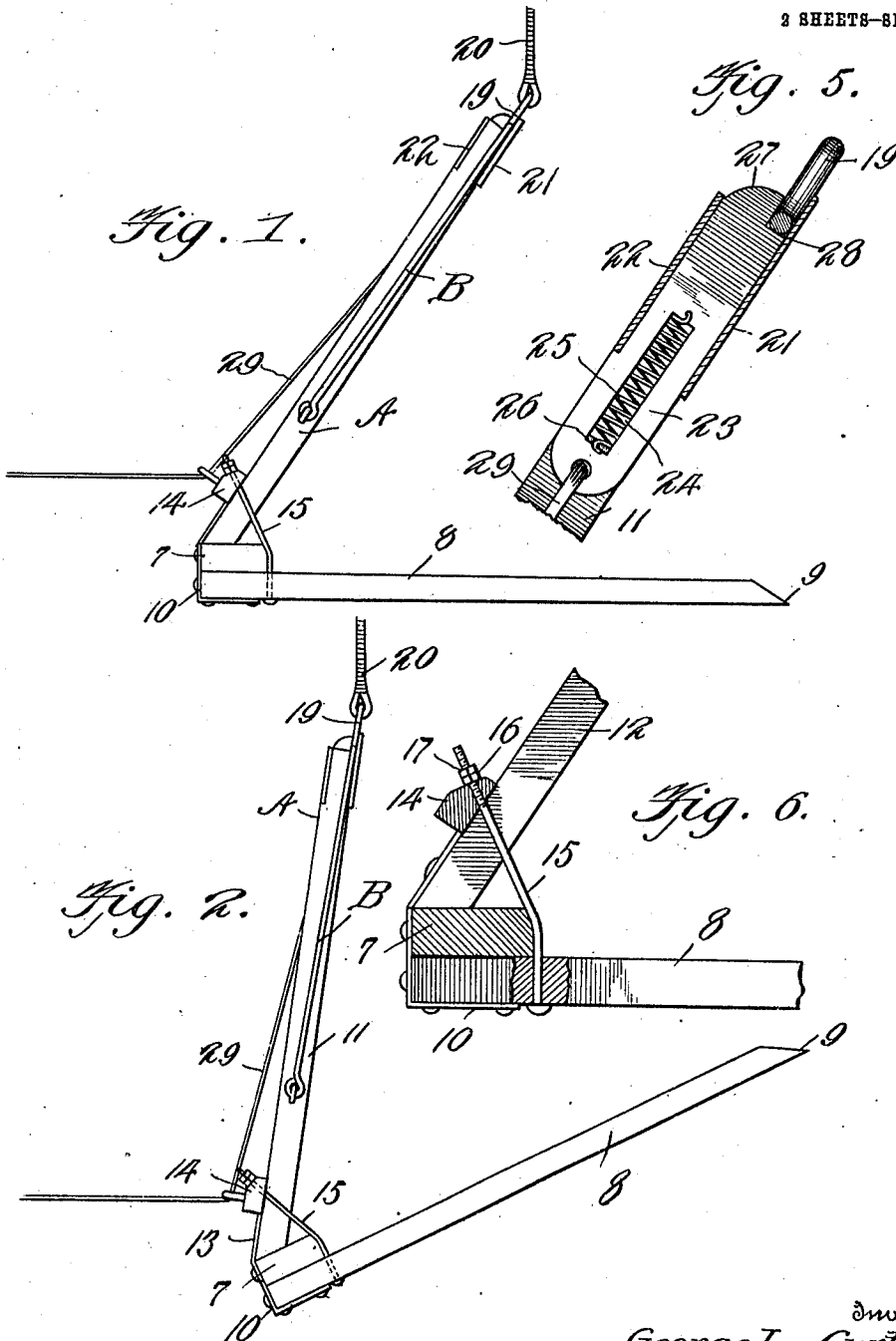


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 FORK FOR HAY STACKERS.
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988,628.

Patented Apr. 4, 1911.

2 SHEETS—SHEET 1.



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UNITED STATES PATENT OFFICE.

GEORGE L. CURTIS, OF BIG TIMBER, MONTANA.

FORK FOR HAY-STACKERS.

988,628.

Specification of Letters Patent.

Patented Apr. 4, 1911.

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To all whom it may concern:

Be it known that I, GEORGE L. CURTIS, a citizen of the United States, residing at Big Timber, in the county of Sweet Grass and State of Montana, have invented new and useful Improvements in Forks for Hay-Stackers, of which the following is a specification.

This invention relates to forks for hay stackers and more particularly for that class which are known as derrick stackers.

The prime object of the invention is to produce a fork of simple and improved construction upon which the load to be elevated may be deposited by means of an ordinary bull-rake.

A further object of the invention is to produce a fork of the class described which shall be equipped with a hinged supporting yoke and latch means for sustaining said yoke to hold the fork in load-supporting position.

Still further objects of the invention are to simplify and improve the general construction and operation of a device of the character outlined above.

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 claim.

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 invention may be resorted to when desired.

In the drawings,—Figure 1 is a side elevation, showing the improved fork in load-receiving position. Fig. 2 is a side view, showing the fork in hoisting position. Fig. 3 is a side elevation, showing the fork in load-discharging position. Fig. 4 is a rear elevation of the improved fork. Fig. 5 is a sectional view enlarged taken on the plane indicated by the line 5—5 in Fig. 4. Fig. 6 is a sectional view enlarged taken on the plane indicated by the line 6—6 in Fig. 4.

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

The improved fork includes in its con-

struction a head bar 7 upon the underside of which a plurality of forwardly extending teeth 8 are secured, said teeth being straight and provided with beveled front ends 9, the heel ends of said teeth being reinforced by means of angle plates 10 connecting the same with the head bar.

An inverted V-shaped hoisting frame A is provided, the side members 11 of said frame being terminally connected with the head bar 7 adjacent to the ends of the latter; vertical braces 12 connect the side members 11 with the head bar, as shown, angle plates 13 being provided for the purpose of properly reinforcing the parts. The hoisting frame is also reinforced by a cross bar 14, which latter is connected at intervals with the teeth 8 by means of brace rods 15 having tightening nuts 16 and lock nuts 17, thus producing a strong and rigid structure. It will be observed that the hoisting frame is positioned at an acute angle with reference to the teeth 8 and that said angle may be slightly varied by tightening the nuts upon the brace rods 15, thus enabling slack caused by wear to be readily taken up.

A hoisting yoke B is hingedly connected with the side members 11 of the hoisting frame A, said yoke terminating above the apex of the hoisting frame in a ring or link 19 with which a flexible hoisting element 20 is connected. The apex of the hoisting frame is reinforced upon its front and rear sides by facing plates 21 and 22, the former of which projects beyond the side members of the frame, as clearly seen in Fig. 4, so as to obstruct the forward movement of the yoke B beyond the apex of the frame A, the rearward movement of said yoke being unobstructed.

Space is provided between the upper ends of the side members 11 of the hoisting frame, and the facing plates 21 and 22 have a slidable latch member 23 having a slot 24, said latch members being actuated by an expansion spring 25, the upper end of which bears against the upper end wall of the slot 24, while the lower end of said spring rests upon a cross bar 26 connecting the side members 11 and extending through the lower end of the slot 24. The upper end of the latch member 23 is beveled, as shown at 27, and provided with a yoke-engaging notch 28. Connected with the lower end of the spring-actuated latch member 23 is a flexible oper-

ating member 29 which is suitably guided to a point within convenient reach of the operator.

The improved fork when in load-receiving position, as shown in Fig. 1, rests with the teeth 8 disposed flat upon the ground so that a load may be conveniently deposited thereupon by means of an ordinary bull-rake, as will be well understood, the hoisting yoke B being in engagement with the notch 28 of the latch member. When draft in an upward direction is applied to the hoisting yoke through the medium of the hoisting member 20, the hoisting frame will assume an approximately vertical position, and the outer ends of the teeth 8 will be tilted upwardly, as shown in Fig. 2, thus causing the load to rest securely between the teeth and hoisting frame. This position is being maintained while the load is being elevated and conveyed to the point of discharge, when the latch member is actuated against the tension of the spring 25 by means of the operating rope 29, thus releasing the hoisting yoke from engagement with the notch 28, when the teeth will be tilted downwardly by the weight of the load to the position shown in Fig. 3, thus discharging the load by gravity.

As will be seen from the foregoing description, the improved stacker fork is simple in construction, and it may be efficiently utilized in connection with stackers of various construction, an important advantage residing in the fact that it may be loaded by

means of an ordinary bull-rake, although its use is by no means limited in this respect.

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

In a stacker fork, a head bar having forwardly extending straight teeth, an inverted V-shaped hoisting frame secured upon the head bar in an inclined position with reference to the teeth, said hoisting frame including side members connected at their lower ends with the head bar and connected together at their upper ends in slightly spaced relation by facing plates, one of which extends beyond the edges of the side members, a latch bar housed in the space bounded by the facing plates and the upper ends of the side members of the hoisting frame, said latch bar having a slot, a cross bar extending through the slot of the latch bar and connecting the side members of the hoisting frame, an actuating spring housed in the slot of the latch bar adjacent to the cross bar, a hoisting yoke hingedly connected with the side members of the hoisting frame and adapted to be obstructed by the facing plate extending beyond said side members when said yoke is in latch engaging position, and a trip rope connected with the latch bar.

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

GEORGE L. CURTIS.

Witnesses:

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