E. M. Rees,
Hay Fork.

No. 21,150. Patented. Aug 10, 1858.

Fig. 3

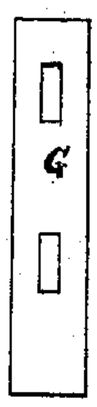


Fig. 1

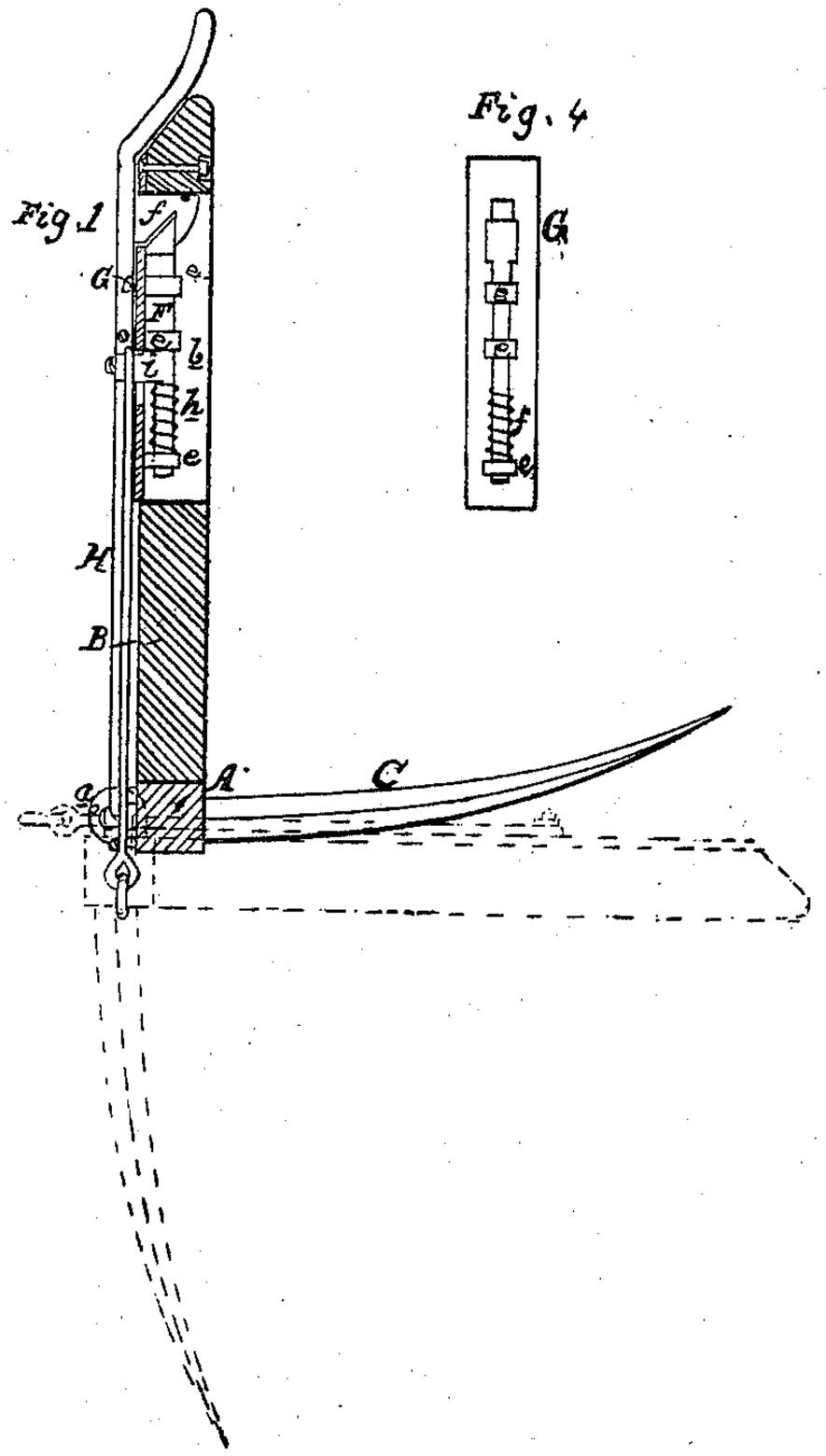
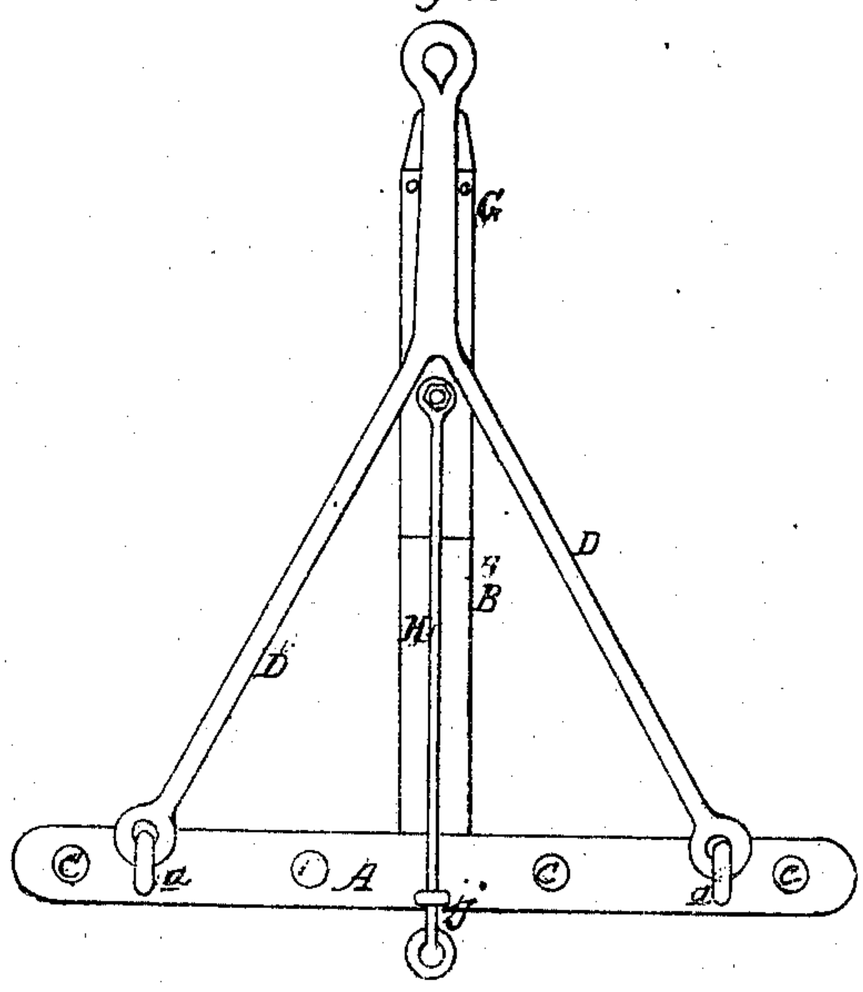


Fig. 4

Fig. 2



UNITED STATES PATENT OFFICE.

E. M. REES, OF NORRISTOWN, PENNSYLVANIA.

IMPROVEMENT IN HAY-ELEVATORS.

Specification forming part of Letters Patent No. **21,150**, dated August 10, 1858.

To all whom it may concern:

Be it known that I, E. M. REES, of Norristown, in the county of Montgomery and State of Pennsylvania, have invented a new and useful Improvement in Hay-Elevators; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention relates to an improvement in hay-elevators, in which the frame, with its teeth, is so connected to an elevating-rod that a load of hay may be retained and released at pleasure; and my improvement consists in a peculiar construction of an elevating-rod, spring-bolt, and rod for operating the same, and in the manner of combining these with and arranging them on the frame, as fully described hereinafter, the whole forming a substantial, compact, and efficient hay-elevator, and one easily operated, and free from the defects of other hay-elevators.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the drawings, which form a part of this specification, Figure1 is a sectional view of my improved hay-elevator; Fig. 2, a back view of the same; Fig. 3, a face view of the plate attached to the frame; Fig. 4, an inside view of the plate with its spring-bolt.

Similar letters refer to similar parts throughout the several views.

The frame-work of the elevator consists of two substantial beams, A and B, the latter being secured midway between the ends of and at right angles to the former.

To the front of the beam A are secured the four curved teeth C, and to the back, near each end of the beam, the two stapples *a a*, to each of which is connected one of the arms of the forked elevating-rod D, the upper end of which is furnished with an eye for connection to the elevating rope or chain.

An oblong opening, *b*, is cut through the beam B for the reception of the spring-bolt F, which is arranged to slide in projections *e e e* on the inside of the plate G, the latter being secured to the back of the beam B. This spring-bolt has a pointed end, adapted to fit into an angular recess formed in the under side of a block, *f*, which is attached to the elevating-rod D, and which projects through an opening in the plate G into the oblong opening *b* in the beam B. A spiral spring coiled round the lower portion of the bolt F, and intervening between a projection, *i*, on the said bolt and the lower projection, *e*, on the plate G, serves to maintain the point of the said bolt within the recess of the block *f* when not withdrawn by depressing the rod H, the upper end of which is connected to the projection *i*, the lower end sliding in a staple attached to the beam A, and being furnished with an eye and link for connection to a cord or chain.

It will be seen, on reference to Fig. 1, that the upper end of the elevating-rod D is bent toward the front of the machine, and that the upper end of the beam B is cut away so as to be adapted to this bend, the object of which is to maintain the beam B as nearly in a perpendicular position as possible when suspended to the elevating rope or chain.

As seen in Fig. 1, the implement is in the act of raising its load of hay. When the required altitude has been reached one of the attendants pulls the cord attached to the end of the rod H, depressing the spring-bolt until its point leaves the notch in the block *f*, when the frame, with its teeth, its bolt, and rod for operating the same, fall and assume the position shown in red lines, thereby discharging its elevated load, the rod D remaining suspended in its original position. The frame is now raised toward its original position, and the beveled edge of the bolt striking against the rounded end of the projection *f*, the bolt is depressed until its point coincides with and is forced by the spring into the recess of the block, when the frame and elevating-rod become locked together, as before, prior to the elevation of another load of hay.

I do not desire to claim, broadly, the locking of the frame to and releasing it from an elevating-rod, as such a device is described and claimed in the patent granted to T. T. Jarret, May 30, 1854; neither do I desire to claim, broadly, a spring-latch for releasing and retaining the frame; but

I claim and desire to secure by Letters Patent—

The plate G, with its spring-bolt F, and rod

H, in combination with the forked rod D, with its upper end bent as described, and its projection *f*, when the several parts are constructed and arranged with respect to each other and to the frame, substantially in the manner herein set forth.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

E. M. REES.

Witnesses:
HENRY HOWSON,
HENRY ODIORNE.