No. 676,287. Patented June 11, 1901.

F. J. VESSELY.

HAY FORK.

(Application filed Mar. 23, 1901.)

(No Model.)

Fig. 1.

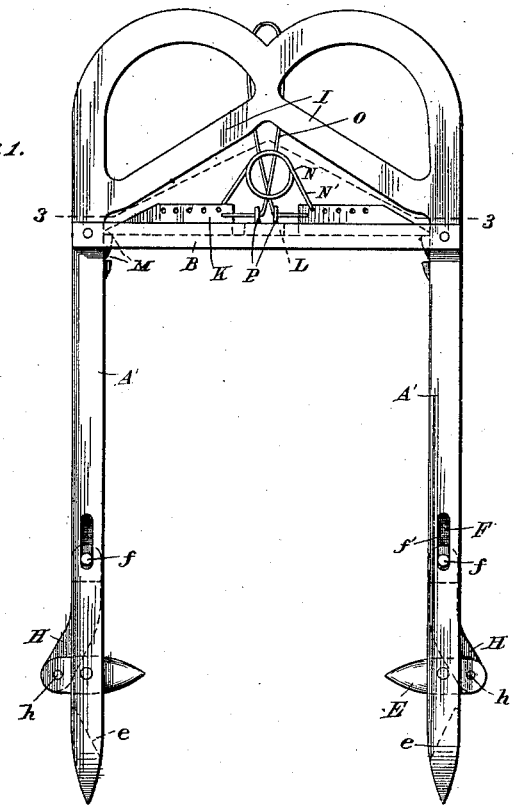
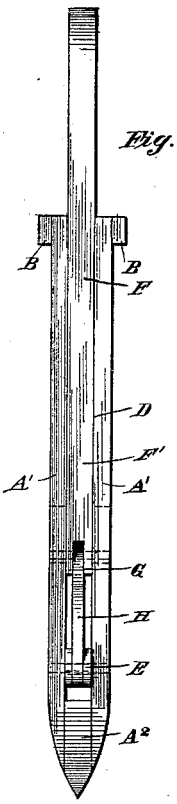


Fig. 2.



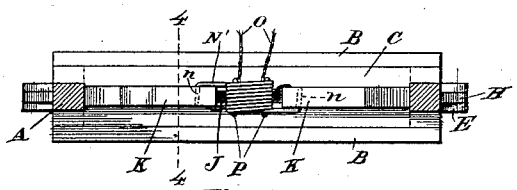
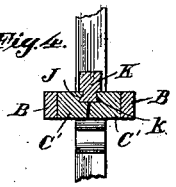


Fig. 3.

Fig. 4.



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FRANK J. VESSELY, OF NORTH JUDSON, INDIANA.

HAY-FORK.

SPECIFICATION forming part of Letters Patent No. 676,287, dated June 11, 1901.

Application filed March 23, 1901. Serial No. 52,571. (No model.)

To all whom it may concern:

Be it known that I, FRANK J. VESSELY, a citizen of the United States, residing at North Judson, in the county of Starke and State of Indiana, have invented certain new and useful Improvements in Hay-Forks; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in hay-forks, the objects of the invention being to construct a hay-fork of simple construction which will be exceedingly efficacious, strong and durable, and so constructed that the parts will offer very little resistance in being inserted into the hay and will be capable of ready release to drop the hay.

A further object of the invention is to provide a generally improved and simplified construction.

With such objects in view the invention is embodied in the novel parts, arrangement, and combinations of parts hereinafter described, and particularly set forth in the claims.

In the drawings is illustrated a construction embodying my invention; but I desire it understood that the invention is not to be limited in its useful applications to the particular construction which is there shown.

In the drawings, Figure 1 is an elevation of a hay-fork embodying my improvements. Fig. 2 is an end elevation. Fig. 3 is a transverse section of the upper portion or head of the frame, showing the releasing mechanism. Fig. 4 is a sectional view through the fork-frame head and one of the dogs.

Referring to the drawings, A indicates a fork-frame comprising side members, each composed of separated bars A′, which at their lower ends or points are reduced and provided with spacing-blocks A^2, which extend beyond the ends of the bars A′ and are sharpened for the purpose of easy penetration into the hay-shock. The bars A′ of the side members or legs at their upper ends are connected by side head-bars B B, secured in any desired or approved manner to the ends of the bars A′, and like the bars A′ the head-bars B B are separated or spaced apart, having therebetween a head-block C or head-blocks C′ C′. It will be manifest that the side legs and head or head bars and blocks can be formed integrally of metal fashioned in a corresponding manner, so as to provide the guideways D between the side bars A′.

In the guideways D or spaces between the bars A′ at their lower ends are pivoted holding or engaging prongs E, adapted to be moved to a position substantially transverse to the arms A′ or to a position substantially parallel with the arms. The inner ends of the prongs are reduced or pointed to enable them to more readily enter the hay and to enter into sockets *e* in the inner faces of the blocks A^2, thereby carrying the ends of the prongs within the lines of the side bars when moved to their vertical positions. For the purpose of oscillating the prongs E, I have shown an operating-frame F, comprising the two side legs F′, located in the guideways D between the bars A′ and adapted to reciprocate or slide up and down therein. At or near their lower ends the legs F′ are provided with pivots *f*, extending beyond the arms and engaging and sliding in slots *f*′ in the bars A′. The lower ends of the arms F′ are slotted or bifurcated at G, and one end of the links H rests between said bifurcated portions, being connected to the arms by means of the pivots *f*. The other end of the links H is pivoted to the upper ends of the prongs E by suitable pivots *h*, and conveniently the upper ends of the prongs are bifurcated for the reception of the ends of the links H. With such construction it will be evident that upon moving the operating-frame or sliding the same upwardly the prongs will be thrown in their substantially vertical position, while by moving the operating-frame down the prongs are thrown into their transverse or substantially horizontal position. The operating-frame arms F′ are connected at their upper ends by means of a head of any suitable construction. I have shown the upper ends of the arms bent and connected above the fork-frame head and have also shown the head provided with diagonal stiffening-braces I. In the cross-head of the fork-frame are provided grooves or ways J for sliding holding-dogs K K. Conveniently for the purpose of re-

taining the dogs in the ways the former are provided with dovetail or flanged tongues *k*, engaging in corresponding undercut or dovetailed groove extensions. By this means the removal of the dog is prevented. Between the two dogs is a stop-block L, which may be formed integral with the head-block or inserted in the grooves or groove therein. When moved to their outward position—that is, when moved toward the arms F′—the dogs are adapted to engage with teeth or notches M, carried by or formed in the arms F′, and thereby hold the operating-frame from upward movement relative to the fork-frame, and consequently holding the prongs from downward movement by reason of the weight of the hay thereon. As will be noticed, the under edges of the teeth or projections forming the notches for the holding-dogs are beveled to permit the downward movement of the operating-frame without operation of the dogs by the operator. For the purpose of moving the dog outwardly into engagement with the teeth or notches on or in the arms F′, I have shown a single spring having a coil N and opposite spring-arms N′, provided with laterally-bent engaging ends *n*. Each end is adapted to engage in one of a series of notches or holes in each dog K. This construction permits of an adjustment of the spring to any desired hole in the dog for the purpose of increasing or decreasing the spring action. For the purpose of releasing the dogs and permitting an upward movement of the operating-frame for the purpose of dropping the hay, I have shown a cord or cords O, connected to the inner ends of the dogs and extending from the same beneath staples P P, secured to the cross head or block of the fork-frame between the dogs. This cord or these cords is or are connected to any suitable operating-cord, which is intended to be pulled for tripping the dogs in a well-known manner.

It is believed that it will of course be understood that the lifting or elevating rope for the fork is connected to the operating-frame F in any desired manner.

It is believed that the operation of the device will be readily understood from the above description.

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

1. The combination with a fork-frame having a head, of an operating-frame slidably carried by the same, prongs operatively connected to said operating-frame, two dogs sliding in grooves in the head of said fork-frame and adapted to engage portions carried by said operating-frame, a coil-spring having opposite legs each engaging one of a series of notches or the like in said dogs, and means for tripping the dogs, substantially as described.

2. The combination with a fork-frame having a head, of an operating-frame slidably carried by the same, prongs operatively connected to said operating-frame, two dogs slidably mounted on the head of said fork-frame and adapted to engage portions carried by the operating-frame, a spring connected to both dogs and acting to force the same in opposite directions, and means for moving said dogs against the action of said spring, substantially as described.

3. In a trip mechanism for hay-forks, the combination of two sliding dogs, a spring adjustably connected to said dogs and acting to force the same apart, and means connected to said dogs for moving the same against the action of said spring, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK J. VESSELY.

Witnesses:

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