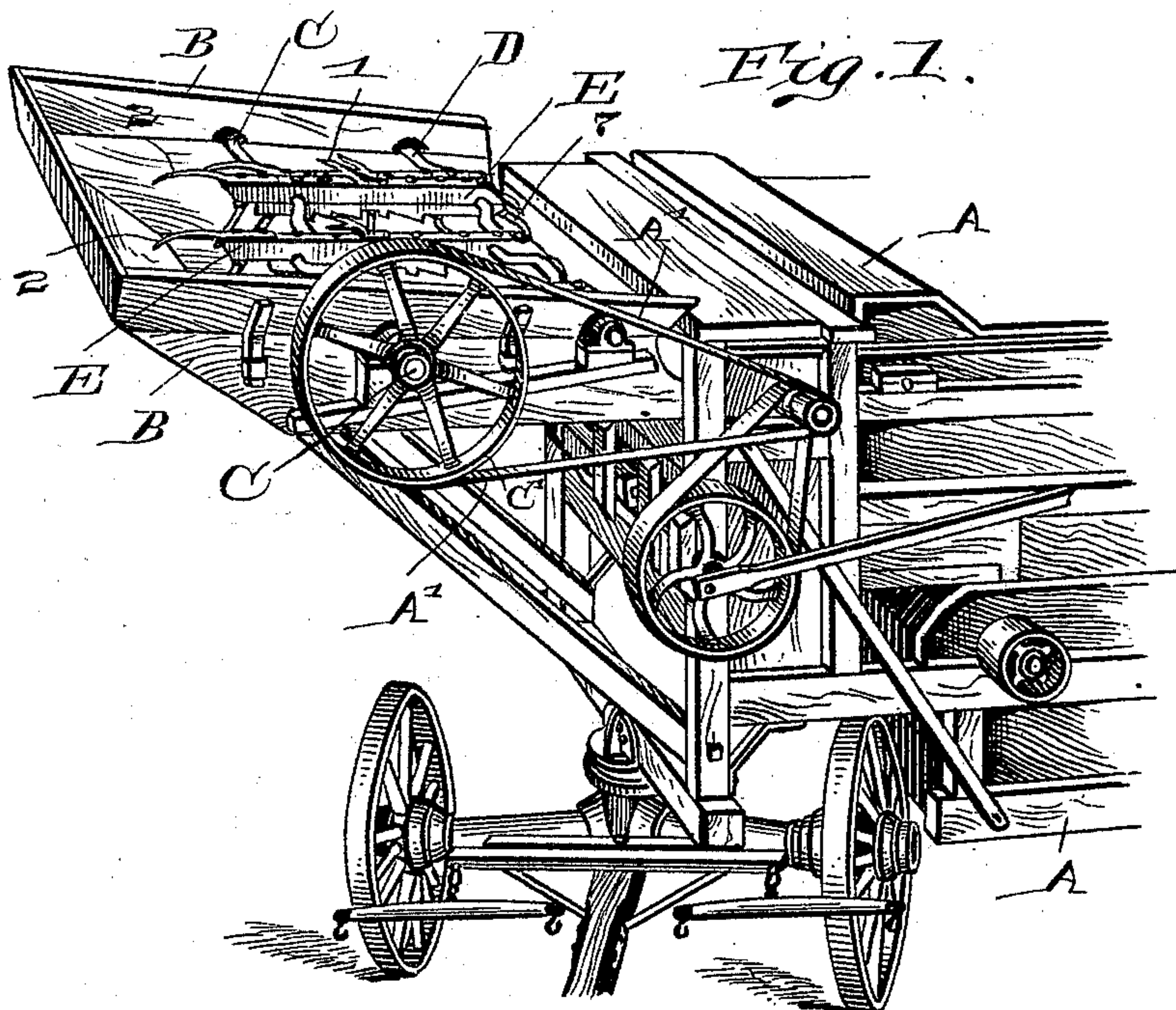


2 Sheets—Sheet 1.

No. 554,341.

Patented Feb. 11, 1896.



H. B. Neely,  
J. A. Walsh -

*Phillip Hoffer,*  
BY  
*Chester Bradford,*  
ATTORNEY.

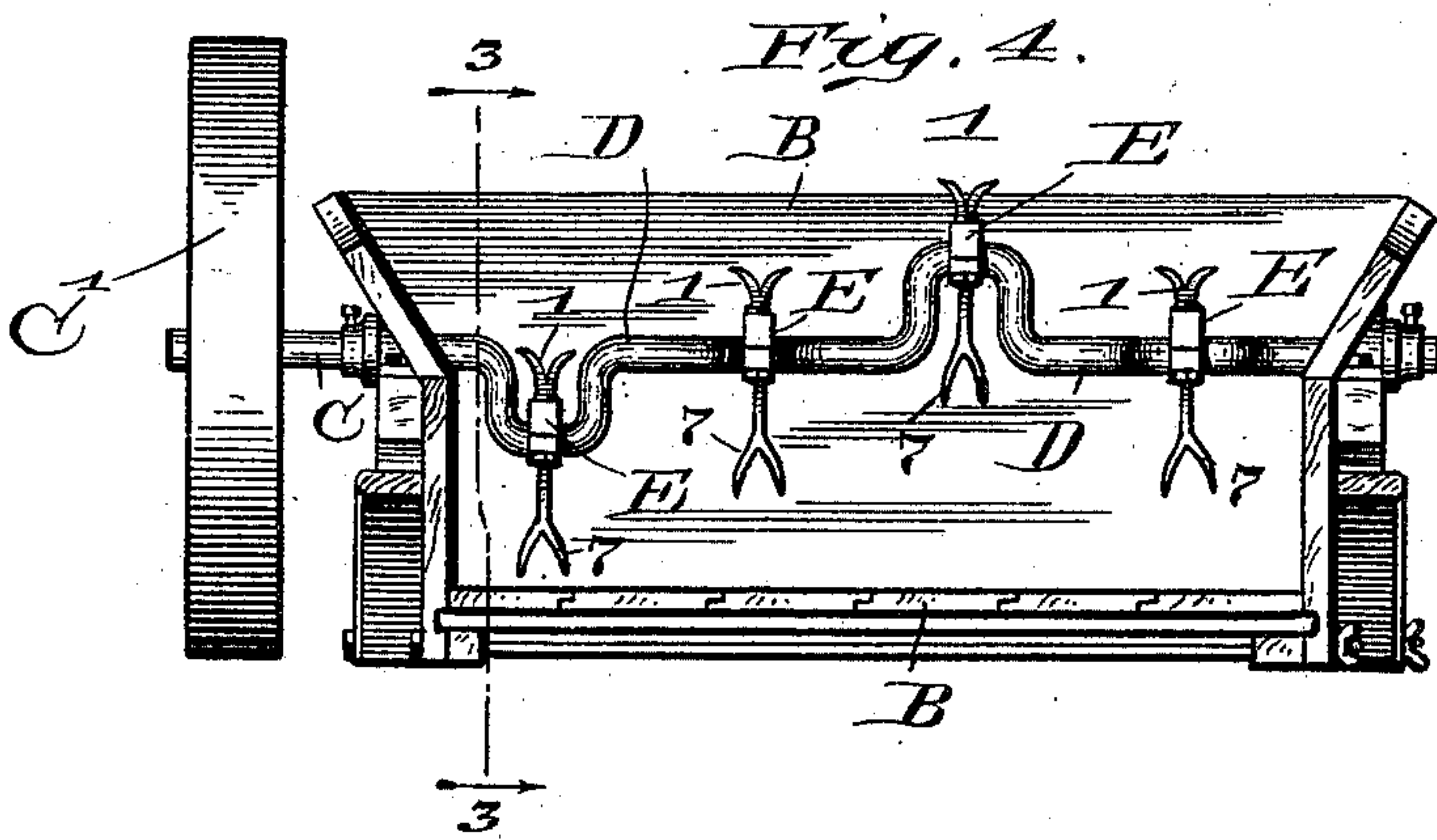
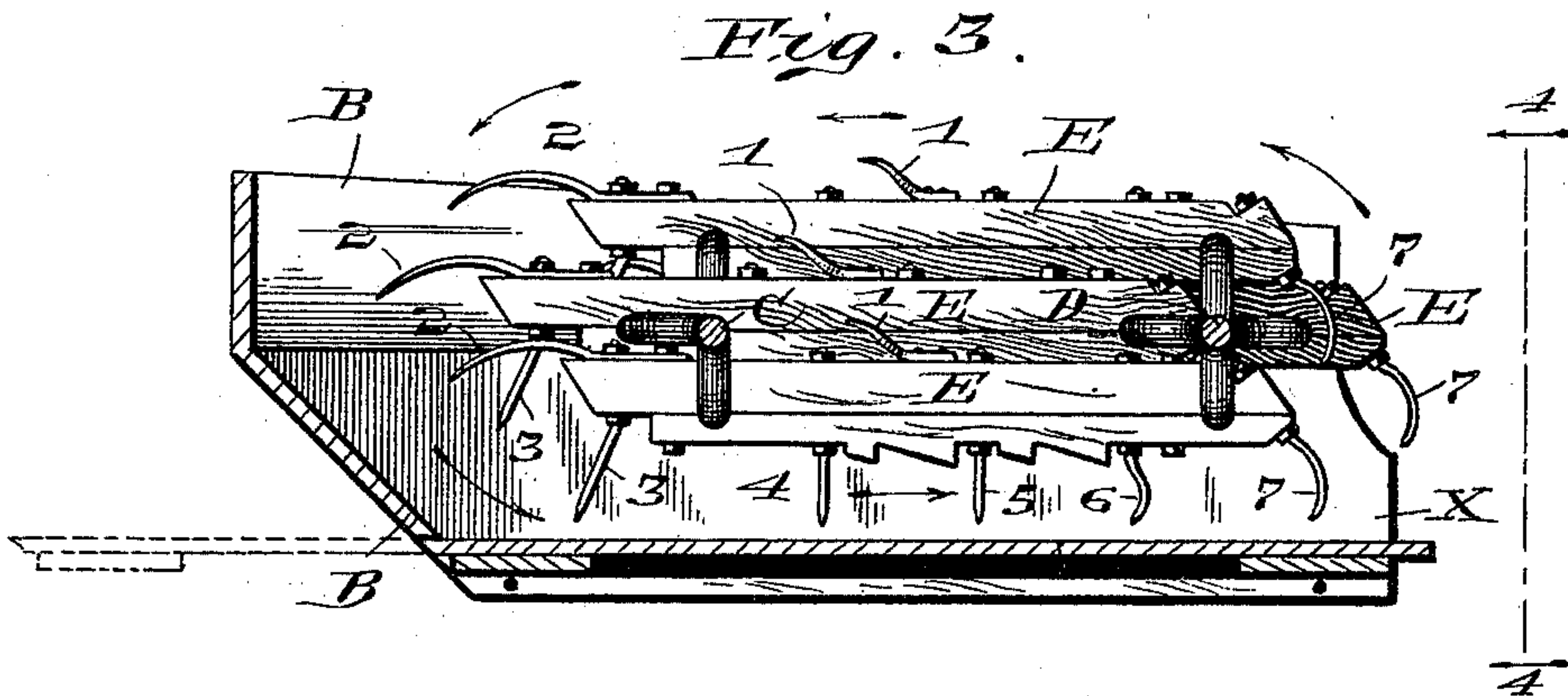
(No Model.)

2 Sheets—Sheet 2.

P. HOFFERD.  
FEEDER FOR CLOVER HULLERS.

No. 554,341.

Patented Feb. 11, 1896.



WITNESSES:

H. B. Neely,  
J. A. Walsh.

INVENTOR

Phillip Hofferd,  
BY  
Chester Bradford,  
ATTORNEY.



# UNITED STATES PATENT OFFICE.

PHILLIP HOFFERD, OF ROSS, CLINTON COUNTY, ASSIGNOR OF ONE-HALF TO  
CONRAD BRINKHOFF, OF MULBERRY, INDIANA.

## FEEDER FOR CLOVER-HULLERS.

SPECIFICATION forming part of Letters Patent No. 554,341, dated February 11, 1896.

Application filed September 3, 1895. Serial No. 561,218. (No model.)

*To all whom it may concern:*

Be it known that I, PHILLIP HOFFERD, a citizen of the United States, residing at Ross township, in the county of Clinton and State of Indiana, have invented certain new and useful Improvements in Feeders for Clover-Hullers, of which the following is a specification.

The object of my said invention is to produce an efficient and easily-operated device for distributing and feeding clover to a clover-huller, and into which the clover to be hulled or thrashed may be pitched indiscriminately.

A machine embodying my said invention will be first fully described, and the novel features thereof then pointed out in the claims.

Referring to the accompanying drawings, which are made a part hereof and on which similar letters of reference indicate similar parts, Figure 1 is a perspective view of the front or feeding end of a clover-huller provided with a feeder embodying my said invention; Fig. 2, a top or plan view of the feeder separately; Fig. 3, a longitudinal vertical sectional view on the dotted line 3 3 in Figs. 2 and 4, and Fig. 4 a rear elevation thereof as seen from the dotted line 4 4 along-side Fig. 3.

In said drawings the portions marked A represent the framework of the clover-huller; B, the framework or hopper of the feeder; C and D, the shafts of said feeder, and E the feeding rake frames or bars.

The clover-huller A may be of any form or construction desired. In so far as it is shown I have illustrated a machine of a well-known manufacture. A belt A' runs from a convenient shaft or shafts thereon to a pulley C' on the shaft C, whereby my improved feeder is driven.

The frame or hopper B of the feeder itself is of a suitable size and construction to receive the clover as it is deposited therein and permit the same to be distributed and fed to the thrashing-cylinder. In use this hopper is securely attached to the clover-huller A, as shown. While its form may be varied as desired, I have illustrated a preferred form in the drawings. In order that easy access may be had to the thrashing-cylinder, I have formed the bottom B' movable,

preferably in the form of a slide, and this can be moved out for the purpose, as indicated most plainly in Fig. 3.

The shafts C and D are mounted in suitable bearings secured to the sides of the framework or hopper B. They are multiple crank-shafts, each having as many cranks as there are feeding-rakes, four being shown, and all of said cranks, as illustrated in the drawings, extending in different directions from the axis. This is best shown at the right-hand end of Fig. 3, and the purpose is to secure that they shall operate successively instead of simultaneously, in order that less power shall be necessary, that the clover shall be more efficiently distributed, and that the movement of the clover being treated shall be more nearly continuous. By this arrangement, as shown in Fig. 4, only one set of the raking-teeth are at the lowest or highest point at any one time.

The rake bars or frames E are respectively mounted on the cranks of the shafts C and D, and are operated thereby. On the back or top of each of these bars is a preferably forked and forwardly-inclined raking-tooth 1, which, as the rake-bar carrying it is moving in the forward direction, while in its higher position, engages with the under side of the quantity of clover which is at the time resting thereon, and urges it forward toward the forward end of the hopper B, at which point a second curved raking-finger 2 is placed, which seizes the clover and forces it down toward the bottom of the hopper as the raking-bar descends. On the under side of these raking-bars are a series of teeth, 3, 4, 5, 6 and 7, most of which are preferably of different forms, as shown, and which seize the clover pulled down by the other teeth and distribute it, tear it apart, and force it rearwardly into the mouth of the clover-huller, whence it will be taken and operated upon by the thrashing-cylinder thereof. Obviously, there may be more or less in number of these raking-teeth than is shown in the drawings, or they may vary somewhat in form, but it is desirable that those at the front end, as 3, should point forward somewhat, and those at the rear end, as 7, should be inclined toward the rear somewhat, and be curved in form and forked or bifurcated, as I have discovered by experiment that when



so formed the operation is superior to that where they are perfectly straight.

The operation may be briefly stated as follows: Clover in condition to be thrashed is thrown into the hopper B on top of the rake-bars E. These are continuously driven in the direction indicated by the arrows in Fig. 3, and the result is to carry the clover first forward, and thence rearwardly, and finally discharge it (at the point marked X in Fig. 3) into the clover-huller, which, of course, operates as usual to thrash or "hull" and separate the seed. The peculiar form and operation of this device secure a superior result.

Having thus fully described my said invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a feeder for clover-hullers, of multiple crank-shafts, rake-bars mounted on said crank-shafts and provided with forwardly-inclined teeth on their upper sides, and downwardly-projecting teeth on their lower sides, whereby the clover deposited on top of said rake-bars is first driven forward and thence down and rearwardly to the clover-huller, substantially as shown and described.

2. The combination, in a feeder for clover-

hullers, of multiple crank-shafts, rake-bars mounted on said crank-shafts, forwardly-inclined teeth on the upper sides of said rake-bars, curved and forwardly-inclined teeth on the forward ends of said rake-bars, and downwardly-projecting teeth on the under sides of said rake-bars, substantially as shown and described.

3. The combination, in a feeder for clover-hullers, of a hopper or casing, multiple crank-shafts mounted on bearings in said hopper or casing, forwardly-inclined teeth secured to the upper sides of said rake-bars, forwardly-extending and curved teeth on the forward ends of said rake-bars, downwardly-extending teeth on the under sides of said rake-bars, and rearwardly-inclined forked and curved teeth at the rear ends of said rake-bars on the under sides, substantially as shown and described.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 31st day of August, A. D. 1895.

PHILLIP HOFFERD. [L. S.]

Witnesses:

CHESTER BRADFORD,  
JAMES A. WALSH.