

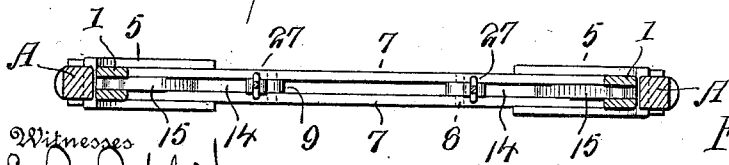
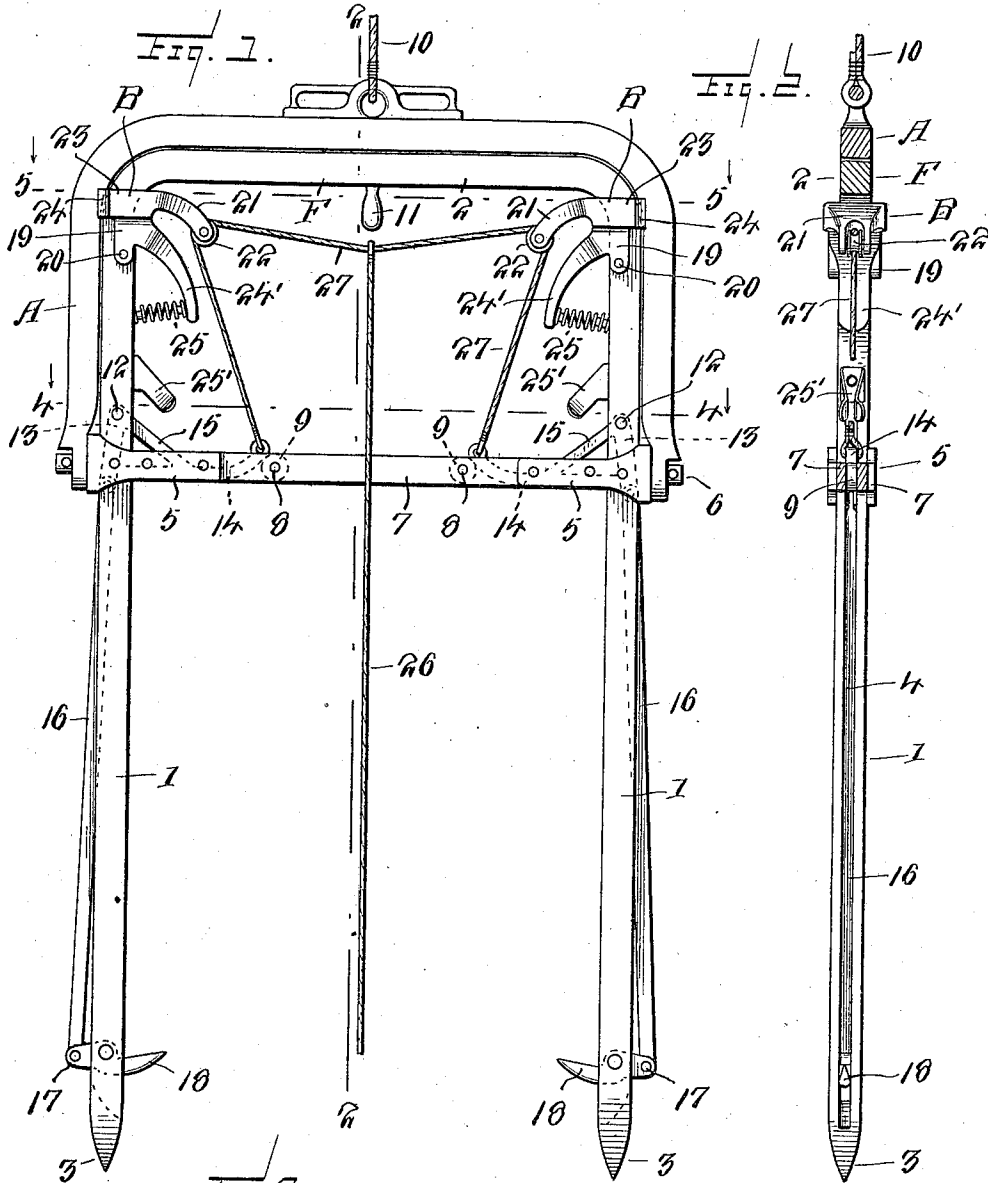
F. L. BAKER.
HAY FORK.

APPLICATION FILED FEB. 10, 1912.

Patented Oct. 15, 1912.

2 SHEETS—SHEET 1.

1,041,572.



Inventor

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Witnesses
E. R. Ruppert.

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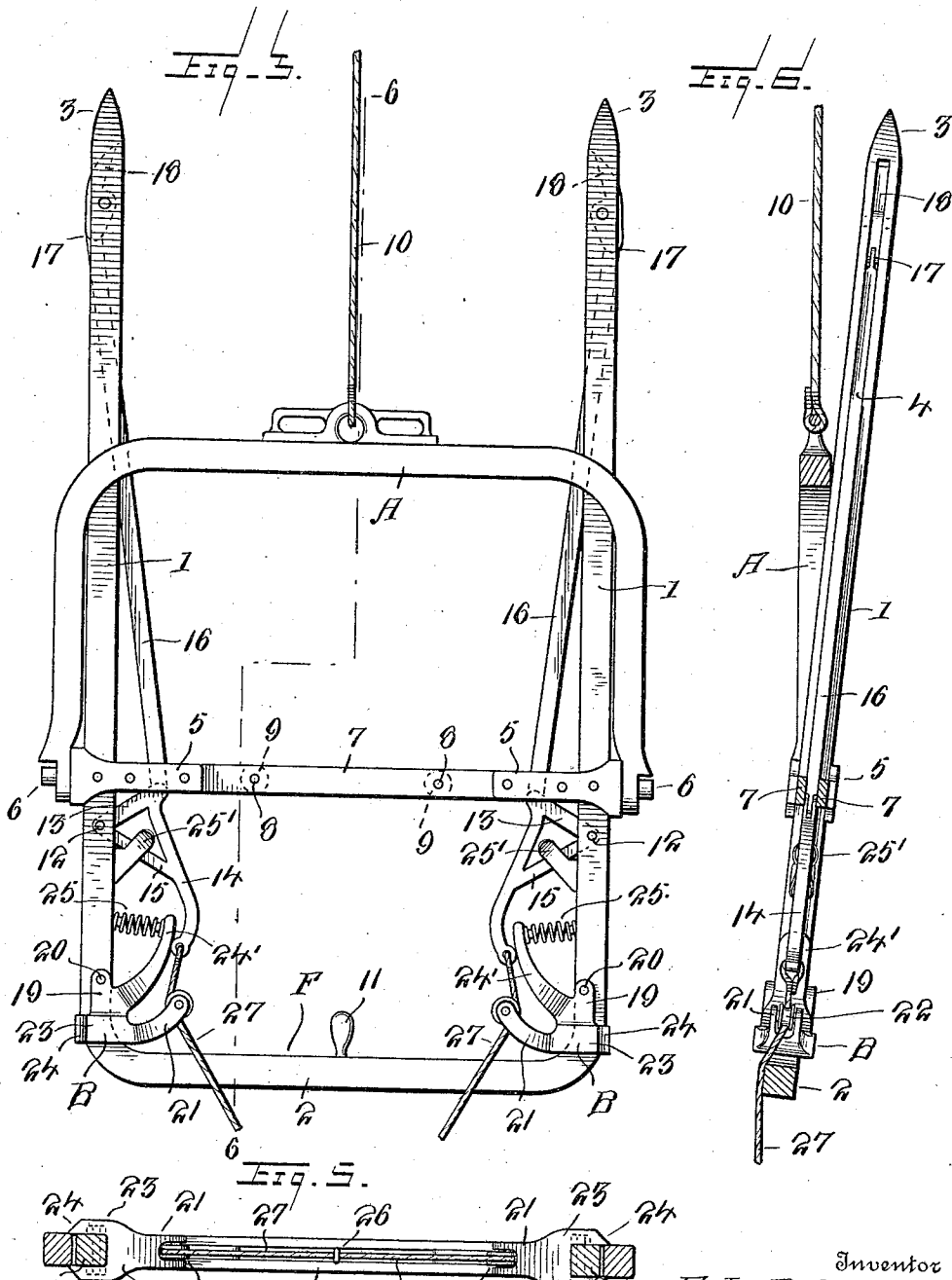
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UNITED STATES PATENT OFFICE.

FRANK L. BAKER, OF ORISKANY, NEW YORK.

HAY-FORK.

1,041,572.

Specification of Letters Patent.

Patented Oct. 15, 1912.

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To all whom it may concern:

Be it known that I, FRANK L. BAKER, a citizen of the United States, residing at Oriskany, in the county of Oneida and State of New York, have invented new and useful Improvements in Hay-Forks, of which the following is a specification.

This invention relates to hay forks of the harpoon type and has for its object to produce a hay fork of this class which shall be simple in construction, easily operated, efficient in operation and perfectly safe in use.

A particular object of the present invention is to suspend the fork proper by means of a carrying yoke wherein the fork is pivotally mounted in such a manner that when tripped for the purpose of discharging the load the fork, after dropping the load, will swing in the suspending yoke to an inverted position with the engaging ends pointed in an upward direction so that if for any reason the fork should suddenly descend or drop, the operator standing below will not be in absolute danger of being transfixd by the prongs of the fork.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the claims may be resorted to when desired.

In the drawings,—Figure 1 is a view in elevation of a fork constructed in accordance with the invention. Fig. 2 is a vertical sectional view taken on the line 2—2 in Fig. 1. Fig. 3 is a view in elevation showing the fork in the inverted position which it assumes subsequent to the discharge of a load. Fig. 4 is a horizontal sectional view taken on the line 4—4 in Fig. 1. Fig. 5 is a sectional view taken on the line 5—5 in Fig. 1. Fig. 6 is a vertical sectional view taken on the line 6—6 in Fig. 2.

Corresponding parts in the several figures are denoted by like characters of reference.

The fork F which is substantially U-shaped includes the limbs or side members 1, 1 and the bridge piece 2. The limbs 1, 1 are provided at their lower ends with sharp points 3 adapted to readily penetrate a bunch of hay, and said limbs are provided with transverse slots 4 extending through the greater part of their length. Said limbs are also provided with brackets 5 having trunnions 6, said brackets being connected together by means of cross bars or braces 7 which are connected together by bolts 8 upon which sleeves 9 are mounted to space the said braces apart. The trunnions 6 are pivotally supported in bearings at the lower ends of the side members of a yoke A which is adapted to the conformation of the upper portion of the fork. The hoisting cable 10 is suitably connected with the yoke, and the bridge piece 2 of the fork has a handle 11 whereby said fork may be manipulated.

Fulcrumed on pins 12 that extend through the slotted limbs or side members 1 of the work are levers 13 having laterally extending arms 14 and braces 15. The levers 13 are connected by links 16 with the heels 17 of the prongs 18 which are pivotally mounted near the lower pointed extremities of the side members 1, said prongs being adapted to swing to the obstructing position shown in Fig. 1 of the drawings, and to the non-obstructing position shown in Fig. 3. When the prongs are in the obstructing position, lying transversely of the limbs 1, the laterally extending arms 14 of the levers 13 are supported on the spacing sleeves 9 which obstruct further movement in a downward direction of said arms. When the arms 14 are thus positioned, the pivotal connection between the lever 13 and the link 16 is positioned outside of a line drawn through the fulcrum 12 and the pivotal axis which connects the link 16 with the heel 17 of the prong 18, and the prong will thus be locked in an obstructing position by the weight of the load supported thereon. By pulling the arms 14 in an upward direction, the prongs will be moved to the non-obstructing position shown in Fig. 3, and the load will slide by gravity off the fork.

Latch members B are pivotally mounted upon the limbs or side members of the fork near the upper ends of said limbs, each of said latch members being constructed to

straddle a limb and provided with downwardly extending ears 19 for the passage of the pins 20, whereby said latch members are pivotally mounted. Each of the latch members has a laterally extending arm 21 carrying a guide member, such as a pulley 22. Each of the latch members is also provided with stop members 23 which are exteriorly beveled, as shown at 24, so as to yield readily to engagement with the opposite sides of the limbs or side members of the yoke A when the fork swings into operative position with relation to the yoke, thus causing the latter to be automatically engaged by the latch members. Each of the latch members is, furthermore, provided with a bracket member 24' between which and the proximate limb or side member 1 of the fork a spring 25 is interposed to keep the latch member normally in engaging position with reference to the carrying yoke 1.

Suitably mounted upon the inner face of each of the limbs 1 is a spring clasp 25' adapted to engage and hold one of the arms 14 extending laterally from the levers 13 whereby the retaining prongs of the fork are actuated. The trip rope 26 is provided with branches 27 that are guided over the pulleys 22 and terminally attached to the inner extremities of the arms 14.

When the improved fork is in the load carrying position shown in Fig. 1, the latch members B engage the limbs or side members of the yoke A, thus maintaining the fork in an upright position with the sharp pointed ends of the limbs or side members 1 pointed downwardly. When the limbs or side members have been driven into the bunch of hay that is to be lifted, the arms 14 are manually moved downward and inward until obstructed by the spacing sleeves 9, thus moving the pivotal connecting points of the levers 13 and the links 16 to one side of a dead center, and thereby locking the prongs 18 in obstructing position. The load may now be lifted by the hoisting rope and moved to the point of discharge where by pulling upon the trip rope, the operator first lifts the inner ends of the arms 14, thus swinging the levers 13 and moving the prongs 18 to a non-obstructing position, permitting the load to slide from the fork. The continued strain upon the trip rope will now serve to depress the inwardly extending arms 21 of the latch members B against the tension of the springs 25, thus releasing the latch members B from engagement with the limbs or side members of the yoke A and pulling or swinging the fork to one side, the bridge piece at the top of the fork moving in the direction of the operator and overbalancing the sharp pointed ends of the limbs 1 which swing in an upward direction where they remain while the fork is being transferred to the loading point. If for any

reason the fork should suddenly drop, the person standing beneath will be in no serious danger, as would be the case if the sharp pointed ends of the limbs 1 were pointed downwardly.

The improved hay fork, as will be seen, is simple in construction, safe and convenient in operation, and it has been found to be thoroughly efficient for the purposes for which it is provided.

Having thus described the invention, what is claimed as new, is:—

1. In a device of the character described, the combination with a substantially U-shaped fork, of a substantially U-shaped bail or yoke in which said fork is pivotally mounted, and latch means for maintaining the fork in fixed relation to the yoke.

2. In a device of the character described, the combination with a substantially U-shaped fork including side members and a bridge piece, of a substantially U-shaped yoke in which the fork is pivotally mounted, prongs pivotally associated with the limbs of the fork and adapted to occupy obstructing and non-obstructing positions, spring actuated latch members to maintain the fork in fixed relation to the yoke, and means for moving the prongs from an obstructing to a non-obstructing position and for simultaneously exerting releasing strain on the spring actuated latch members.

3. In a device of the character described, a carrying yoke having limbs provided with terminal bearings, a hoisting element connected with said yoke, a substantially U-shaped harpoon fork having a cross bar provided with trunnions engaging the bearings of the carrying yoke, and spring actuated latch means to maintain the fork in fixed relation to the yoke.

4. In a device of the character described, a carrying yoke, a U-shaped harpoon fork pivotally associated therewith, latch members pivoted on the limbs of the fork and having bifurcated arms straddling the limbs of the carrying yoke, said arms being exteriorly beveled, said latch members being also provided with inwardly extending lateral arms having guide members and inwardly extending arms, springs engaging the last mentioned arms to maintain the latch members in engagement with the carrying yoke, obstructing prongs pivotally associated with the limbs of the fork, means for actuating said obstructing prongs including levers pivotally associated with the limbs of the fork and having lateral inwardly extending arms, and a trip rope having branches connected with said arms, said branches being guided over the guide members on the inwardly extending lateral arms of the latch members.

5. In a device of the character described, a carrying yoke, a pivotally supported fork

having spring actuated latch members engaging the carrying yoke, obstructing prongs pivotally associated with the fork, means for actuating said prongs including
5 levers pivoted on the limbs of the fork and having laterally extending arms and diagonal braces, and spring members mounted on the fork to engage the lever arms, there-

by maintaining the obstructing prongs in non-obstructing position. 10

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

FRANK L. BAKER.

Witnesses:

MARIAN C. BAKER,

BERTHA A. PEELING.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
