

J. WERNER, Jr.
HARVESTER.

No. 174,330.

Patented Feb. 29, 1876.

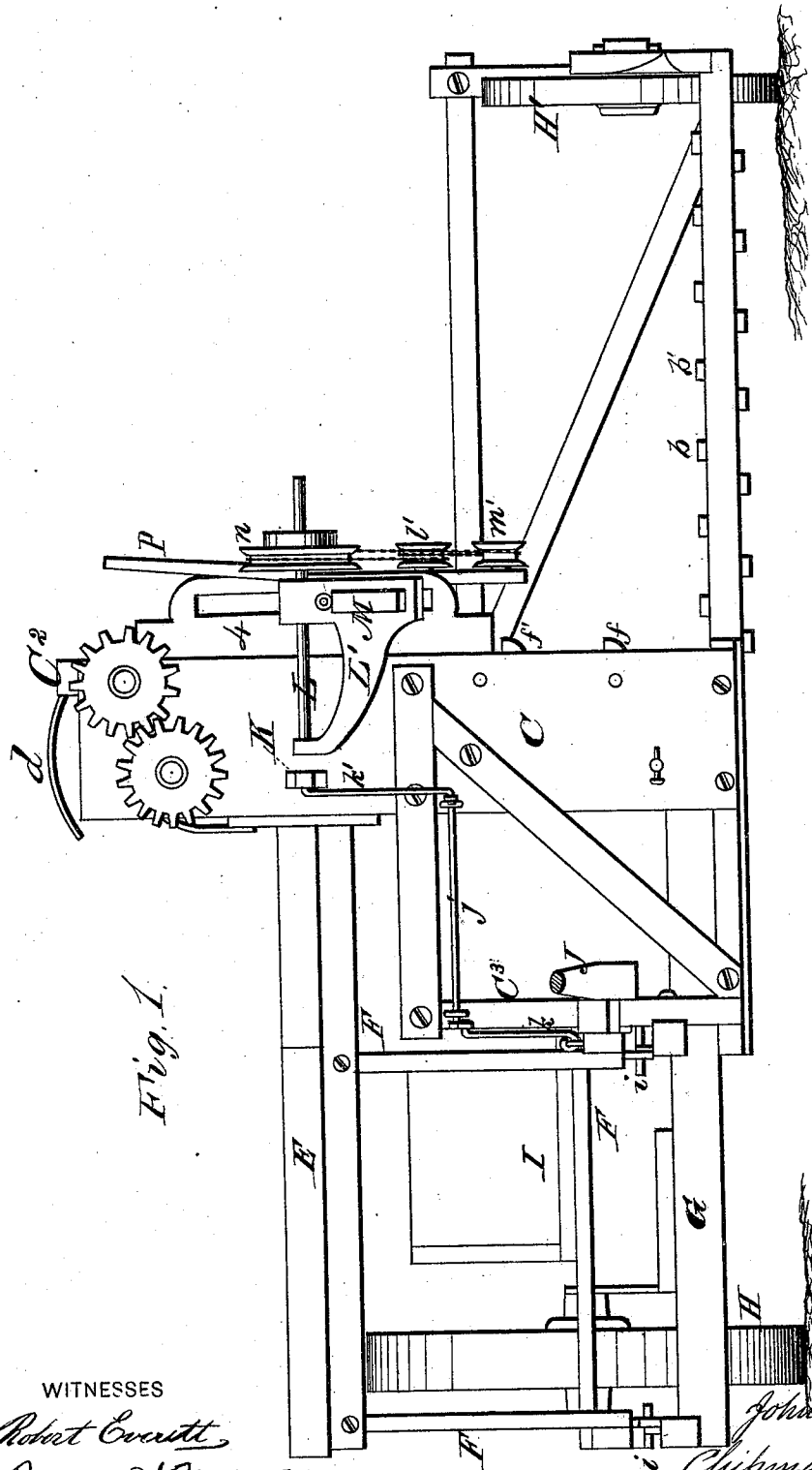


Fig. 1.

WITNESSES

Robert Everett,
Benjamin H. Morse

INVENTOR

John Werner Jr.

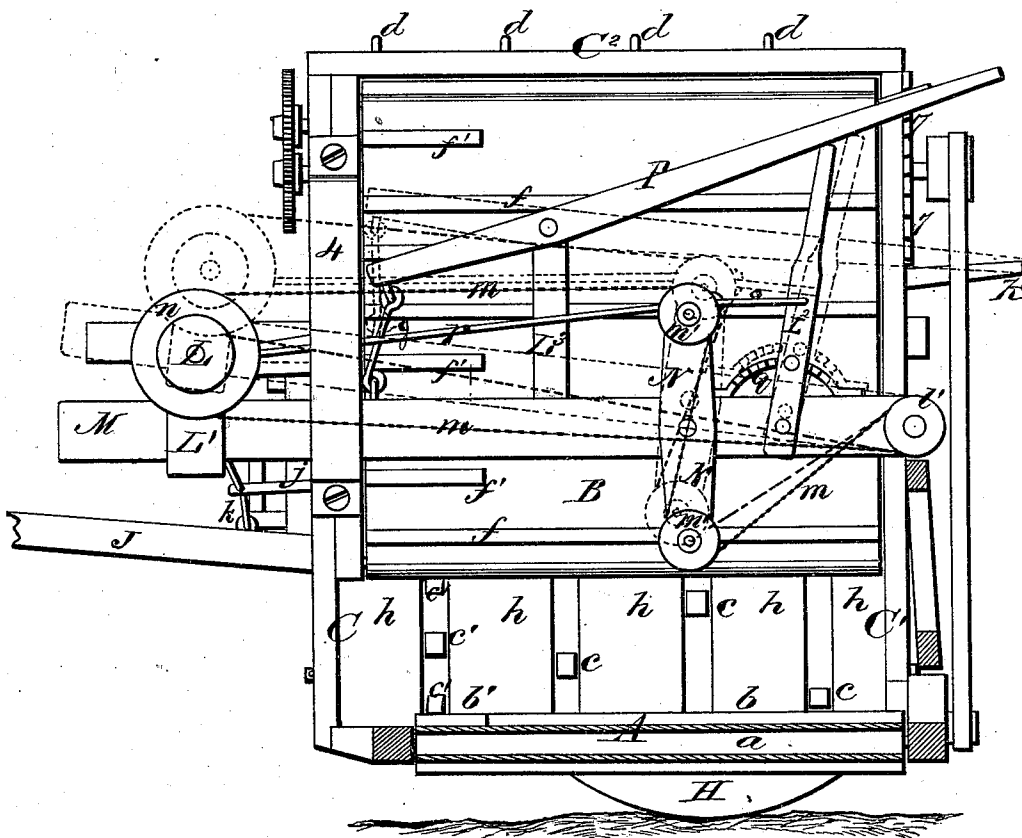
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Fig. 2.



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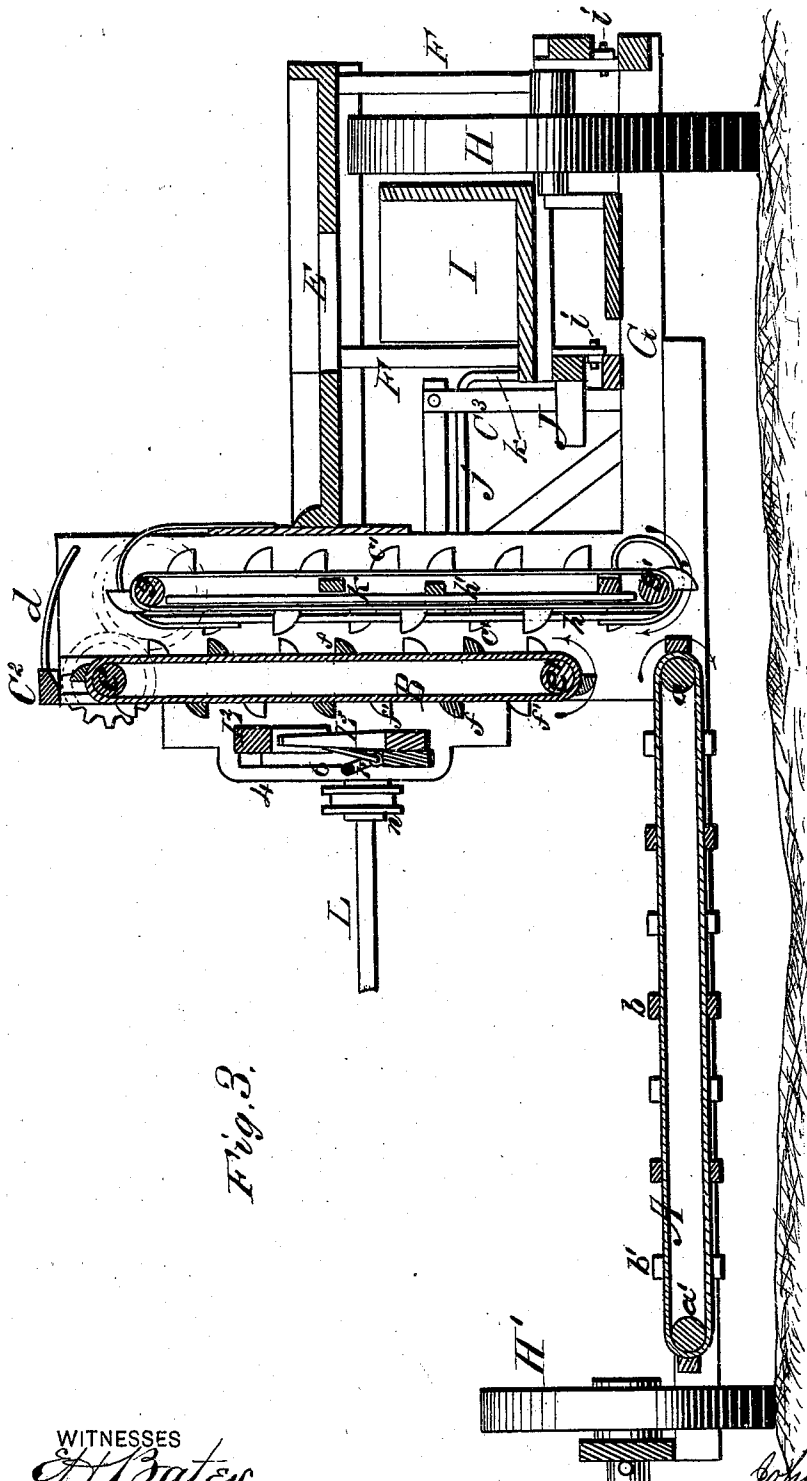


Fig. 3.

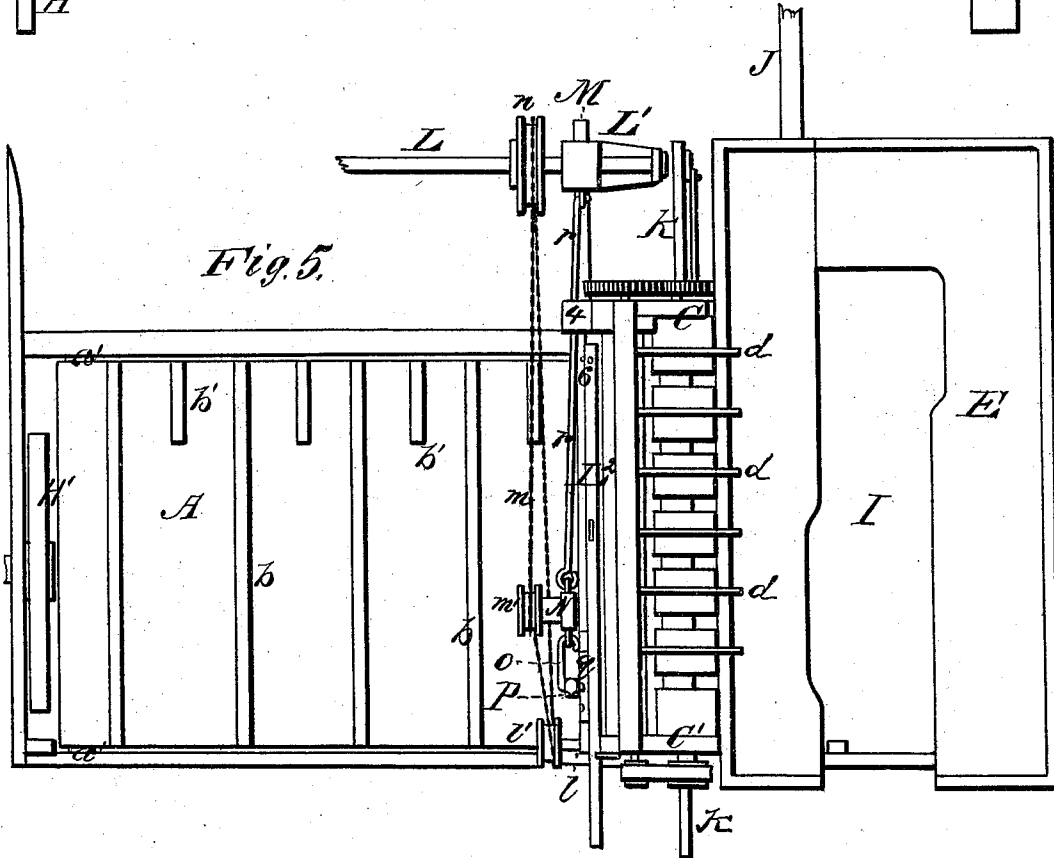
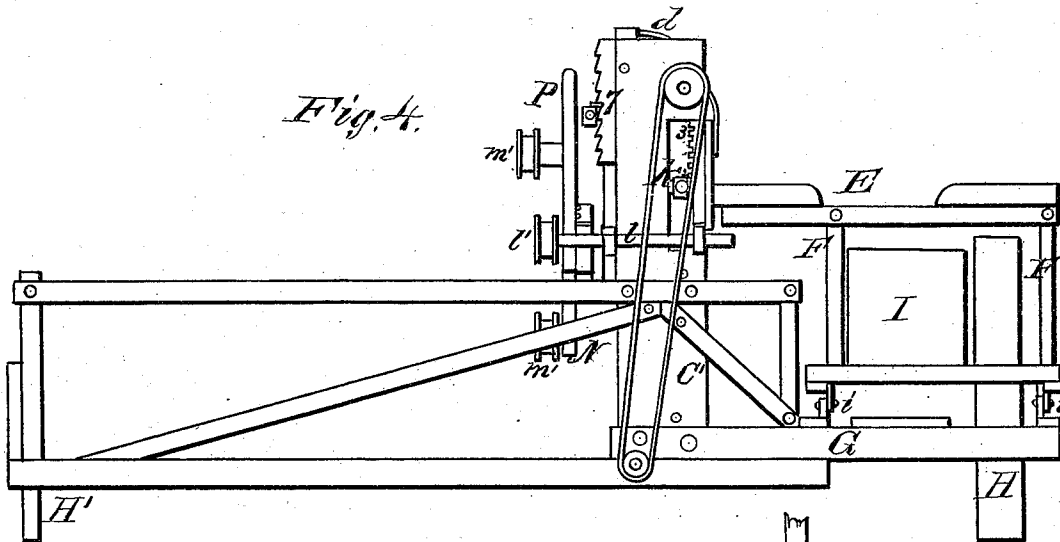
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UNITED STATES PATENT OFFICE.

JOHN WERNER, JR., OF PRAIRIE DU SAC, WISCONSIN.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. **174,330**, dated February 29, 1876; application filed December 4, 1875.

To all whom it may concern:

Be it known that I, JOHN WERNER, Jr., of Prairie du Sac, in the county of Sauk and State of Wisconsin, have invented a new and valuable Improvement in Harvesters; 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, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a front view of my harvester, and Fig. 2 is a longitudinal vertical sectional view thereof. Fig. 3 is a transverse vertical sectional view of the same, and Fig. 4 is a rear view. Fig. 5 is a plan view.

This invention has relation to machines for cutting grain, elevating the same, and depositing it upon a table, from which it is taken and bound.

The nature of my invention consists in an overhanging reel-carrier, having means applied to it for raising and lowering the reel, and also for moving the reel forward or backward, both of which operations can be performed by the attendant while the machine is moving, as will be hereinafter described.

In the annexed drawings, A designates an endless apron, which passes around rollers *a a'* at the ends of the platform-frame, and *b b'* designate slats or strips, which are secured across the apron A. The slats *b* extend entirely across the apron A, but the intermediate slats *b'* are short, and are secured to the front part of the apron A. The short slats assist the long ones in moving the grain (butts and heads) evenly to the elevating-apron B and elevating-teeth *c c'*.

C C¹ are uprights, which rise from the front and rear beams of the platform, and are connected together by means of a bar, C², from which a number of guard-teeth, *d*, extend, and prevent the grain at the upper end of the elevators from being blown about by the wind.

The elevating-apron B passes around horizontal rollers *e e'*, which have their end bearings in the uprights C C¹; and this apron has secured to it long and short elevating-strips *f f'*, which operate to carry up the grain evenly. The uprights C C¹ also afford end bearings for

two rollers, *g g'*, around which a number of narrow belts pass, to which the elevating-teeth *c c'* are secured. These teeth are arranged on the same general plan as the strips on the platform and elevating-aprons—that is to say, the teeth *c'*, which are on the front belt on rollers *g g'*, outnumber the teeth on the belts in rear of said teeth *c'*.

The elevating-teeth *c c'* move between upright strips *h*, and the belts of the teeth are backed by rigid strips *h'*, which hold the teeth to their work.

The two upper rollers *e g* of the elevators are geared together by means of twin spur-wheels, which give the same speed to both of them. The cut grain is delivered by the endless apron A to the elevating-teeth *c c'*, which, with the slatted apron B', carries up the grain and delivers it upon the grain side of a rectangular table, E. This table E is mounted upon a frame, F, which is jointed at *i i* to a frame, G, rigidly secured to the platform-beams. This latter frame is mounted upon the driving and transporting wheel H, and the grain end of the platform is mounted on a wheel, H'.

The binders' table is made for two men to work at, who stand on a platform, I, below the table E. J designates a draft-tongue, which is rigidly secured to the frame F, and to which one arm of a cranked shaft, *j*, is attached by means of a link, *k*. Shaft *j* has its end bearings in the front uprights C C¹, and it is connected by a link, *k'*, to the front end of a lever, K. This lever K extends through the two uprights C C¹, and its rear end has a handle formed on it, and also a ratchet-plate, 2, which latter engages with a rack-plate, 3. It is by means of the lever K that a person sitting in a seat at the rear of the machine is able to raise or depress the front of the platform according to the height of cut required.

L designates a reel-shaft, which has its bearing in a slide, L¹, adjustably applied on the front end of a long arm, M, which arm is pivoted to the grain side of the rear upright C¹, and passed through a long staple, 4, fixed to the front upright C.

P is a hand-lever, which is above the long arm M, and which has its fulcrum on a post, L², rising from a connecting-beam of the two

uprights C C'. The front end of the lever P is connected to the long arm M by means of a link, 6, and the rear handle portion of this lever has a pawl-plate secured to it, which is designed to engage with a rack, 7, on the rear upright C', and hold the reel at any desired height. The person sitting at the rear of the machine can conveniently raise or lower the reel, whether the machine be in motion or at rest.

At the rear end of the machine, and having its bearing in boxes fixed to the rear upright C', is a shaft, *l*, which receives rotation from the driving-wheel H by any suitable means, and which carries on one end a pulley, *l'*. Around this pulley *l'* passes a belt or endless chain, *m*, which is carried around pulleys *m'* on the ends of an equalizing-lever, N, pivoted to the long arm M. From these pulleys *m'* the chain *m* is carried forward and passed around a pulley, *n*, fixed on the reel-shaft L.

L² designates a hand-lever, which is pivoted to the arm M, and connected by a link, *o*, to the upper end of the equalizing-lever N. The hand-lever L² is within reach of a person sitting in the rear seat, and this lever is provided with a pawl, which is designed to engage with

a toothed segment, *q*, on arm M, and hold the reel in the desired position. A rod, *r*, connects the upper end of the equalizing-lever N to the slide M, so that by vibrating lever L² the reel can be moved forward or back any desired distance. The equalizing-lever and its pulleys maintain a tension on the chain *m*.

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

1. The reel-shaft L, having its bearings in the slide L', adjustably applied to the free end of an arm, M, in combination with the equalizing-lever N, lever L², and endless belt *m*, substantially as and for the purpose set forth.

2. The reel-shaft L, having its bearings in a slide, L', adjustably applied to the free end of a long arm, M, in combination with the adjusting-levers P L², the endless driver *m* and its pulleys, and the equalizing-lever N, substantially as described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOHN WERNER, JR.

Witnesses:

SILAS W. CAWTH, AMOS WILLIS.