A. Wood,
Mower.

No. 46,170 Patented Jan. 31, 1865

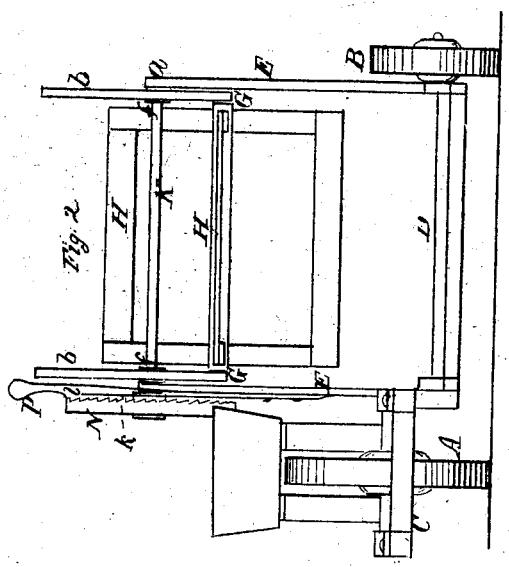

Fig. 2.

Witnesses:
R. F. Osgood
Jay Hyatt

Alonzo Wood,
By J. Fraser & Co
Attys.

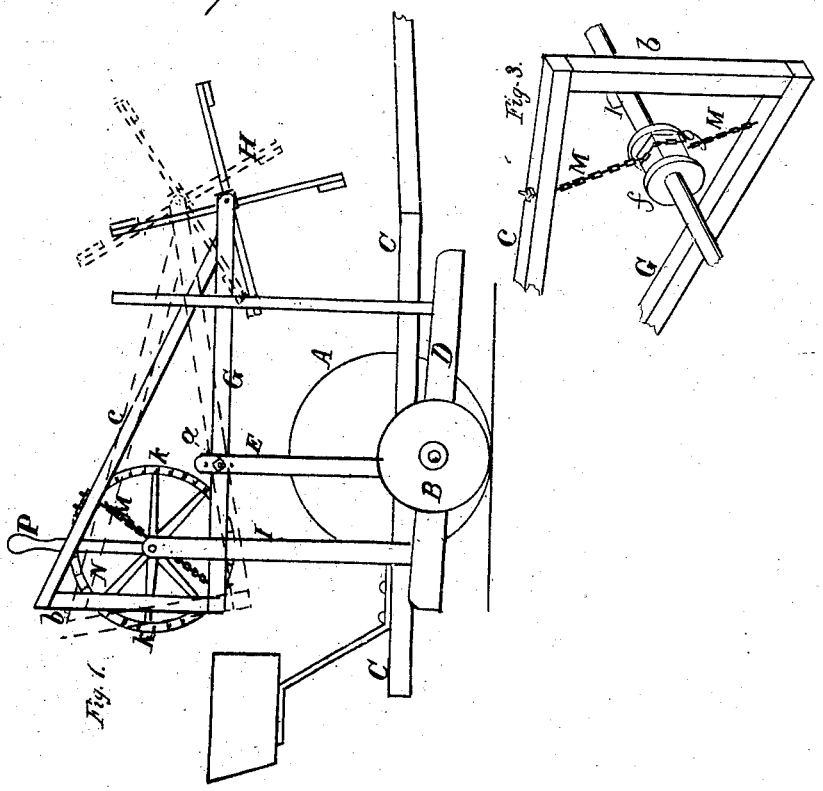

Fig. 1.

Fig. 3.

UNITED STATES PATENT OFFICE

ALONZO WOOD, OF HENRIETTA, NEW YORK.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. **46,170**, dated January 31, 1865.

To all whom it may concern:

Be it known that I, ALONZO WOOD, of Henrietta, in the county of Monroe and State of New York, have invented a new and useful Improvement in Adjusting the Reels of Harvesters; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

Figure 1 is a side elevation of a harvester provided with my improvement; Fig. 2, a rear elevation of the same; Fig. 3, a perspective view of the device for adjusting the arms that support the reel.

Like letters of reference indicate corresponding parts in all the figures.

In fields of grain the straw is usually of varying height, being tall in some portions and short in others. In order to make the reel work properly in inclining the straw to the table or platform, it is necessary to raise and lower it to adapt it to these varying heights of the straw. In most harvesters the reel is made to adjust higher or lower by removing a bolt from one adjusting-hole to another; but in such cases it is obvious that the reel is not automatically under control of the driver, but is fixed in its position and cannot be adapted to the purpose before indicated.

It is the object of my invention to so arrange the reel that it can be raised or lowered at pleasure by the driver without removing from his seat by merely turning a hand-wheel in such a manner as to adapt the same to the varying height of the grain as it is being cut.

As represented in the drawings, A B are the supporting-wheels; C, the main frame, and D the table or platform, which parts do not differ essentially from the corresponding parts in ordinary harvesters.

On each side of the table or platform D, at a suitable position, are erected standards E E, to whose tops are jointed, at *a*, arms G G. For the purpose of bracing and strengthening the arms I prefer to connect with them at the rear vertical end pieces, *b b*, and angular pieces *c c*, which connect near the front end, the whole forming triangles, as clearly represented; but this is not absolutely essential, and any desired modification may be employed. The front ends of the arms G G form the bearings for the ordinary reel, H, which is operated in any usual or desirable manner.

In the rear of the standards E E are other similar standards, I I, which form bearings for a shaft, K, having at opposite ends, in a position corresponding with the arms, pulleys *f f*, Fig. 3, provided with square bearings *g g*; or, what is the same in effect, the shaft itself may be made square, and the pulleys dispensed with. Around the square bearings wind chains or cords M M once or more, so as to prevent slipping, one end connecting with the arms G G, while the other connects with the angular braces *c c*, or their equivalent.

It is obvious that as the shaft K is turned in one direction or the other the chains will be correspondingly wound or unwound and the arms G G moved up or down, thereby adjusting the reel H higher or lower.

In order to operate the shaft K easily I secure rigidly on its end, within reach of the driver's seat, a hand-wheel, N, similar to the hand-wheel of a car-brake. On its inner edge I provide the rim of this wheel with ratchet-teeth *k k*, into which catches the pawl *l* of a spring-lever, P, that yields away from the wheel. In raising the reel, (as indicated by red lines, Fig. 1,) it is only necessary to take hold of the hand-wheel and move it forward, the spring-lever yielding to allow it to pass and holding it in any desired position when raised; but in lowering the reel the lever is seized and held back, thus allowing the hand-wheel to turn freely, and the reel will fall of its own weight.

It is manifest that an equivalent device to the chains M M may be employed with a similar effect—such, for instance, as a cog-rack secured to the arms G G, with a pinion on shaft K gearing with it.

The advantages of this arrangement are obvious. The driver has the reel completly under his control, and can raise or lower it at pleasure and with but little effort by either turning the hand-wheel or depressing the lever. He can thus cause the reel to work uniformly on the inequality of height of the straw in different parts of the field—an effect that, so far as I am aware, has never before been accomplished. In all harvesters with which I am acquainted the adjustment of the reel has been arbitrary and without reference to adapting it to the inequality of height of the straw in the same field, the adjustment being accomplished while the harvester is at rest, and by chang-

ing a bolt from one hole to another, or in some equivalent way.

I do not claim, broadly, adjusting the reel of a harvester higher or lower; but

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

Adjusting the reels of harvesters so as to adapt them to the inequality of height of the straw in a field of grain by means of the arms G G, hand-wheel N, chains or cords M M, or equivalent, and pawl-lever P, or equivalent, the whole so arranged that the driver can operate the same without stopping the machine, substantially as herein set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

ALONZO WOOD.

Witnesses:
R. F. OSGOOD,
JAY HYATT.