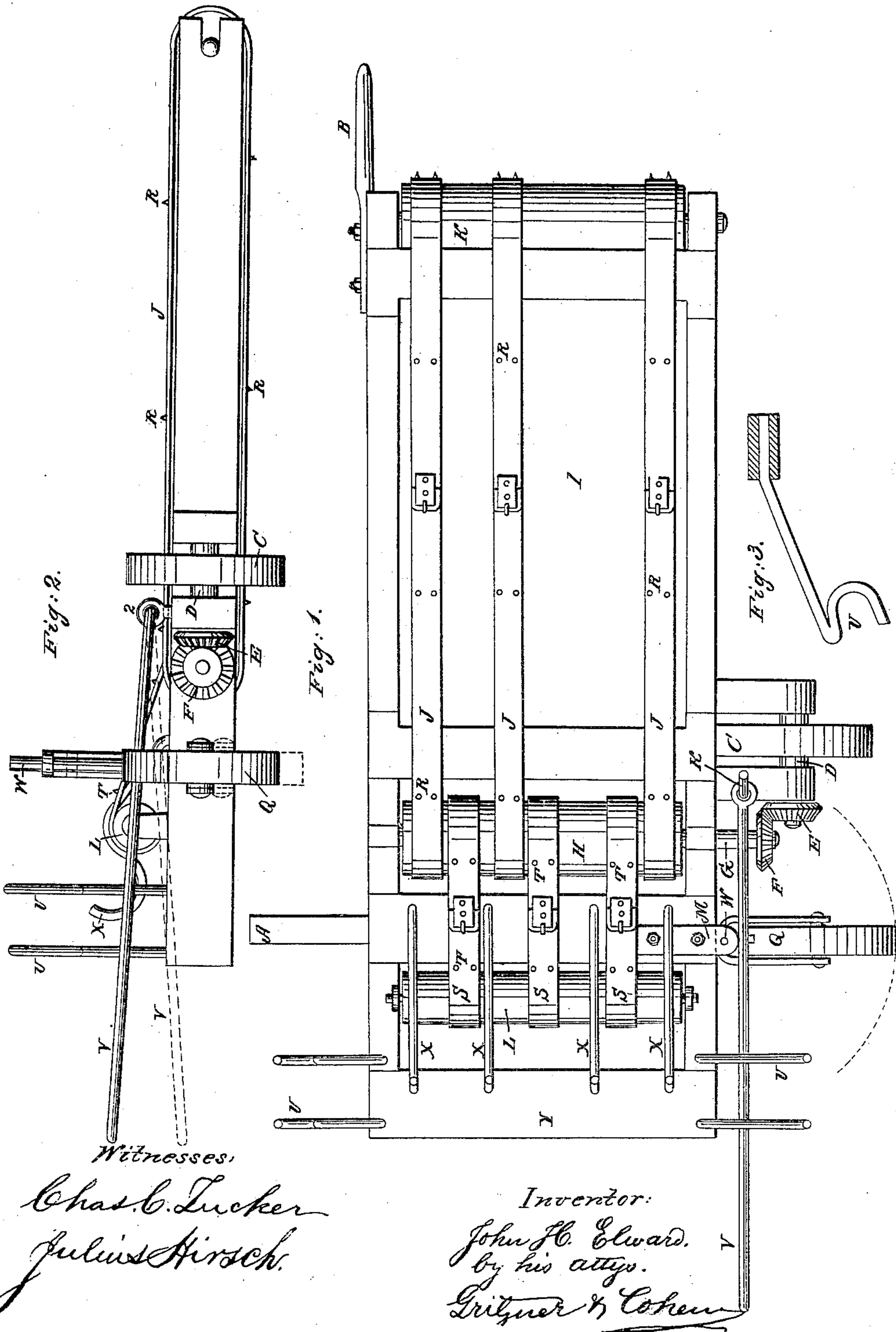


J. H. ELWARD.
Reaping Machine.

No. 44,858.

Patented Nov. 1, 1864.



UNITED STATES PATENT OFFICE.

JOHN H. ELWARD, OF OTTAWA, ILLINOIS, ASSIGNOR TO HIMSELF AND
WILLIAM H. W. CUSHMAN.

IMPROVEMENT IN REAPING-MACHINES.

Specification forming part of Letters Patent No. 44,858, dated November 1, 1864.

To all whom it may concern:

Be it known that I, JOHN H. ELWARD, of Ottawa, in the county of La Salle and State of Illinois, have invented a new and useful Improvement in Reaping-Machines; 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 represents a top view. Fig. 2 represents a side view. Fig. 3 represents a sectional view of hook U.

To enable others skilled in the art to construct this machine, I will give the following description of my invention.

A platform, I, is to be attached in the rear of the finger or cutting bar of a reaping-machine. It is attached by means of and supported by arms A and B, Fig. 1. The arm A is attached to the shoe or other arrangement which supports the inner end of the mowing-bar. The arm B fastens into the divider-shoe at the outer extremity of the cutting-bar. It is intended that this platform shall rake the grain as it falls upon it to the end, whence it is deposited in the hooks X, as shown in Fig. 2. Heretofore the raking apparatus has been driven by the main driving-wheels of the reaping-machine, thereby so incumbering the machine with gearing for raking purposes as to make it nearly or wholly unfit to be of use. Now, I propose to overcome this difficulty by making the platform operate its own machinery, which I do in the following manner: First, by the arrangement of the wheel C, through which passes the shaft D, upon the end of which is attached the bevel-gear E. This meshes into the bevel-gear F, which is secured to the end of the shaft G, which passes into and is fastened firmly in roller H. This wheel C carries, when moving forward, the whole weight of platform I, the weight of which causes the wheel to revolve, which, by the means of the gears E and F, causes the roller H to revolve, thereby causing the endless belts J J J and S S S to move said belts, also operating rollers K and L. The belts J J J, moving lengthwise over the platform, receive the grain as it falls upon the platform, hold it firmly by means of the pins R R R, and convey it to the

roller H, where it is received by the belts S S S, being held at the same time by the pins T T T, by which it is conveyed up the inclined plane to the top of roller L, when it is deposited on the hooks X.

Upon the small platform Y, I station two men, one at each extremity, who take the grain from hooks X X X X and place it in the hooks U U, for the purpose of binding. By this arrangement one man is able to do the work that three men usually do when they take the grain from the ground, as they have nothing to do but stand upon the platform Y and make their band until the bundle becomes of sufficient size, when they pass the band around the bundle, lifting it from the hooks X X X X, depositing it in the hooks U U, when the band may be drawn without removing their hands from the bundle. When the band is fastened the bundle, by a slight motion, is tipped from the hook and falls upon the ground, out of the way of the machine. By these means a large amount of labor is saved. Now, the shaft of the wheel C being immovable, which it must be in order to cause the wheel C to drive the rollers and belts, in turning the machine the wheel C would be likely to cramp and break. To avoid this, I use the swivel-wheel Q, which is attached to the frame of platform I, by means of two bars, M, Fig. 1, which bars support the swivel-shaft W of the wheel Q in such a manner as to permit said shaft vertical play to a limited extent. While the machine is moving forward the swivel-wheel Q is allowed to play up and down at will upon the shaft W, without having any weight upon it; but when in turning the machine around it is necessary to take the weight off the wheel C, I do so by the lever V, which is attached to loop 2 in one of the supporting-braces of wheel C. The lever V then passes over the top of said braces of wheel A, and when it is necessary to turn the machine around, one of the men who bind depresses the outer end of the lever V, thus depresses the swivel-wheel Q, raises the wheel C, and the machine turns upon the swivel-wheel Q, thereby avoiding all damage which otherwise might be done to wheel C or the other parts of the machinery.

Having thus fully described the nature of

my invention, what I claim herein as new, and desire to secure by Letters Patent, is—

1. The combination of the rollers K, H, and L, and their endless belts, when the same are operated by the supporting-wheel C of the platform and independently of the main driving-wheels of the machine, substantially as herein described.

2. The application to the rear side of the platform of two supporting-wheels, C Q, one being a swivel-wheel, the other a fixed wheel,

substantially in the manner and for the purposes described.

3. The combination of the rollers K H L and their endless aprons, with the hooks X and U, when constructed and operated substantially in the manner and for the purposes described.

J. H. ELWARD.

In presence of—

T. R. COURTNEY,

A. LYNCH.