J. M. HILL.
Hay-Tedder.

No. 205,384. Patented June 25, 1878.

Fig. 1.

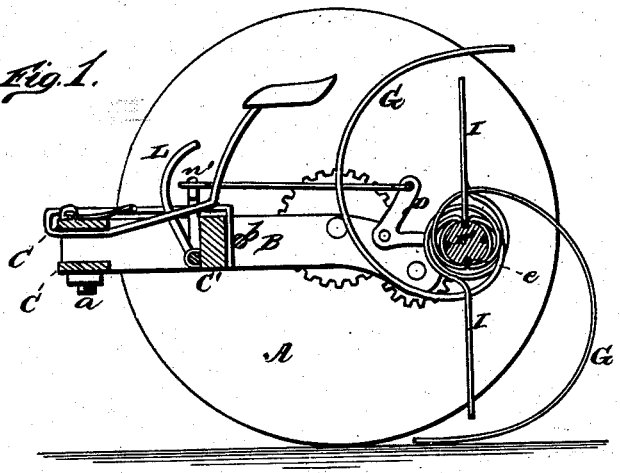
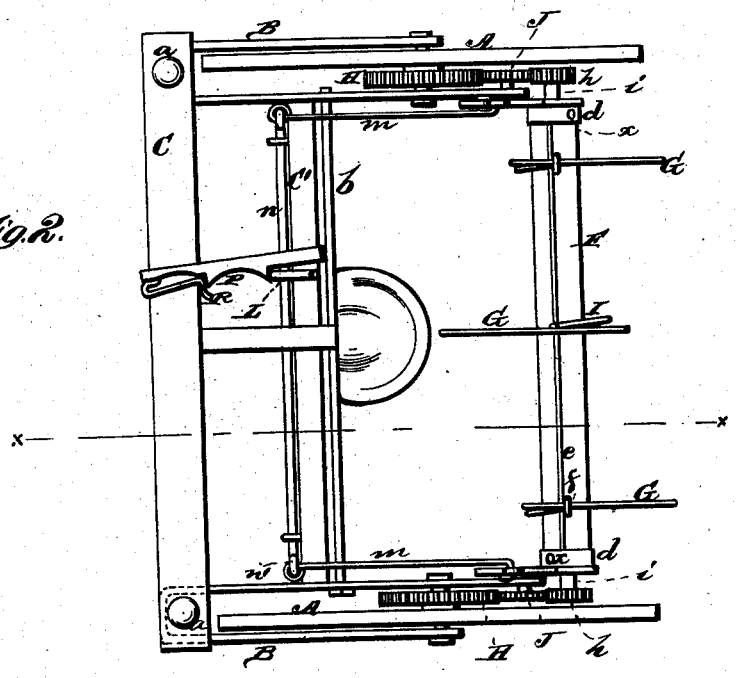


Fig. 2.



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JAMES M. HILL, OF ANN ARBOR, MICHIGAN.

IMPROVEMENT IN HAY-TEDDERS.

Specification forming part of Letters Patent No. **205,384**, dated June 25, 1878; application filed May 25, 1878.

To all whom it may concern:

Be it known that I, JAMES M. HILL, of Ann Arbor, in the county of Washtenaw and State of Michigan, have invented a new and valuable Improvement in Hay-Tedders; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal vertical section of my hay-tedder through the line *x x*, and Fig. 2 is a plan view of the same.

The nature of my invention relates to a novel and improved construction of hay-tedders, as will be hereinafter more fully set forth, and pointed out in the claims.

The annexed drawings, to which reference is made, fully illustrate my invention.

A A represent the driving-wheels, each of which is mounted in a frame, B, composed of a single iron strap bent at or near the center, and forming two parallel arms a suitable distance apart, as shown. The two frames are connected at their front ends by top and bottom bars C C, fastened to them by bolts *a a*, as shown. Another bar, C′, and a rod, *b*, immediately behind the same, connect the inner arms of the two frames.

On the inner arm of each frame B, near the rear end, is pivoted an L-shaped lever, D, and in the rear ends of these levers is journaled the roller F, which forms the head for the teeth. Each tooth forms a curved or semicircular tooth, G, and a straight tooth, I, located across the circle, as shown. These teeth may be made of one piece of spring-wire coiled around the head, or of two separate pieces, if desired. In both cases they are fastened in the head by means of iron bars or rods *e e*, let into the head lengthwise. These bars or rods also strengthen the head, and are fastened by bolts, and then iron bands *d d* are fitted over the ends of the head.

The head is rotated by means hereinafter described, and during its revolution, as each circle spring-tooth G comes in contact with the hay it rises up or bends farther, and the straight tooth I then projects down into the hay. As the circle tooth leaves the ground it springs back, throwing the hay back and shaking it up very nicely. Each tooth G passes through a staple, *f*, to keep the same from springing too far back. The tooth I also passes through the same staple, and said staple keeps the teeth in place.

At each end of the head F is a small pinion, *h*, secured on a shaft, *i*, which passes through an eye in the end of the lever D, and is driven into the end of the shaft, where it is held by a bolt, *x*, passing through the band *d*, head F, and shaft *i*, which secures and makes the whole firm and solid.

The pinion *h* on each end of the head meshes with a gear-wheel, J, mounted on a stud on the inner arm of the frame F, and this wheel meshes with a similar wheel, H, on the axle of the driving-wheel A, this latter gear-wheel being connected to the drive-wheel by a pawl and ratchet. These gear-wheels are gaged so that the tedder-head will revolve eight times to each revolution of the driving-wheel.

The inner ends of the levers D D are, by rods *m m*, connected with arms *n′ n′* on the ends of a shaft, *n*, which is held in suitable bearings on the front side of the bar C′.

The shaft *n* is provided with a lever, L, so as to throw the tedder in and out of gear, as required, said lever being held in either position by means of a spring-catch, R, and this spring-catch is thrown out by means of a pivoted foot-piece, P, as shown.

The parts are arranged in such a manner that when the tedder is thrown in gear the pinions *h* will be square behind the middle or intermediate gear-wheels J.

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

1. The revolving tedder-head F, provided with curved spring-teeth G and straight teeth I, said teeth G adapted to throw the hay back by force of the spring after the teeth leave the ground, as herein specified.

2. The combination of the head F, teeth G I, staple *f*, rod or bar *e*, and bands *d d*, substantially as and for the purposes set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JAMES M. HILL.

Witnesses:

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I. L. GRINNELL.