Reynolds v. Young.
Hay Fork.

No 47,982. Patented. May 30. 1865.

Fig: 1.

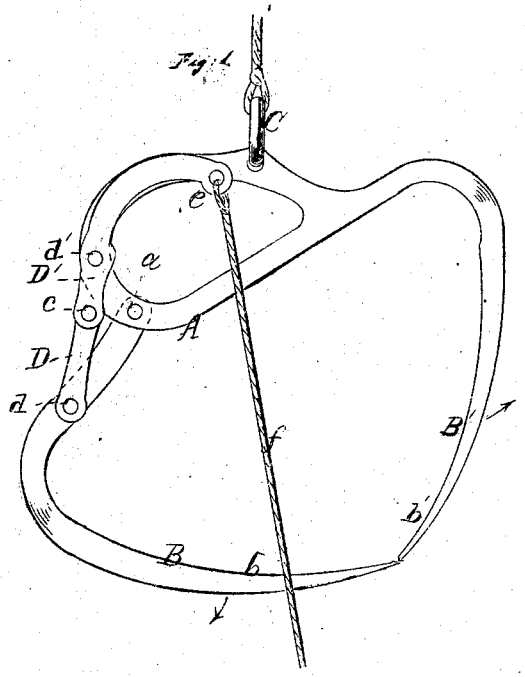


Fig: 2.

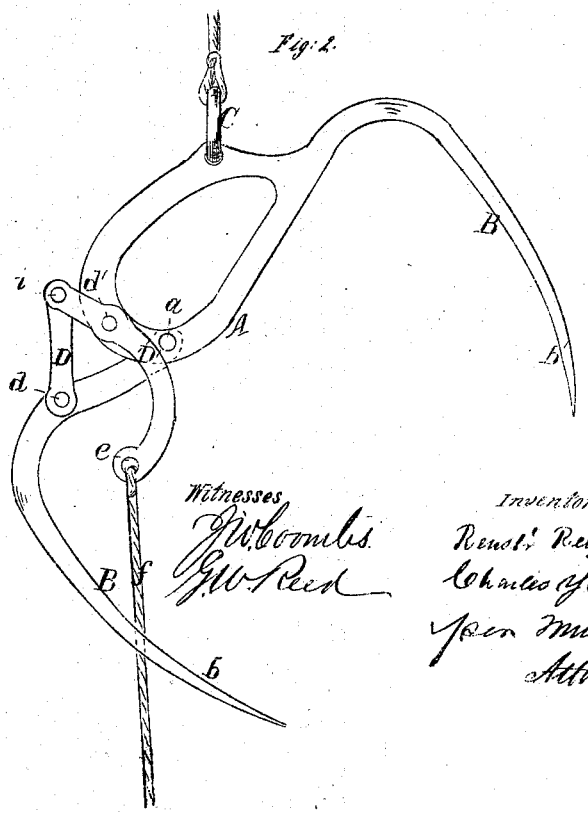
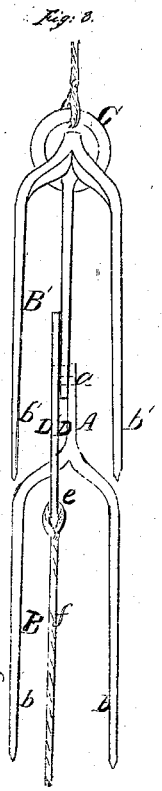


Fig: 3.



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UNITED STATES PATENT OFFICE.

RENSS. REYNOLDS AND CHARLES YOUNG, OF STOCKPORT, NEW YORK.

IMPROVEMENT IN HORSE HAY-FORKS.

Specification forming part of Letters Patent No. **47,982**, dated May 30, 1865.

To all whom it may concern:

Be it known that we, RENSSELAER REYNOLDS and CHARLES YOUNG, both of Stockport, in the county of Columbia and State of New York, have invented a new and Improved Hay-Fork; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a side elevation of our invention when closed and in the position of being hoisted up. Fig. 2 is a similar view of the same when open and ready to take in a fresh load. Fig. 3 is a front elevation of the same.

Similar letters of reference indicate like parts.

This invention consists in combining with two hinged tined jaws two levers or toggle-arms in such a manner that when said toggle-arms are straightened out the jaws are firmly closed, and a load of hay taken up by them can be hoisted up to any desired height, and by a slight pull on one of the toggle-arms they are thrown out of line, and the jaws open to clamp their load; and, furthermore, by the action of the toggle-lever the operation of entering the fork in the hay is facilitated.

It consists, further, in placing the ring which takes the hoisting-rope out of the center of the fork and in such position in relation to the toggle-arms and to the pivot connecting the two jaws that by the strain on the hoisting-rope the opening and the closing of the fork is facilitated.

A represents a fork made of iron or any other suitable material, and composed of two jaws, B B′, which are hinged together by a pivot, *a*. Each jaw is provided with two or more tines, *b b′*, and the pivot *a*, which connects the two jaws, is far from being central between the tines, as clearly shown in Figs. 1 and 2 of the drawings.

C is a ring secured to the jaw B′, and intended to take the hoisting-rope. This ring is also out of the center on the opposite side of the pivot *a*, and by this position of the ring and pivot in relation to each other and to the tines the discharge of the hay is considerably facilitated, and the fork drops the load just as it was taken up, instead of rolling it up, as is the case with most forks. For this reason our fork is particularly valuable in mowing or stacking where it is desirable to deposit the load just as it was taken up. The two jaws of the fork are also connected by two arms, D D′, which are connected to each other by a pivot, *c*, and to the jaws by pivots *d d′*, as clearly shown in the drawings. The arm D′ extends beyond its pivot *d′*, and is provided with a loop, *e*, to receive the line *f*, which serves to discharge the load. The arms D D′ form a toggle-joint, and if the fork is closed the pivot *c*, which connects said toggle-arms, is within a straight line drawn through the centers of the pivots *d d′*. In this position the end of the arm D strikes the back of the jaw B′, and the fork retains its load, and the weight of the load itself, together with the strain on the hoisting-rope, prevents the fork from opening spontaneously. The load rests on the jaw B, and consequently has a tendency to throw said jaw in the direction of the arrow marked near it in Fig. 1, and by this strain on said jaw the fulcrum of the toggle-joint is pressed in, and consequently said toggle-joint is prevented from releasing the jaws. The same action takes place by the strain of the hoisting-rope on the jaw B′. This strain has a tendency to throw said jaw in the direction of the arrow marked near it in the same figure, and the toggle-joint is held tight. By pulling the line *f*, however, the fulcrum of the toggle-joint is easily thrown beyond the line drawn through the pivots *d d′*, and the fork is allowed to open. By the weight of the load and by the strain of the hoisting-rope both jaws are thrown open simultaneously, and the load is dumped just as it had been taken up. The toggle-joint and lever D′ are also very useful and important in causing the fork to enter the hay. If the fork is open, as shown in Fig. 2, a slight pressure on the fork, added to the action of the lever and toggle-joint by pulling the lever, causes the fork to catch and grasp the hay firmly with the least possible effort, and this operation is further facilitated by the peculiar form of the tines, which are curved in such a manner that they will readily enter the hay.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The toggle-joint and lever D D′, in com-

bination with the hinged jaws B B′ of the fork A, constructed and operating in the manner and for the purpose substantially as herein shown and described.

2. The ring C, when the same is arranged on one side of the center of the fork, and operates in combination with the toggle-arms D D′ and jaws B B′, substantially as and for the purpose set forth.

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Witnesses:
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