No. 692,489. Patented Feb. 4, 1902.

J. F. SNETHEN.

HAY FORK.

(Application filed Oct. 5, 1901.)

(No Model.)

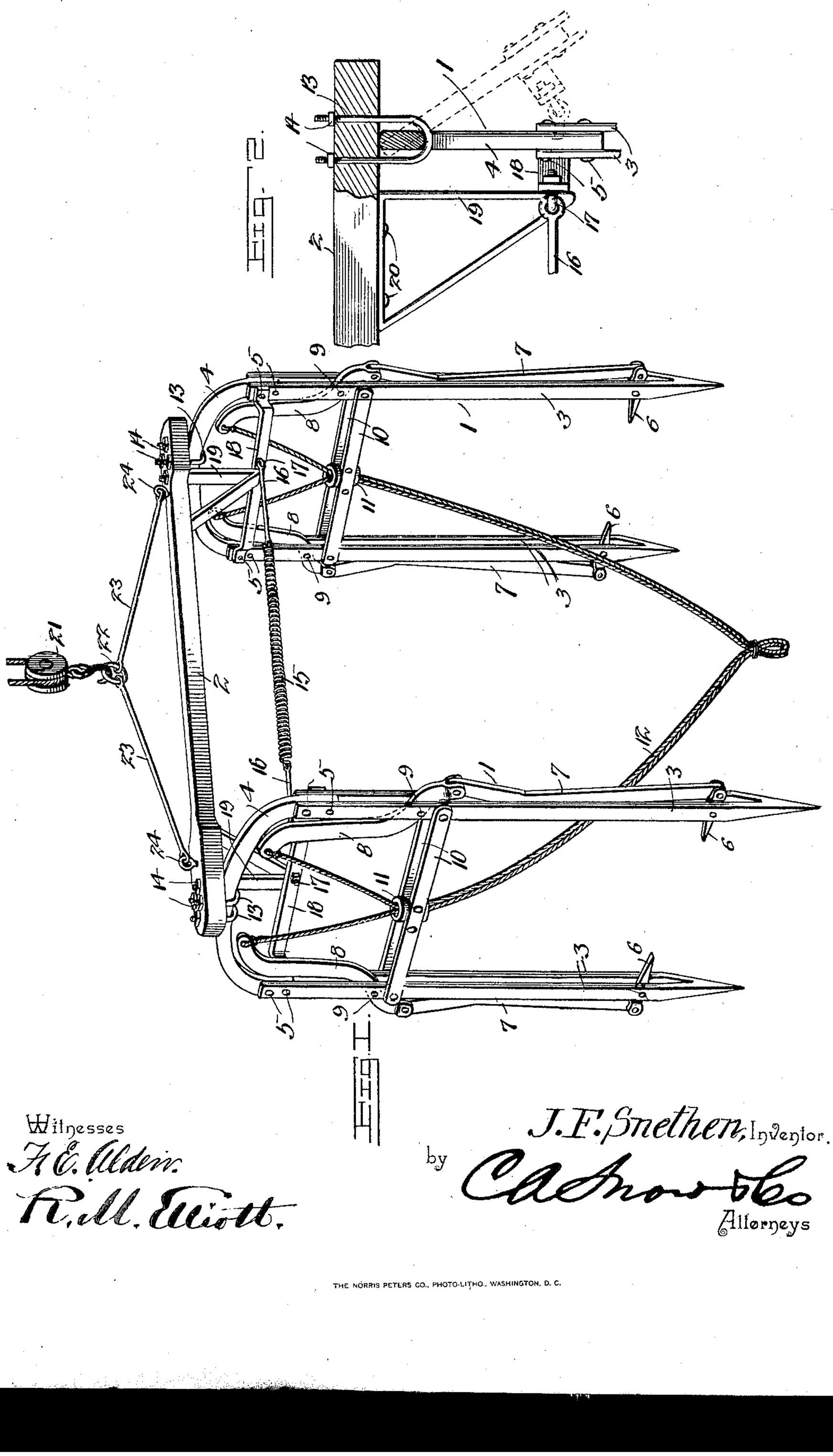

FIG. 2.

Witnesses
F. E. Alden.
R. M. Elliott.

J. F. Snethen, Inventor.
by Church & Co
Attorneys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JACOB F. SNETHEN, OF HUMBOLDT, NEBRASKA.

HAY-FORK.

SPECIFICATION forming part of Letters Patent No. 692,489, dated February 4, 1902.

Application filed October 5, 1901. Serial No. 77,708. (No model.)

To all whom it may concern:

Be it known that I, JACOB F. SNETHEN, a citizen of the United States, residing at Humboldt, in the county of Richardson and State of Nebraska, have invented a new and useful Hay-Fork, of which the following is a specification.

This invention relates to hay-forks.

The object is to present a hay-fork which shall be capable of lifting large bulks or bunches of hay or straw irrespective of its condition—that is to say, whether it be fine or coarse—and deposit the same without scattering on the mow or stack.

A further object is to present a hay-fork in which damage to the prongs thereof will not ensue, as by bending or breaking, where the load is unevenly distributed on the prongs.

A further object is to provide a hay-fork having two sets of forks supported from a common head, the forks being adapted to yield laterally in the event of the barbs of one of the forks being tripped to the exclusion of the other, thereby to prevent damage to the fork, and to resume their normal position automatically after the load is discharged.

With these and other objects in view, as will appear as the nature of the invention is better understood, the same consists in the novel construction and combination of parts of a hay-fork, as will be hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which like numerals of reference indicate corresponding parts, there is illustrated a form of embodiment of the invention capable of carrying the same into practical operation, it being understood that the elements therein exhibited may be varied or changed as to shape, proportion, and exact manner of assemblage without departing from the spirit of the invention.

In the drawings, Figure 1 is a perspective view of a hay-fork characterizing this invention. Fig. 2 is a detail view in side elevation, showing more particularly the manner in which the prongs or forks are held associated with the connecting bar or head for lateral swinging movement.

As shown in Fig. 1, two forks (designated generally 1) are provided, these being suitably connected to a connecting bar or head 2. As each of the forks is a counterpart of the other and operates in precisely the same manner, a description of one will serve for both.

Each fork comprises two prongs 3, formed by welding two flat bars of metal together and pointing the lower end to facilitate insertion in the straw or hay. The two prongs are connected by a yoke 4, which is preferably curved and is associated with the prong members by bolts or rivets 5. Pivoted between the prong members adjacent the lower end of each is a barb 6, of the usual or any preferred construction, to the outer end of which is connected the lower end of a link 7, the upper end of which is pivotally connected with a trip-lever 8, pivoted between the prong members at 9. Connecting the prongs at a point adjacent to the pivotal connection of the trip-levers are two tie-bars 10, which serve to brace the prongs and prevent spreading thereof, and secured between the tie-bars, preferably at a point midway of their length, is a rope-guide 11, through which passes the trip-rope 12, the ends of which are secured in openings in the upper ends of the trip-levers.

The means of connection between the fork and the connecting-bar 2 is in this instance through the medium of two clips 13, which loosely embrace the crest of yoke 4, as shown in Fig. 2, and are held associated with the connecting-bar 2 by nuts 14. It will be seen by reference to Fig. 2 that the clips are of somewhat greater width than the thickness of the yoke, by which arrangement the fork will be permitted to have lateral swinging movement, as indicated in dotted lines in said figure. The provision of this means for permitting lateral movement of the forks is of the greatest importance and that which renders the employment of two forks supported from a single connecting-bar possible; otherwise when a heavy load is being lifted should the operator fail to trip the barbs on one of the forks all of the weight would be thrown on this fork and bending or breaking of the prongs thereof would inevitably follow; but where permitted to swing in the manner described the weight will always remain in vertical alinement with the fork irrespective of

the position the latter assumes with relation to the connecting bar or head.

As a means for holding the forks normally at right angles to the connecting-bar 2 and in position for the pointed ends of the prongs to enter the hay or straw a spring 15 is employed, to each of the end whirls of which is connected one end of a rod 16, the other end of which is connected with an eyebolt 17, carried by a cross-bar 18, rigidly secured to each of the forks adjacent to the yoke, these cross-bars also subserving the function of stops to limit the inward movement of the forks, under the stress of the spring 15, by contact with braces or abutments 19, depending from the lower side of the connecting-bar, as clearly shown in Fig. 2. Each abutment, as shown in the drawings, is a hollow rectangular structure held associated with the connecting-bar by bolts 20; but it is to be understood that it may be otherwise constructed and still be within the scope of the invention.

The hoisting means (herein shown as a block and tackle 21) is connected with the cross-bar through the medium of a ring 22 and two rods 23, secured to the connecting-bar by eyebolts 24. It is to be understood, however, that, if preferred, other means may be employed for this purpose; but inasmuch as it is desired that the strain of the load should be transmitted to the connecting-bar as near its extremities as possible the arrangement shown will generally be employed.

The operation of the device is as follows: The stops 18 being in position against the abutments 19, so that the forks are disposed at right angles to the connecting-bar, the trip-levers are depressed by drawing down upon the trip-rope, thereby causing the barbs to be sheathed between the members of the prongs. The operator then forces the forks down into the straw or hay and moves the trip-levers to the position shown in Fig. 1, thereby to bring the prongs into position to prevent the load from becoming disconnected therefrom. When the fork has been swung in position over the mow or stack, the operator pulls the trip-rope, and thus releases the load in the usual manner.

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

1. A hay-fork comprising a bar or head, a pair of forks suspended for swinging movement thereon, and means operating normally to hold the forks in parallel relation with each other.

2. A hay-fork comprising a bar or head, a pair of forks suspended for swinging movement thereon, a spring connecting the forks and operating normally to hold the same disposed parallel with each other, and stops or abutments for limiting the inward movement of the forks.

3. A hay-fork comprising a bar or head having means for connection with an overhead support, laterally-yieldable spring-retracted forks carried by the terminals of the bar, and means for holding the forks in parallel relation with each other against the stress of the spring.

4. A hay-fork having two sets of forks supported from a common head, the forks being adapted to yield laterally, in event of the barbs of one of the forks being tripped to the exclusion of the other, and to resume their normal position automatically after the load is discharged.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JACOB F. SNETHEN.

Witnesses:
ELVON E. BARLOW,
WILLIAM M. SCHLOSSER.