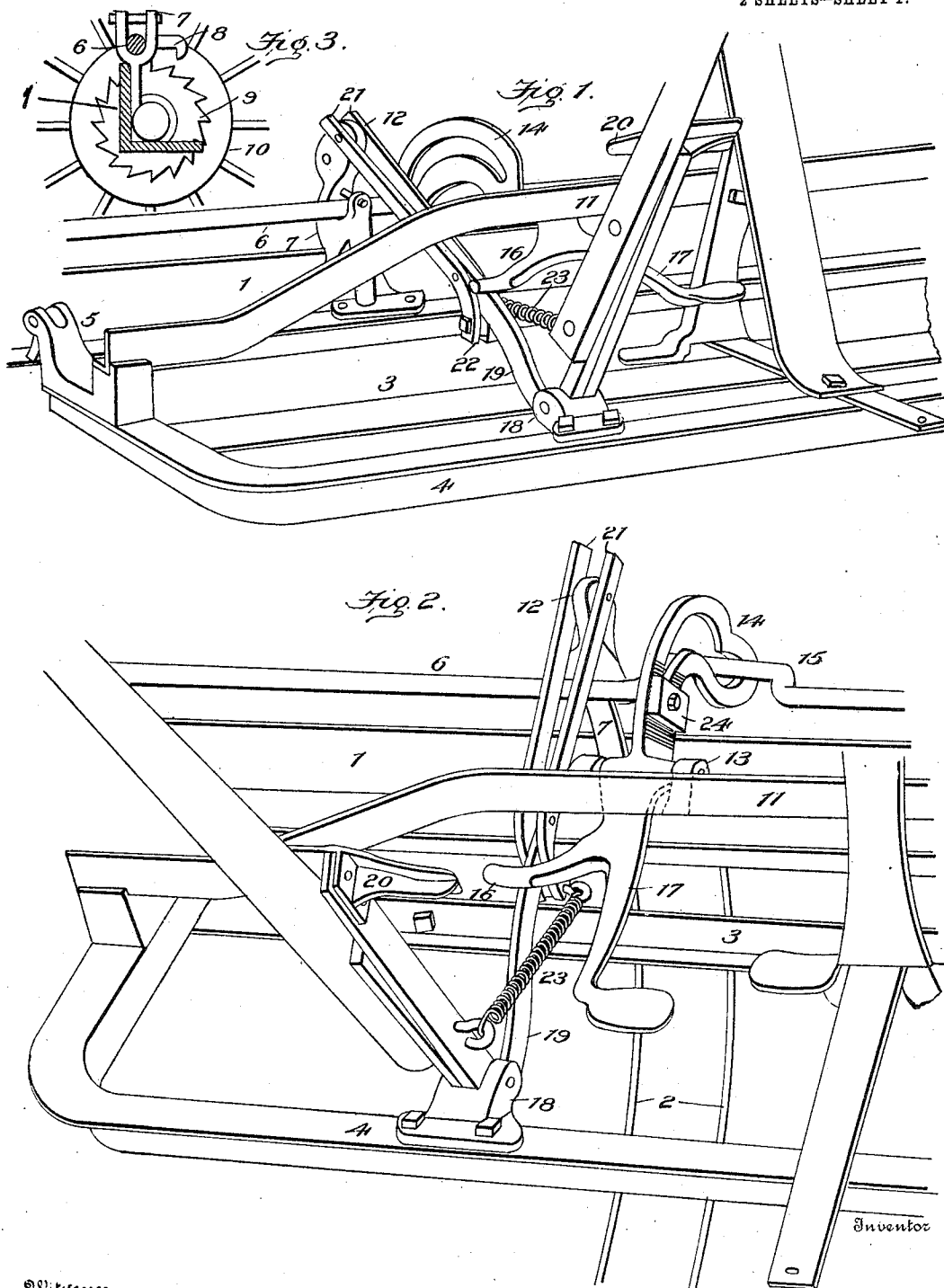


No. 828,692.

PATENTED AUG. 14, 1906.

L. E. WATERMAN.
HORSE HAY RAKE.
APPLICATION FILED FEB. 10, 1904.

2 SHEETS—SHEET 1.



Witnesses

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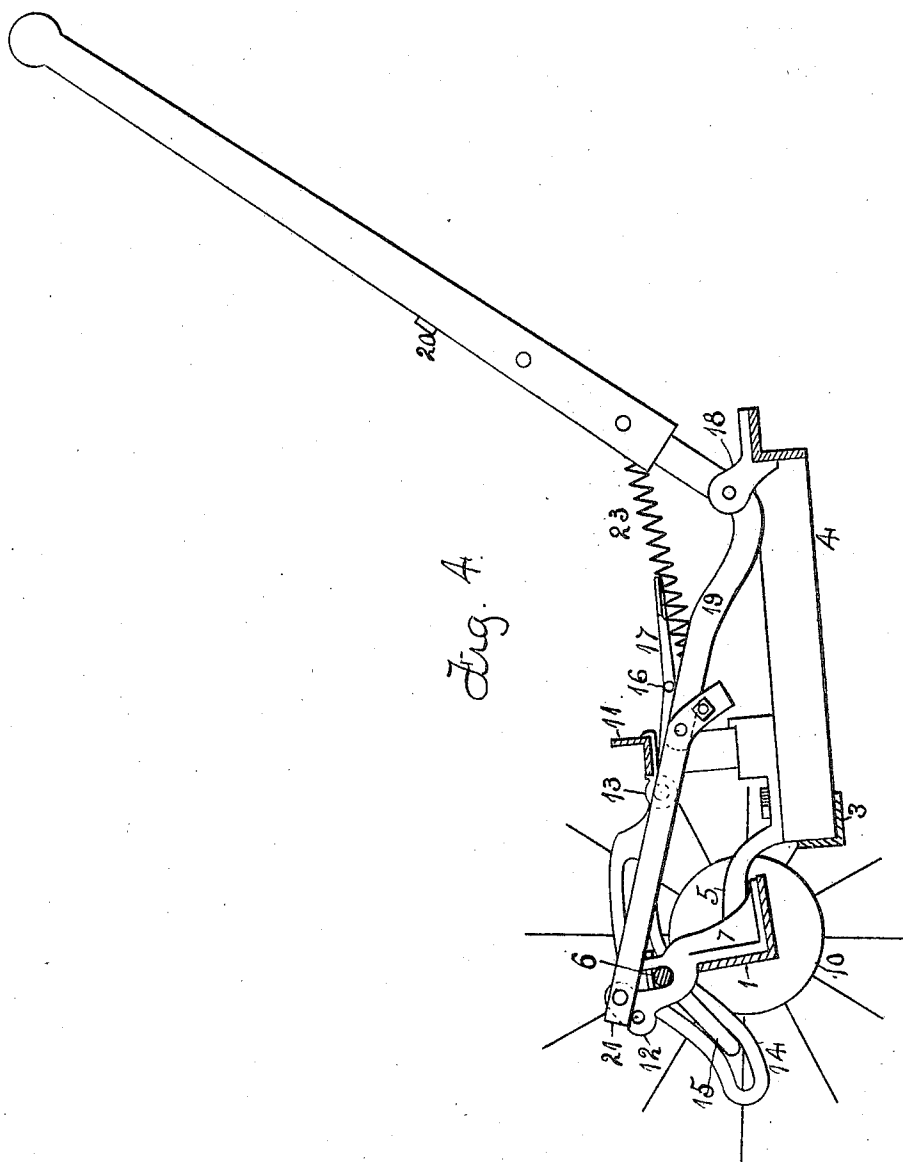
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

LEWIS E. WATERMAN, OF ROCKFORD, ILLINOIS, ASSIGNOR TO EMERSON MANUFACTURING COMPANY, OF ROCKFORD, ILLINOIS, A CORPORATION OF ILLINOIS.

HORSE HAY-RAKE.

No. 828,692.

Specification of Letters Patent.

Patented Aug. 14, 1906.

Application filed February 10, 1904. Serial No. 192,865.

To all whom it may concern:

Be it known that I, LEWIS E. WATERMAN, a citizen of the United States, residing at Rockford, in the county of Winnebago and State of Illinois, have invented certain new and useful Improvements in Horse Hay-Rakes, of which the following is a specification.

This invention relates to a class of horse hay-rakes in which the teeth are held down in working position and just after they are released a connection is formed between the carrying-wheels and rake-head in order that the teeth may be raised to dump the load.

In the accompanying drawings, Figures 1 and 2 are perspective views of my improved horse hay-rake. Fig. 3 is a vertical section of the rake-head, showing the stub-axle and clutch connection between the rake-head and supporting-wheels. Fig. 4 is a vertical transverse section.

The framework of my improved horse hay-rake is old and comprises the rake-head 1, rake-teeth 2, and the lengthwise angle-bars 3 and 4, forming the tongue and seat supporting frame which has a pivotal connection with the rake-head by the brackets 5.

A rod 6 extends in the lengthwise direction of the rake-head and is supported in brackets 7. The free ends 8 of the rod are in hook form and adapted to engage the teeth of the ratchet-wheels 9, revolving with the supporting-wheels 10. An angle-bar 11 extends in the lengthwise direction of the tongue-supporting frame. A bracket 13 is supported by the angle-bar 11. A cam 14 is pivotally supported by the bracket and engages the crank portion 15 of the rod 6. This cam has a forwardly-extending portion 17, forming a foot-lever and a laterally-extending arm 16.

To the rake-head is secured a bracket 12, having a number of holes. A bracket 18 is secured to the angle-bar 4 of the tongue-supporting frame. A link 19 has a pivotal connection with the bracket 18 intermediate its ends. One end is provided with a foot-rest 20 and the other end has a pivotal connection with the links 21, and the other ends of these links have a pivotal connection with the bracket 12, secured to the rake-head. The forward ends of the links 21 are curved

downward, and a stop 22 is supported thereby. A spring 23 has one end connected to the links 21 and to the link 19 between its pivotal connection with the bracket 18 and the foot-rest. The laterally-extending arm 16 overlies the link 19 near its pivotal connection with the links 21. The action of the spring 23 is to hold the link connection between the rake-head and tongue-supporting frame in lock, and also holding the arm 16 elevated, which will hold the hooked ends 8 of the rod 6 free of the toothed ratchet-wheels 9.

When it is desired to dump the load, the attendant with his foot presses down on the foot-lever 17, which will move the arm 16 down against the linked connection between the rake-head and tongue-supporting frame, thereby breaking the lock. A further movement of the foot-lever will oscillate the rod 6 and cause the hooked ends 8 to engage the ratchet-wheel of the revolving supporting-wheels, and as the rake is drawn forward a connection is formed between the rake-head and supporting-wheels which will cause the rake-head to be turned, thereby raising the teeth and dumping the load.

The cam 14 will move the rod so as to liberate the hooked ends from the ratchet-wheel when the rod comes in contact with the stop 24. The stop is adjustable in its connection with the cam in order that the connection between the rod and ratchet-wheel may be broken when the teeth have reached the proper elevation. By this arrangement it is clear that the link connection must be broken before a connection is formed between the rake-head and supporting-wheels, for if the connection with the wheels could under any circumstances be made before the link connection was broken the operative parts would be broken.

I claim as my invention—

1. In a horse hay-rake, the combination of a rake-head, a tongue-supporting frame, a double-link connection between the rake-head and tongue-supporting frame, a stop holding the link connection in lock, a cranked rock-shaft, and a pivoted combined cam and foot-lever having an arm engaging the crank of the rock-shaft.

2. In a horse hay-rake, the combination of a rake-head, a tongue-supporting frame, a double-link connection between the rake-head and tongue-supporting frame, a stop
5 holding the link connection in lock, a cranked rock-shaft, a pivoted combined cam and foot-lever having an arm engaging the crank on the rock-shaft and a spring connection between the members of the link connection.

LEWIS E. WATERMAN.

Witnesses:

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