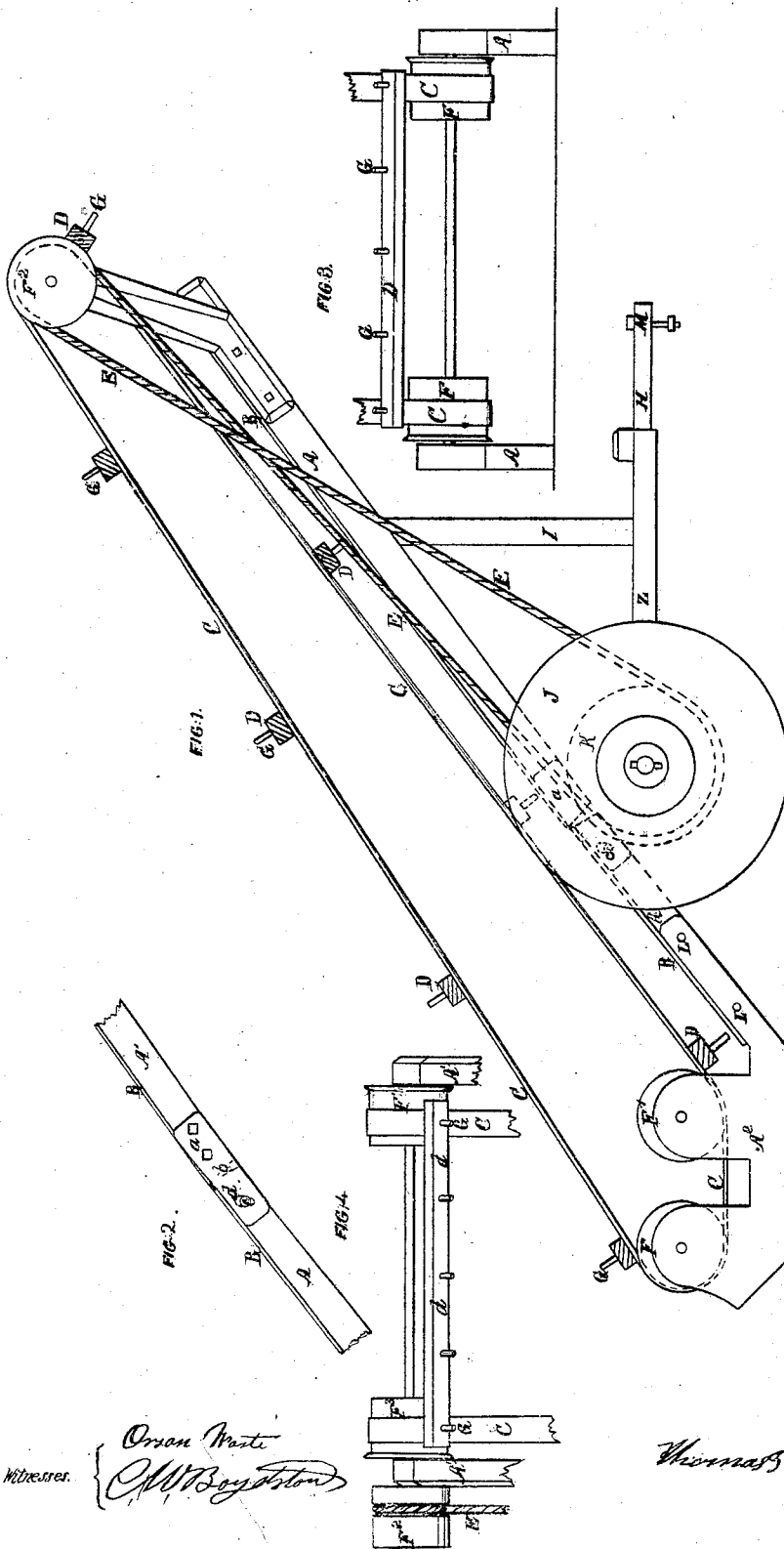


*T. J. Wallace,
Hay Loader.*

No. 25459

Patented, Sep. 13, 1859.



Witnesses:
Orson Pratt
Chas. W. Boynton

Thomas Wallace

UNITED STATES PATENT OFFICE.

THOMAS J. WALLACE, OF CAMERON, ILLINOIS.

IMPROVEMENT IN MACHINES FOR RAKING AND LOADING HAY.

Specification forming part of Letters Patent No. **25,459**, dated September 13, 1859.

To all whom it may concern:

Be it known that I, THOMAS J. WALLACE, of Cameron, county of Warren, State of Illinois, have invented an Improved Hay Raker and Loader; and I do hereby declare that the following is a full and exact description of its construction and operation, reference being had to the accompanying drawings, and to the letters of reference marked thereon, so as to enable others skilled in the art to make and use my invention.

Figure 1 represents a side view, and Figs. 2, 3, and 4 detached views, of parts of my improved hay raker and loader.

The main frame A' I Z of the machine rests upon the shaft of the two driving-wheels, J J, and is provided with a tongue, H, the front end of which is to be attached to the rear of a wagon or cart by means of connecting-bolt M. A sled-frame, A A², is hinged to the part A' of the main frame at *b*, by having two pivots, *c*, (one projecting from each side of the upper end of the sled-frame,) arranged in slots *d* in arms *a*, extending from the sides of the lower end of the part A' of the main frame. The front portion of the sled-frame A inclines upward in line with the inclined portion A' of the main frame, while its rear part is formed into runners A², which support the bearings of the shafts of two pairs of rolls, F F', the center lines of the shafts being arranged in a plane parallel to the bottom faces of the runners, and consequently parallel to the surface over which the sled passes. Another pair of rolls, F³, have their bearings in arms extending upward from the top of the part A' of the main frame. Two bands, C C—one near each side of the sled and main frame—pass over each set of rolls F F' F³, and rake-bars D are arranged across the machine and are fastened at their ends to the bands C C. Rake-teeth G are inserted into said rake-bars so as to project outward, and are of such length as to nearly touch the surface of the platform B B when, during the revolutions of the bands, the rake-bars and teeth are caused to travel over said platform, which is made of sheet-iron or similar material, and is made in two pieces—one to cover the part A' A' of the main frame, and the other the inclined sled-frame A, so that the two portions form one smooth and inclined surface, which will stand considerable wear.

Motion is transmitted to the system of bands and rake-bars by means of a driving-band, E, passing over a large pulley, K, inside of one of the driving-wheels J, and a pulley, F², at the outer end of the shaft of the pulleys or rolls F³, at the upper end of the main frame. (See Fig. 4.) The rolls F F' F³ have projections at their outer sides to keep the bands C C in place. The driving-band E is crossed so as to reverse the motion of roll F² in relation to the motion of the driving-wheels J and driving-pulley K. By this means, when the machine is drawn along the bands C C and rakers attached to them will always move in the proper direction to gather the hay on the ground between the sled-runners and move it up the inclined platform B B and drop it over the upper edge of said platform onto the wagon or cart below. The sled, being hinged to the main frame, will freely pass over any inequalities of the ground or stones and other obstructions without disturbance in the operation of the machine. Whenever one or both of the driving-wheels sink into holes or indentations in the soil the sled can yield upward, the pivots *c* moving up in their slots *d*, and thus the weight of the machine can never come to rest on the sled frame or rear end of the machine, which would be the case if the frame of the machine were rigid instead of being hinged. In this last case, whenever the wheels happened to come across a hole or indentation in the ground, the machine would be supported in front by the tongue resting upon the cart and in rear by the sled, so that the wheels would be supported above the ground, and would consequently cease to revolve for the time being, thus stopping the whole raking mechanism. This difficulty is obviated, however, in my machine by means of hinging the frame as set forth, and by providing it with the slots *d*.

It will be seen that in consequence of the above-described arrangement of the shafts of rolls F F' the rakers, as they come around the rolls F, will pass a short time horizontally over the ground before they begin to rise, thus giving them time to gather all the hay on the ground between the runners of the sled.

Another great advantage of my raker and loader consists in its being fastened to the cart or wagon by a single joint. In this way the rear part of the raker can be lifted by stumps

and stones or into corners without changing the position of the cart or wagon to which it is attached.

Having described by improved hay raker and loader, what I claim, and desire to secure by Letters Patent, is—

1. A hay raker and loader all the parts of which are constructed, arranged, and combined together for joint operation substantially as described.

2. The combination of the inclined part A, with its pivot *e*, with the part A' of the main frame and slot *d*, substantially as and for the purposes set forth.

THOMAS J. WALLACE.

Witnesses:

ORSON WASTE,
C. W. BOGSTON.