2 Sheets—Sheet 1.

C. FORD.

CORN HUSKER.

No. 75,403. Patented Mar. 10, 1868.

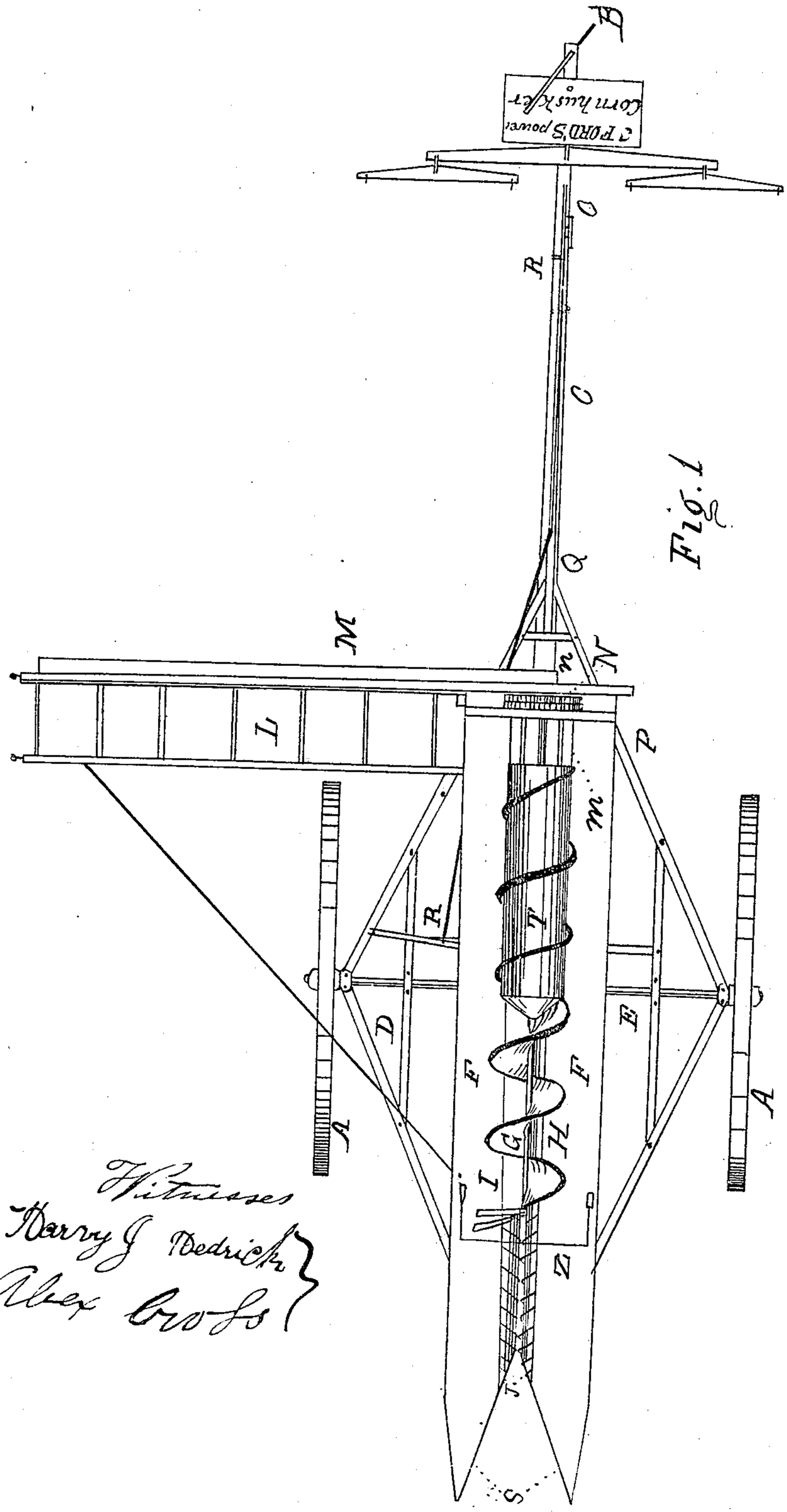

Fig. 1.

Witnesses
Harry J Bedrick
Alex Brosius

2 Sheets—Sheet 2.

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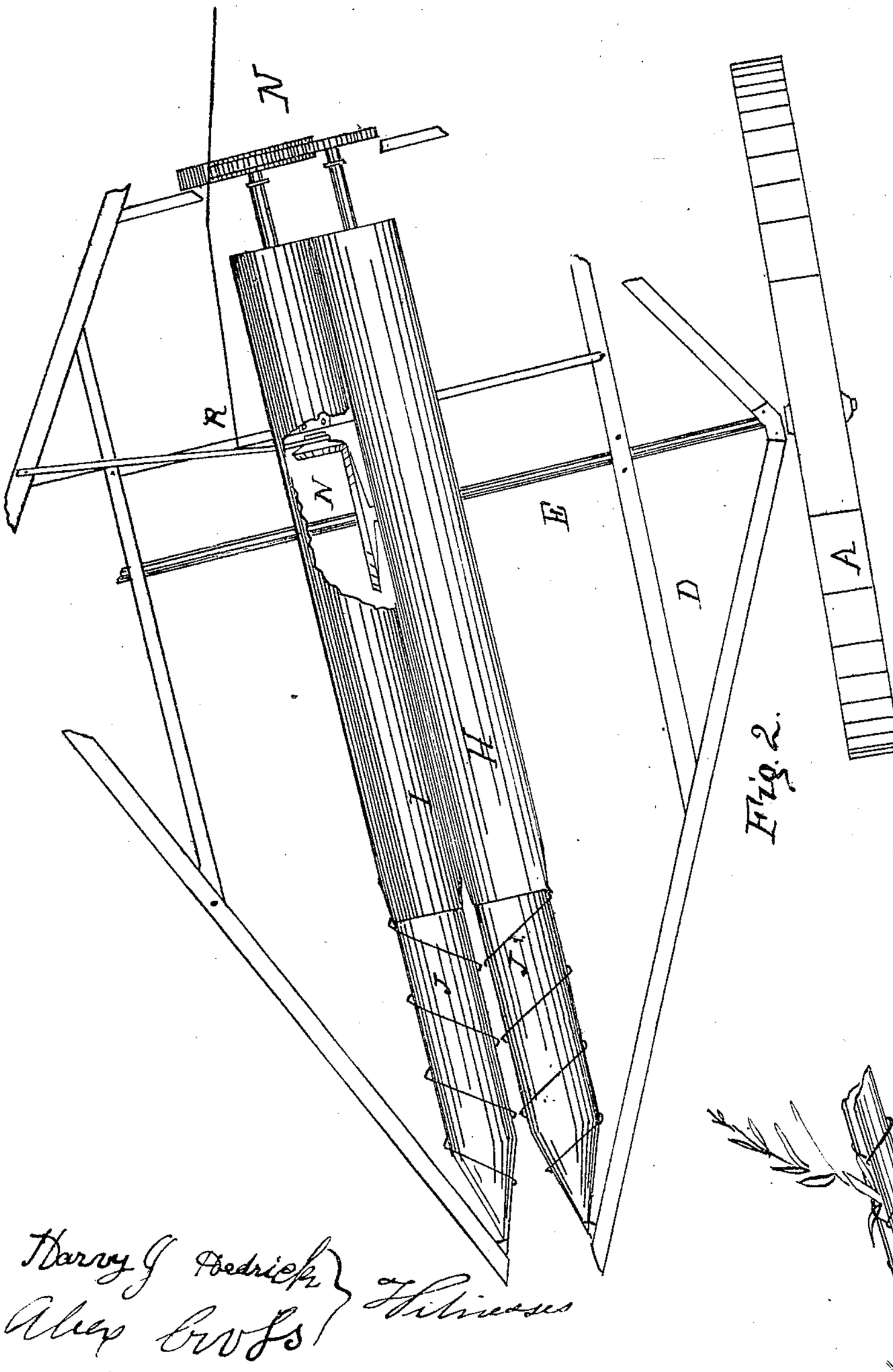

Fig. 2.

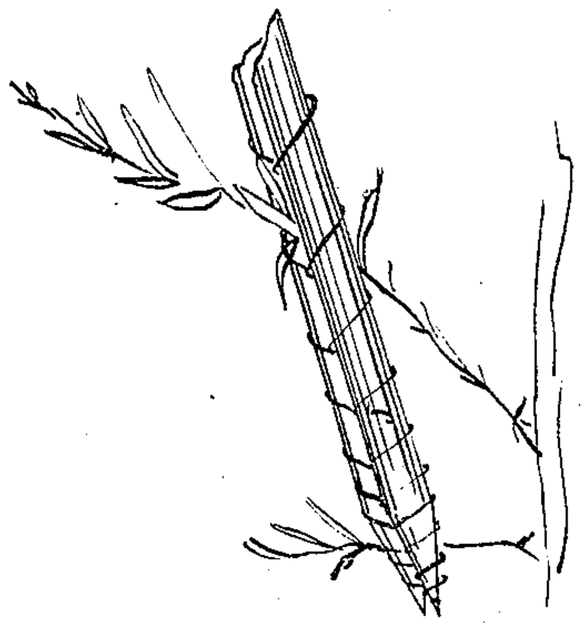

Fig. 3

Witnesses

Harry J. Roedrick

Alex Ervds

United States Patent Office.

CHARLES FORD, OF FOREST CITY, ILLINOIS.

Letters Patent No. 75,403, *dated March* 10, 1868.

IMPROVEMENT IN CORN-HUSKERS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, CHARLES FORD, of Forest City, in the county of Mason, and State of Illinois, have invented a new and useful Machine for Husking Corn from the field or stalk, by horse or other power, which I call a "Field-Power Corn-Husker;" and I do hereby declare that the following is a full, clear, 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 side elevation.

Figure 2 is a section, showing the husking-rollers, with a part of the rubber roller broken away, to show the gearing.

Figure 3 is a section, showing the front ends of the rollers, with the gain-twist of the threads, and the manner in which they act on the stalks of corn.

The following are the names of the parts: A, drive-wheels; B, guide-wheel; C, shaft; D, frame; E, axle; F, hopper; G, snapper; H, serrated roller; I, rubber roller; J, gain-thread; L, dropper; M, belt; N, gearing; *m*, mouth; P, shaft-hinge; Q, lever; R, stop; S, fenders; T, presser; Z, breaker; *n*, pulley.

Construction.

The frame D, shaft C, drive-wheels A, guide-wheel B, and lever Q are arranged much after the manner of Haine's small-grain harvester, except the frame is made half diamond or full diamond (see fig. 1) shape for one-row, and double-diamond shaped for a two-row husker. The axle E is fast in one drive-wheel and ratcheted to the other, and from their revolutions comes the power that drives the gearing N. This gearing is so arranged that it gives a downward and inward motion to the serrated and rubber rollers, H and I. The left-hand roller H is made with a serrated or a file-like surface, of wood, iron, or other hard substance. The square sides of the serrates should face with the (intended) motion of the roller. The other roller, I, is made of hard substance from the small end, one-third its length back, and the balance of the roller is covered with a heavy coat of India rubber, or other elastic material, and its axle may or may not be on spring-bearings. By the use of spring-bearing a less elastic substance may be used in the roller I. Both rollers are one inch smaller, for one-third their length next the front end, (see fig. 2,) and have a spiral rod, (gain-threads,) J, winding at first near the points of the roller, at an obtuse angle with the rollers, but increasing to an acute angle as they pass back to their termination at the swell in the rollers, (see figs. 1 and 3.) A right-hand thread should be on the left-hand roller, and a left-hand thread should be on the right-hand roller.

The hopper F sits with its lower edges close to and just over each of the rollers H and I. The snapper G is a spiral web lying and revolving in the hopper, its front end being held in place by a bearing attached to the hopper, and its other end joining to the presser T. This presser is a cylinder, with a right-hand thread, of the depth of near two inches, winding on its surface, the whole revolving on the same axle with the snapper G, and driven by gearing on the rubber roller I.

The mouth *m* is an outlet from the hopper on to the dropper L. The dropper is a common kind, driven by a belt, which runs to a pulley, *n*, on the end of the snapper and presser-shaft. The fenders S are made of boards or light iron; and the breaker Z is an iron rod properly bent and fixed to the hopper.

Operation.

The machine is pushed or drawn by the horses astride the row or rows, so the fenders will throw the corn-stalks between the rollers, where the gain-threads J will draw them, (one or two stalks at a time,) slowly at first, but more quickly as they go, back and down between the rollers, (see fig. 3,) until the stalks and husks are carried down between the serrated and rubber rollers, where, if the ear does not burst out, the snapper G will break it out, or from its stem, and pass it back under the presser T, which rolls the ear over and over between the serrated and rubber rollers (so that every husk and silk may be caught and torn off) as it passes it back and out at the mouth *m*. Here the ears are caught by the dropper L, and passed up into a wagon, which should be driven along under the mouth of the dropper for that purpose. The fenders should run under the ears on the stalks, and are raised or lowered for that purpose by the lever Q.

The machine is thrown out of gear by the stop R. The breaker Z breaks the tops off the stalks, and causes them to pass through sooner. The whole machine is managed, guided, turned, &c., substantially the same as "Haine's header" or "small-grain harvester."

I do not claim the general features of the carriage and frame, nor the application of the common screw or spiral thread on a roller for carrying the corn on the stalks up and back.

Claims.

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

1. A serrated feed hard roller, H, and rubber roller I, used, as herein set forth, for husking corn, by catching the husk and stalks and passing them through beneath, while the ear is left on top.

2. The rollers made, as herein set forth, (fig. 2,) smaller for near one-third their length at the front end, to admit the stalks between the rollers.

3. The use of the gain-thread J, which increases the acuteness of its angle with the roller, as it runs back (see fig. 3) from the point to the swell of the rollers, thereby pulling the cornstalk gently over at first, but more quickly afterward, and also keeping the stalks parallel with the threads that pull them, thus avoiding the danger of breaking them off before they get into the hopper.

4. I claim the use of the right-hand gain-thread on the front end of the left-hand roller, and the left-hand gain-thread (see fig. 1, J,) on the right-hand roller, in connection with the inward and downward motion of the rollers.

5. The hopper F, made and used as herein set forth.

6. The snapper G, made and used for breaking the ears from the stalks and husk, while the latter are held firmly beneath, between the rubber and serrated rollers, and also for carrying the ears back under the presser.

7. The presser T, for pressing the ears down and rolling them over as it passes them back between the rubber and serrated rollers, so that any remaining husk or silk may be taken off before they pass out on to the dropper.

8. The dropper L, arranged as herein described, in connection with the mouth *m* of the machine, in such manner that the ear-corn is delivered in a wagon, if driven for that purpose, without other assistance.

9. The breaker Z, made and used as herein set forth, to break the tops of the stalks back, so they will pass down between the rollers before they get far back on them.

10. I claim the combination of the gain-thread J, rubber roller I, serrated roller H, fenders S, snapper G, presser T, hopper F, dropper L, gearing N, and frame D, arranged and used as herein described.

CHARLES FORD.

Witnesses:

HARVEY J. HEDRICK,

ALEX. CROSS.