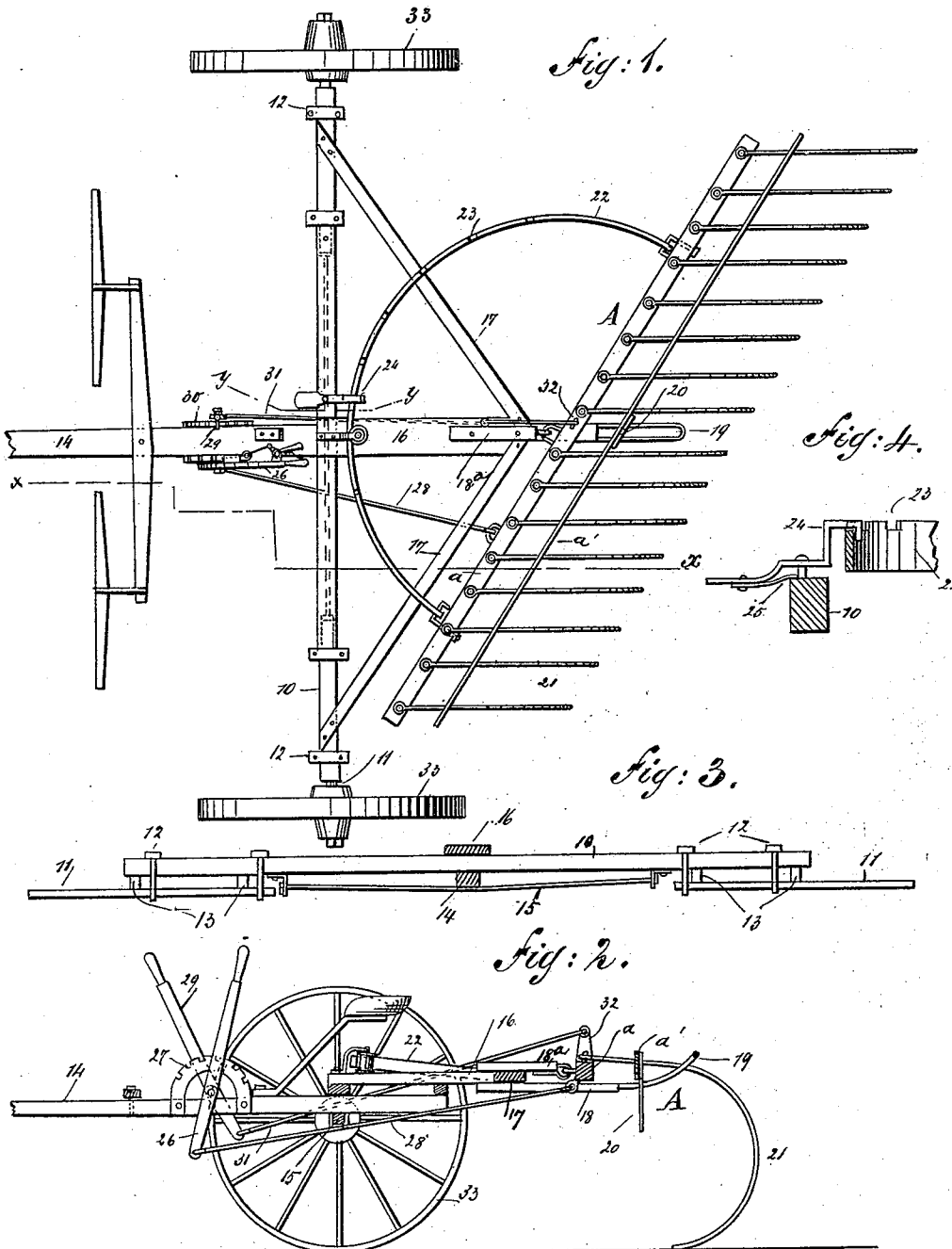


(No Model.)

J. H. SOEHREN.
HAY RAKE.

No. 463,461.

Patented Nov. 17, 1891.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN H. SOEHREN, OF EVERLY, IOWA.

HAY-RAKE.

SPECIFICATION forming part of Letters Patent No. 463,461, dated November 17, 1891.

Application filed April 14, 1891. Serial No. 388,848. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. SOEHREN, of Everly, in the county of Clay and State of Iowa, have invented a new and useful Improvement in Hay-Rakes, of which the following is a full, clear, and exact description.

My invention relates to an improvement in hay-rakes, and has for its object to provide a simple, durable, and economical implement, and to provide a means whereby the teeth will normally stand straight behind the axle, and also whereby the entire rake may be conveniently and expeditiously shifted to stand at a right angle to the line of draft or diagonally thereto, in which latter position the windrow may be formed either to the right or to the left of the implement, as the operator may desire, thereby greatly facilitating the work of the loader following the rake.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the rake. Fig. 2 is a longitudinal section taken practically on the line *xx* of Fig. 1. Fig. 3 is a side elevation of the center beam and stud-axes attached thereto, and Fig. 4 is a transverse section taken practically on the line *yy* of Fig. 1.

The main frame of the implement consists of a transverse beam 10, to the under side of which at each end a stud-axle 11 is secured, preferably by means of clips 12, as illustrated in Fig. 3. The stud-axes at their inner ends are preferably spaced somewhat from the beam 10 by means of interposed blocks 13. To the under side of the beam 10, preferably at the center thereof, the inner end of the tongue 14 is bolted or otherwise secured, and the beam is longitudinally braced by a truss-rod 15, located at the under side of the said beam and secured thereto near the inner ends of the axles 11. The truss-rod 15 is also secured to the tongue and serves as a partial support therefor. The construction of the frame is completed by securing transversely upon the upper face of the beam 10 at its cen-

ter a plate or platform 16, which plate or platform is rigidly attached and extends horizontally rearward some distance. It is braced at its rear end by diagonal bars 17, which are also secured to the main beam 10 of the frame near the ends thereof, as illustrated in Fig. 1. The driver's seat is located over the plate or platform 16. A beam 18 is secured upon the under face of the plate or platform 16 and extends some distance rearward beyond the end of the plate or platform, being provided at its rear extremity with a longitudinally-extending slot formed by an upwardly-curved staple 19. A rake-head A is hung upon the staple 19 by securing to one bar of the head a downwardly-extending pin 20, which pin passes through the staple 19, as is best illustrated in Figs. 1 and 2. The rake-head preferably consists of a beam *a* and a parallel bar *a'*, and the rake-teeth 21, which may be of any approved pattern, are secured at their upper ends upon the beam *a* of the rake-head and are passed through apertures in the bar *a'* of the head. The rake-head is pivotally attached at or near its center to a beam 18^a, secured upon the upper face of the plate 16 and extending longitudinally thereof, the pivotal attachment being effected, preferably, through the medium of interlocking staples.

A semicircular segmental rack-bar 22 is attached to the rake-head at each side of its center. The said rack-bar has produced in its upper edge a series of recesses 23, adapted to receive the head of a foot-latch 24, said latch being pivoted upon the beam 10 or a convenient support, and the treadle portion of the latch is pressed by a spring 25, as illustrated in Fig. 4, which normally causes the head-section to engage with the rack-bar.

Upon the left-hand side of the pole or tongue 14 a lever 26 is fulcrumed, provided with the usual thumb-latch to engage a rack 27. The lower end of the lever, which extends below the tongue, is connected by a link 28 with the rake-head between its center and the left-hand connection of the rack-bar with the head, as illustrated in Figs. 1 and 2, and a second lever 29 is fulcrumed upon the right-hand side of the tongue, and is also provided with a thumb-latch which engages with a rack 30. The lower end of the latter lever is connected by a link 31 with a stud 32, projected upward

from the rake-head near the center thereof, the stud 32 being located upon the forward member or beam *a* of the head. Wheels 33 of suitable size are loosely mounted upon the stud-axes 11 and serve to support the implement.

In operation, by manipulating the left-hand lever 26, the rake-head may be placed in a diagonal position to throw the hay gathered thereby either to the right or to the left of the implement, thus creating a windrow at either side thereof, and when the rake-head has been placed in its proper position it is maintained in this position by causing the latch 24 to enter one of the recesses 23 in the rack-bar; or, if in practice it is found desirable, the rake may be placed in such position that its head will be parallel with the main or body beam 10, in which event the hay is thrown straight ahead. When it is desired to dump the hay or free the rake-head from engagement therewith, it is accomplished by the manipulation of the right-hand lever 29, through the medium of which the teeth may be elevated from the ground and held in such position.

It will be observed that the implement is exceedingly simple, durable, and effective, as the hay may be placed in a windrow either at the right or the left of the implement, or may be carried straight ahead, or practically so, at the option of the operator.

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

1. The combination, with the wheeled frame having a longitudinal slot at its rear end, of the horizontally and vertically swinging rake-head, consisting in the bar or beam *a*, hung at its center to the said frame and provided with pivoted rake-teeth, the transverse bar *a'*, through which the teeth pass and provided with a depending pin 20, projecting down through the said slot, and means for operating the rake-head, substantially as set forth.

2. The combination, with the wheeled frame of the horizontally and vertically swinging rake-head, a curved rack-bar 22, the teeth of which are formed on its upper edge, connected at its ends with the rake-head at opposite sides of its pivotal point, a foot-latch pivoted on the frame and engaging the toothed edge of the rack-bar, a guide on the frame through which the rack-bar passes, operating-levers mounted on the frame and having links connected with the rake-head, whereby it may receive its two adjustments, substantially as set forth.

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Witnesses:

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