

O. Paddock.
Hay Fork.

No. 82867.

Patented Oct. 6. 1868.

FIG. 3

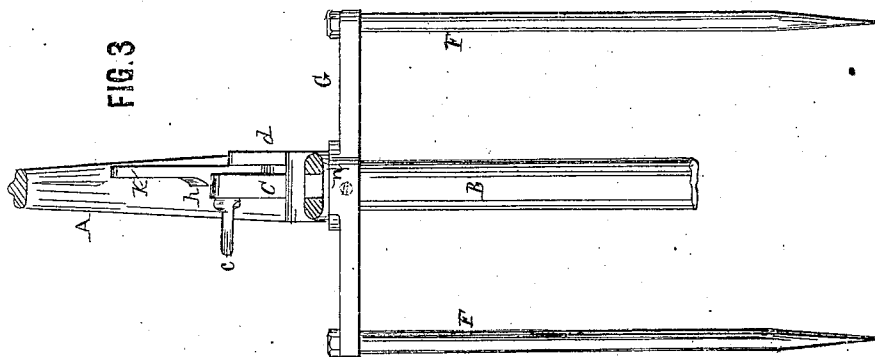


FIG. 2

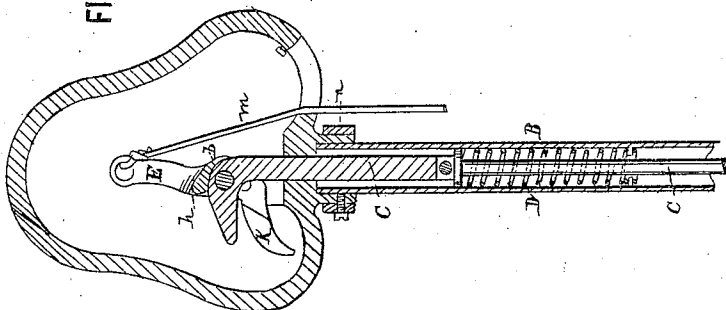
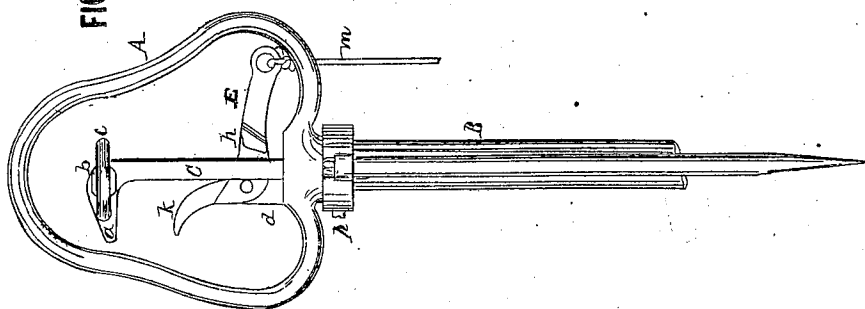


FIG. 1



Oscar Paddock
by *Arthur P. Harty*

WITNESSES

Marshall Bailey
Charles Page Jr.

United States Patent Office.

OSCAR PADDOCK, OF WATERTOWN, NEW YORK.

Letters Patent No. 82,867, dated October 6, 1868.

IMPROVEMENT IN HORSE HAY-FORKS.

The Schedule referred to in these Letters Patent and making part of the same.

TO WHOM IT MAY CONCERN:

Be it known that I, OSCAR PADDOCK, of Watertown, in the county of Jefferson, and State of New York, have invented certain new and useful Improvements in Hay-Forks; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a side view of a fork constructed in accordance with my invention, the centre-bar, to which the claws or barbs of the fork are hung, being represented in the elevated position it occupies when the claws are retracted within the sheath.

Figure 2 is a vertical central section of the same, with the centre-bar depressed, the claws being in this case consequently projected from the sheath.

Figure 3 is an elevation of the fork taken at right angles to the view represented in fig. 1, the handle being broken away, so as to exhibit the arrangement of the locking and tripping-lever.

My invention relates to that class of horse hay-forks in which one or more claws or barbs are projected from or retracted within the sheath of the fork by means of a centre-bar, arranged to move up and down in said sheath, and combined with a suitable locking and unlocking-mechanism, for maintaining the said claws in either of the positions named; and it has reference, mainly, to the said locking and unlocking-mechanism, my object being to simplify the construction and arrangement of such mechanism, and to render it better adapted for every-day and long-continued use.

My invention consists in the combination, with a centre-bar playing up and down within the sheath of the fork, as specified, of a pivoted locking-lever, in such manner that when the bar is depressed, and the claws consequently projected from the sheath, the lever may be moved, so that a stop or lug which it carries shall catch upon the top or upper end of the bar, and thus hold it in position, and prevent the retraction of the claws. When it is desired to unlock the bar, so as to allow it to rise, the lever, by means of the tripping-cord usually employed, is vibrated or moved on its pivot, so as to draw off or disengage the lug from the end of the bar.

My invention further consists in providing the said locking-lever with a tripping-finger, which, when the lever is drawn down so as to disengage the locking-device from the centre-bar, will catch under a projection on the end of a bar, and force the latter upwards, so as to effect with certainty the retraction of the claws.

To enable those skilled in the art to understand and use my invention, I will now proceed to describe the manner in which the same is or may be carried into effect, by reference to the accompanying drawings.

The fork there represented in illustration of my invention is similar in most respects to that for which Letters Patent of the United States have been granted me, under date of March 24, 1868. It is suspended by the handle, A, of the sheath B, within which sheath is contained the centre-bar C, to whose lower end the claws or barbs of the fork are pivoted. These claws, as set forth in the said Letters Patent, are provided with inclined shoulders, which, when the claws are projected from the sheath, bear against correspondingly-shaped bearings or shoulders in the sheath, so as to transform what would otherwise be direct upward strain upon the centre-bar into a lateral pressure against the sheath. I have not deemed it necessary, however, to represent this arrangement of the claws and sheath in the drawings, as it is fully described and claimed in the Letters Patent referred to.

There is further combined with the centre-bar a spring, D, arranged in this instance within the sheath, for the purpose of raising and holding the said bar when released from the locking-mechanism, the use of which spring is also described and claimed in the Letters Patent above named.

The upper end of the centre-bar has formed upon it a shoulder or projection, *a*, and on the side opposite the projection it is rounded or bevelled at *b*, as shown clearly in fig. 2. It may also be provided with a handle, *c*, for the purpose of enabling the operator to depress the bar with greater facility.

The bar, when forced down in the position seen in fig. 2, so as to project the claws from the sheath, (the spiral spring D being consequently compressed,) is held by means of a locking-lever, E, placed alongside of the centre-bar, and pivoted to an upright, *d*, attached to the handle A. This lever has formed upon it a lug or

stop, *h*, which, when the centre-bar *C* is depressed, and the lever *E* raised, passes over and catches upon the top of the centre-bar, as represented in figs. 2 and 3. The lug has a rounded face, so that it may the more easily pass over the rounded corner, *b*, of the upper end of the bar. The opposite end of the lever may have formed upon it a finger, *k*, which stands at an angle to the longer arm of the lever, and is so arranged, that, when the lever is drawn down to disengage the lug *h* from the centre-bar, it will catch under the projection on the bar, and thus force it upward. I prefer to make the lever as shown in fig. 2, the lug and projecting finger being cast upon the face of the lever, contiguous to the bar, a recess or space, through which the centre-bar passes, being left between the said lug and finger, sufficient to allow the necessary vibration of the lever.

In a fork in which the claws are combined with the sheath, as hereinbefore described, the use of the finger *k* is quite essential, as the claws, when projected and sustaining the load, are, in a degree, liable to bind or jam against their bearings in the sheath, so that the spring *D* alone cannot at all times raise the centre-bar. But, under the arrangement I have described, when the longer arm of the lever *E*, by means of the tripping-cord *m*, is pulled down, so as to disengage the lug *h* from the top of the centre-bar, the finger *k* is at the same time tilted or thrown up, so as to catch under the projection or shoulder *a*, and thus elevate, or at least start the upward movement of the bar, which movement is completed by the expansion of the spring *D*. While, therefore, the lever, and its lug or stop *h*, may alone be used in connection with the centre-bar, it will be found much preferable, in practice, for the reasons above stated, to combine, with the said parts, the lifting or tripping-finger *k*.

In order to adapt a hay-fork, of the general construction hereinbefore referred to, to lift either straw or hay, I combine with the fork one or more tines, *F*, held to a frame or bar, *G*, which can be either adjusted to or removed from the fork. In the centre of the bar *G* is a socket or sleeve, *n*, which fits upon the upper end of the fork, and from the bar, on each side of the fork, hang the tines *F*, which are parallel, or nearly so, to the sheath, and at a suitable distance from it. The socket *n* is held to the fork by means of a set-screw, *p*, or other suitable device, which can be removed when it is desired to detach the bar *G*. These tines, as is well known to those interested in agricultural pursuits, are valuable adjuncts in holding together a load of straw, much of which would be apt to drop from the fork if the tines or other similar devices were not employed. In elevating hay, however, the tines are comparatively of little use, and in such case they can be detached, and removed from the fork, as above indicated.

Having now described my invention, and the manner in which the same is or may be carried into effect, what I claim, and desire to secure by Letters Patent, is—

The combination, with the centre or claw-operating bar in a fork, such as described, of a vibratory locking-lever or arm, arranged to catch over and press upon the head or upper end of the centre-bar, when the latter is depressed, and connected with a tripping-cord, or other suitable means for effecting its disengagement from the said centre-bar, substantially in the manner herein shown and set forth.

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

OSCAR PADDOCK.

Witnesses:

GEO. L. WOODRUFF,
MELLEN BRAY.