C. N. Owen.
Mower.

No. 107,804. Patented. Sep. 27. 1870.

Fig. 1.

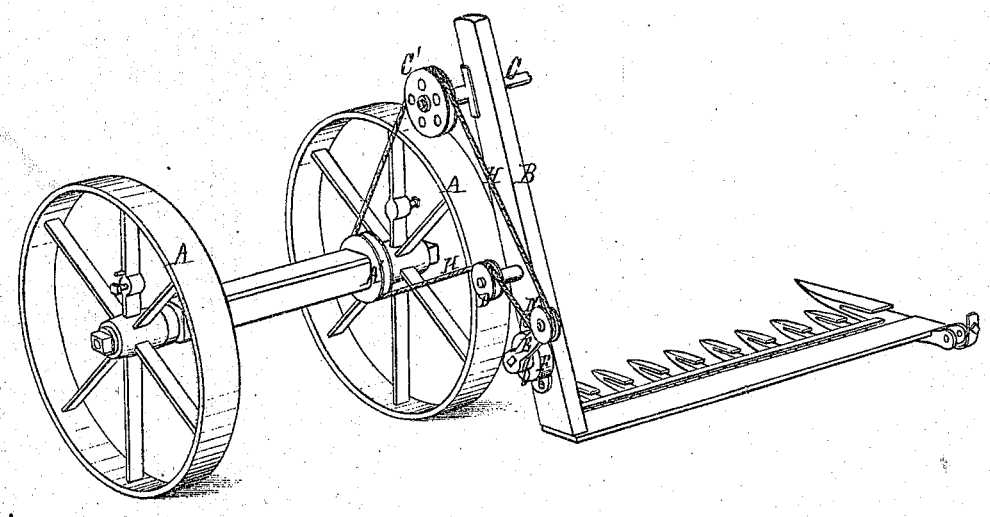
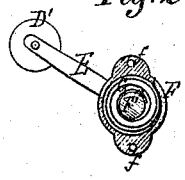


Fig. 2.



Witnesses.
H H Doubleday
N B Smith

Charles N. Owen
by his attorney
A. M. Smith

UNITED STATES PATENT OFFICE.

CHARLES N. OWEN, OF SALEM, OHIO.

IMPROVEMENT IN HARVESTER-REELS.

Specification forming part of Letters Patent No. **107,804**, dated September 27, 1870.

To all whom it may concern:

Be it known that I, CHARLES N. OWEN, of Salem, county of Columbiana, State of Ohio, have invented a new and useful Improvement in Harvester-Reels, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, making a part of this specification, in which—

Figure 1 is a perspective view of a reel having my improvement attached, and Fig. 2 is a detached view of the device taken from the inner or open side.

The invention relates to the provision of means by which the tension of the driving chain or belt may be increased or diminished at the will of the operator, while at the same time the necessary adjustment of the reel may be made, and yet a proper working tension of said belt be maintained.

The invention consists in the combination, with an arm carrying a tension-pulley, of a coiled spring, inclosed in a stationary shell or case, the parts being constructed and arranged in a novel manner, whereby certain advantages are derived, as will be fully set forth and explained.

In the drawing, A A represent the main driving-wheels of a harvester. B is the reel post or standard, which is shown mounted upon the inner or heel end of the cutter-bar, which is in the position usually occupied in a rear-cut machine. C is the reel-shaft, adjustably supported upon reel-post B. C′ is a grooved pulley or sheave, keyed to reel-shaft C. A′ is a driving-sheave, rigidly attached to one of the driving-wheels. D is a loose grooved guide-pulley, mounted upon reel-post B. D′ is another pulley, mounted upon a vibrating arm, E, and serving as a tension-pulley, in a manner that will be hereinafter explained. F is a cylindrical case or shell, provided with ears *f*, and secured to the reel-post by bolts passing through said ears, or by equivalent devices. The inner face of shell F, which is next to the post B, is open, as is shown in Fig. 2, while the outer end is closed by a head, the central portion of which is expanded into a short sleeve, *f′*, (shown in Fig. 1,) in which a bearing is formed for a short stud-shaft, F′. (See Fig. 2.) The stud-shaft F′ extends beyond the outer face of the sleeve, and is squared, so as to fit closely a corresponding square perforation or socket in one end of arm E, which is mounted upon this shaft, as is shown in Fig. 1.

G is a coiled spring, one end of which is fastened to shaft F′, the other end being attached to the inside of shell F in any usual or desired manner. H is a driving belt or chain, passing over the pulleys A′, C′, D, and D′, substantially in the manner shown in the drawing, although I do not intend to confine myself to the precise arrangement of pulleys shown.

From the foregoing description it will be readily seen that any desired amount of tension may be given to the belt H by simply winding up spring G, using arm E as a crank or wrench for that purpose, and that after this has been done the pulley D′ will at once take up any slack that may be occasioned by adjusting the reel or otherwise.

Among the advantages growing out of my improvement are compactness of form and certainty of operation, arising from the length of spring that can be used, the ease with which the degree of tension can be changed without the employment of tools, and the great distance which the reel can be moved without unduly slackening the belt, as it is apparent that arm E, carrying with it pulley D′, can be made to describe nearly a half-circle from the position in which it is shown in Fig. 1, keeping the belt under tension during its entire passage.

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

In combination with a harvester-reel, the coiled spring G, arranged within the shell F, the stud-shaft F′, vibrating arm E, and pulleys D′ D, these parts being arranged for joint operation, substantially as set forth.

C. N. OWEN.

Witnesses:

EDWARD KENNETT,

J. OSCAR TABER.