

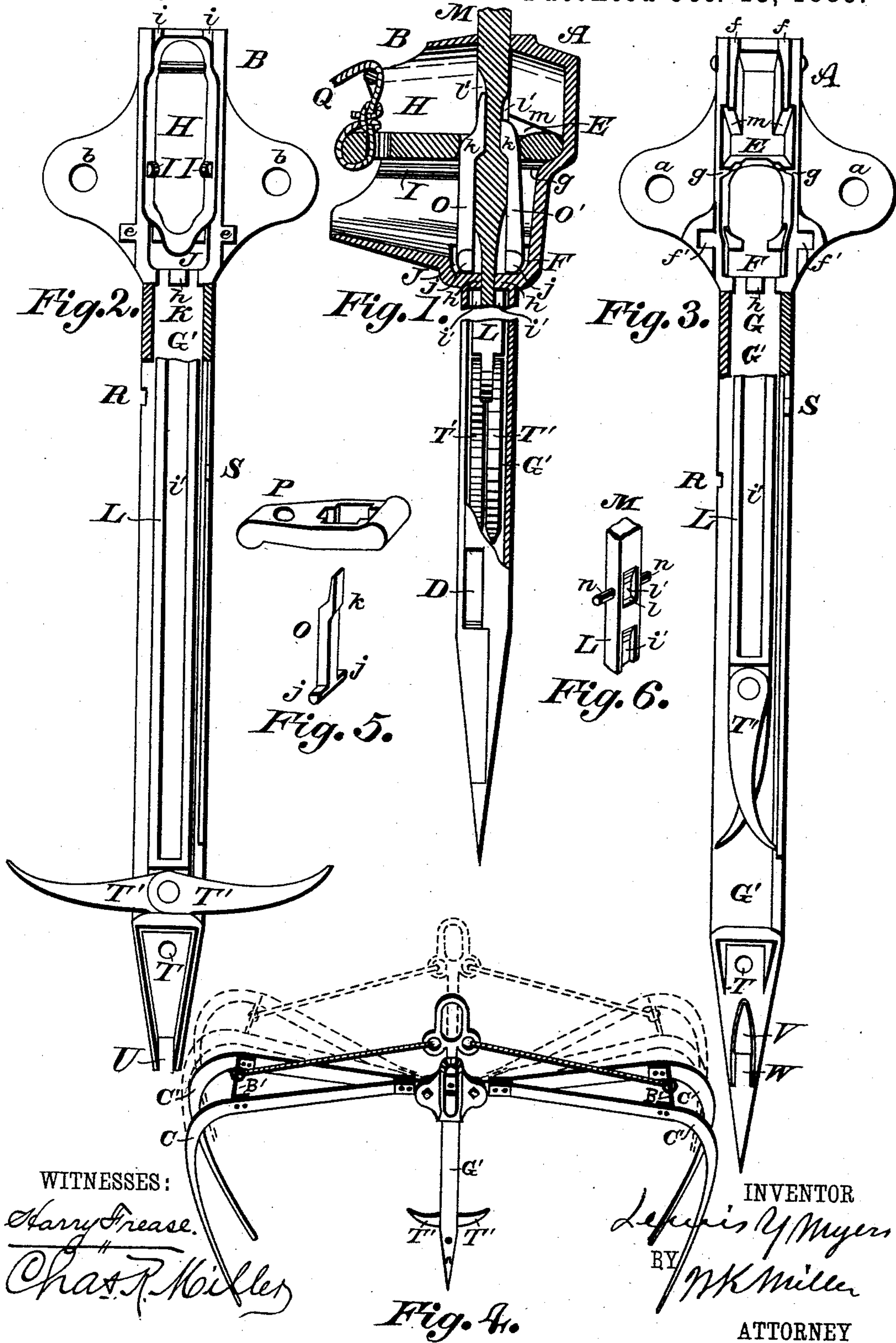
(No Model.)

L. Y. MYERS.

HAY FORK.

No. 328,053.

Patented Oct. 13, 1885.





# UNITED STATES PATENT OFFICE.

LEWIS Y. MYERS, OF CANTON, OHIO.

## HAY-FORK.

SPECIFICATION forming part of Letters Patent No. 328,053, dated October 13, 1885,

Application filed May 8, 1885. Serial No. 164,854. (No model.)

*To all whom it may concern:*

Be it known that I, LEWIS Y. MYERS, a citizen of the United States, and a resident of Canton, county of Stark, State of Ohio, have  
5 invented a new and useful Improvement in Hay-Forks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

10 My invention relates to an improvement in hay-forks; and it consists in the parts and combinations of parts, as will be more fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is  
15 a longitudinal section of my improved hay-elevator. Fig. 2 is an inner view of one of the parts of the supporting-head and one-half of the harpoon-tube or shield G for the tine and its barbs T' T'. Fig. 3 is a corresponding  
20 view of the opposite part of the supporting-head and harpoon-shield for the tine and its barbs. Fig. 4 is a side elevation of the elevator. Fig. 5 is a perspective of one of the locking-dogs and the yoke detached. Fig. 6  
25 is a perspective of a portion of the tine.

The supporting part or body of my improved elevator, which holds the other portions, is represented by A and B, these indicating two castings so arranged as when  
30 brought together to form an interior chamber for receiving, retaining, and guiding the pivoting, locking, and stop mechanism, and a harpoon-shield, G', for the barbed tine L. Each of the parts A and B of the supporting-head is cast with two laterally-projecting  
35 ears, those on part A being indicated by *a a*, and those on part B by *b b*. These ears are provided with holes for the passage of bolts, and the sections of shield G with registering-tongues S S, recesses R R, and holes for the  
40 passage of rivets, by means of which the parts are securely locked against displacement.

On one side or half of the tube, at its lower end, there is a slot or socket, W, which, when  
45 fitted over shoulder V on the lower half, with the jaws of the slot resting against and behind, is protected by the shoulders, as shown at W.

Near the lower end of the harpoon or shield there are openings D on two opposite sides,  
50 through which the prongs or barbs T' T' pass out, as shown in Fig. 4.

C C' C' C' represent the clamping-hooks for inclosing the hay, which are secured in pairs C C' to a stud-piece, which is pivoted by means of the clamping-bolts to the supporting-head  
55 between one of the ears *a* and one of the ears *b*; or the ends of the hooks may pass into the head and be pivoted between the lugs, as stated. In order to allow freedom of play for the hooks C C' C' C', an open space is provided  
60 between the ears of each opposing pair, which space may be produced by casting the ears to the central part of the head-piece so that their inner spaces shall be below the surface or edge of said central part. The hooks C C' are held  
65 apart and supported by the cross-brace B', and are attached to the ring M by a flexible connection.

By means of lugs on one part of the supporting-head fitting into seats of recesses *f f* in the  
70 opposing parts, the two parts of the head A B may be prevented from slipping longitudinally relatively to each other. The central part of the head A B is expanded on lines transverse to those of the ears *a b*, there being in the part  
75 A recesses *f f* at one end, a chamber, E, shoulders *g g*, a recess or seat, F, a recess or way, G, and a stud or lug, *h*. The central portion of the other part of the head B is formed with recesses *i i*, corresponding in position to those  
80 at *f f* in the part A, a chamber, H, shoulder I, a recess, J, a recess or way, K, and a stud or lug, *h*. When the parts A and B are placed together, the chamber H in one part adjoins the chamber E in the other. The shoulders I I lie in same lines substantially as the  
85 shoulders *g g*, and recesses J and F are opposite to each other, as are also the ways K and G and the studs *h h*. It will be seen that when the parts are thus put together there is  
90 a continuous way or passage through the central part of the head A B into the tube G'. In this passage or way is mounted the sliding tine L, with its two barbs or prongs T' T', pivoted at the lower end, and at its upper end  
95 with the ring M. This tine is provided with two elongated slots, *i' i'*, on opposite sides, in which are situated the respective lugs or studs *h h*, which when the parts are put together allow of but a limited movement of the tine  
100 L M, only such movement being allowed as will permit the loading and unloading of the



elevator. When the elevator is to be loaded, the tine L M is drawn up, as shown by the dotted lines in Fig. 4, and this upward drawing of the tine also opens and draws upward the pivoted hooks C C' C C', they being connected flexibly with the ring M or the upper end of the tine by means of cords or chains N. By this movement also the barbs T' T', attached to the lower end of the tine, are drawn into the shield or tube, as shown in Fig. 3. After the parts of the elevator have been thus opened the pointed harpoon or shield G', with the tine and barbs inclosed, is forced downward into the hay as far as the supporting-head will permit it, and the hooks C C' C C' are pushed down, as shown in Fig. 4, and the tine L M is pushed down until the barbs T' T' are thrown out, as shown in Fig. 4. This downward movement of the tine automatically locks all the parts in the lifting position, as shown in Fig. 4, the clamping-hooks C C' C C' pressing in from the outside to the center, while the center is supported by the barbs as they project from the pointed shield or harpoon. The locking is caused by means of the following devices: O O' are dogs mounted within the central chamber of the heads A B upon opposite sides of the tine L. They are prevented from moving longitudinally relatively to said head by means of cross bars or lugs j j, which are seated in the recesses J F, and which, although they prevent longitudinal play of the dogs, allow them to oscillate a little upon the bars or lugs as centers. These dogs engage with the tine by means of the shoulders k on the dogs and shoulders l on the tine, produced by forming therein recesses l'. When the tine is at its lowest point, it has been brought down sufficiently far to have the shoulder k engage with the shoulder l on the tine, and if, then, an upward strain be exerted upon the tine, and if the dogs be kept in engagement with the shoulder l, they will prevent any upward longitudinal movement of the tine in the head A B.

In order to hold the dogs in such engagement as last mentioned I employ a yoke, P, which, although mounted loosely and detachably in the interior chamber of the head, is nevertheless arranged so as to have a swinging movement at one end, as if it were hinged at the other—that is to say, one end is substantially stationary, while the other oscillates vertically. The stationary end is mounted in the chamber E of the part A, said chamber having shoulders m, inclined relatively to the shoulders g g, the distance between them at their outer ends being about the same as the thickness of the yoke P. The other end of the yoke P is situated in the opposite chamber, H, which chamber is large enough at the outer end to permit an oscillating play of the end of the yoke mounted therein. The yoke has a central aperture, (preferably rectangular,) and it surrounds the tine and the two dogs O O'. Just as the tine is reaching its

lowest point and the dogs O O', by their shoulders k k, are engaging with the shoulders l l on the tine, the pins n n, projecting laterally from the tine, strike the yoke and swing it downward, so that it will pass over the dog O and assume a position substantially transverse to a line of the tine, it (the yoke) at this time resting or bearing upon the shoulders I g. While the yoke is in this position the dogs are tightly held in engagement with the tine in the recesses l' l', and therefore prevent any upward longitudinal movement of the tine. The load, being thus locked in the elevator or forks, is now elevated to the desired point, and, when there, is released by swinging upward the oscillating end of the yoke P, which upward swinging throws it beyond the end of the dog O, and the tine therefore can escape from an engagement with the dog, such escape being made possible by the beveling or inclining of the engaging shoulders k and l. The end of the yoke is thus moved upward by means of a chain or cord, Q, running up a short distance, thence out through an aperture, o, in the part B of the head, and thence downward to the operator's hand, and when thus released the clamping-hooks will be drawn up, as shown by the dotted lines in Fig. 4, and the barbs drawn into the harpoon or shield, as shown in Fig. 3, allowing a free discharge of the hay.

The above construction of hay fork or elevator is capable of elevating short as well as long hay or second-crop hay, as it is shown that the clamping-hooks will reach over the load and press it in toward the center, and the barbs on the harpoon will hold up the center of the load.

Having thus fully described and shown the nature of my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with a shield or body provided at its upper end with a head and hooks pivoted to said head, of a movable tine located within the shield or body and head, and provided with barbs and devices located within the head for locking the tine against movement.

2. The combination, with a shield or body provided at its upper end with a head, a sliding tine located within said body and provided at its lower end with tines, hooks pivoted to said head, and cords or equivalent devices connecting the hooks and tine, of dogs located within the head and constructed to engage the tine, and a movable yoke for locking the dogs in contact with the tine.

3. In a hay-fork, the combination, with body or shield composed of two castings provided with interlocking lugs and recesses, of a movable tine, devices for locking the tine against movement, and hooks.

4. The combination, with a body and head and a movable tine located therein and provided with barbs, of dogs constructed to engage the tine, a yoke, and lugs formed on said



tine for moving the yoke in contact with the dogs.

5 The combination, with the hollow head and body, the latter provided with side openings, of a movable tine carrying movable barbs, which latter are adapted to be forced through said openings, movable dogs constructed to engage said tine, a device for locking the dogs

against movement, hooks, and devices connecting the hooks and tines.

In testimony whereof I have hereunto set my hand this 18th day of April, A. D. 1885.

LEWIS Y. MYERS.

Witnesses:

CHAS. R. MILLER,  
W. K. MILLER.