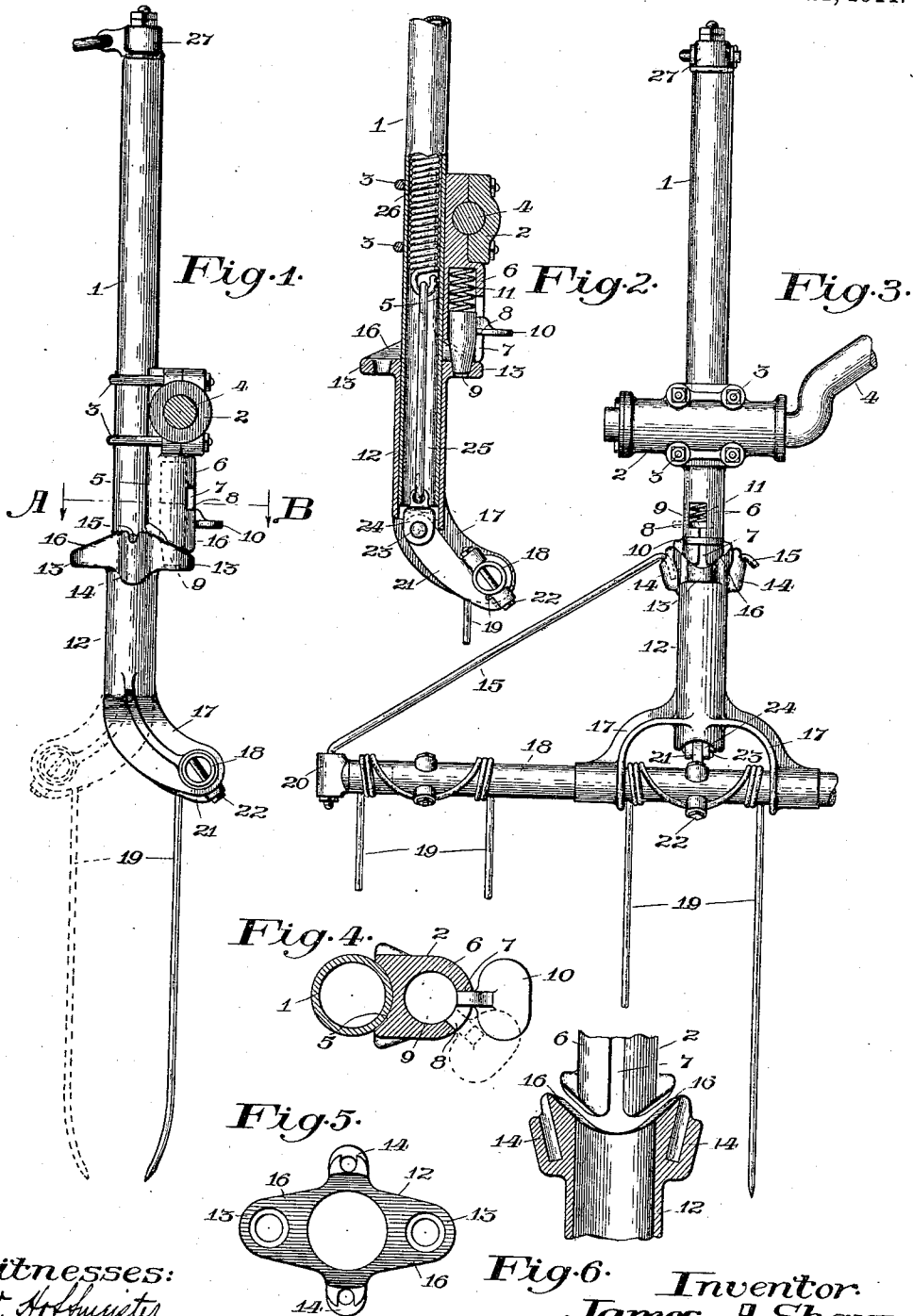


J. A. SHARP.
 REVERSIBLE FORK FOR HAY TEDDERS.
 APPLICATION FILED JULY 5, 1911.

1,009,105.

Patented Nov. 21, 1911.



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UNITED STATES PATENT OFFICE.

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REVERSIBLE FORK FOR HAY-TEDDERS.

1,009,105.

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To all whom it may concern:

Be it known that I, JAMES A. SHARP, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Reversible Forks for Hay-Tedders, of which the following is a specification.

My invention relates to combined hay rakes and tedders, and in particular to the construction of the forks, whereby they may be turned about the axis of the fork-carrying arm in a manner to operate either as rake teeth when the rotatable shaft upon which the forks are mounted is rotated in one direction, or as tedder forks when the shaft is rotated in a reverse direction, and consists in a sleeved bracket having a tooth-carrying head secured thereto and means whereby the sleeve is mounted upon the fork-carrying arm in a manner to turn about the axis thereof, and means for locking the sleeve in its different positions of adjustment relative to the arm; the object of my invention being to provide a construction permitting the forks to be easily and quickly reversed and securely held in either position. I attain this object by means of the mechanism illustrated by the accompanying drawing, in which—

Figure 1 represents a side elevation of my improved fork, having the shaft upon which it is mounted shown in section; Fig. 2 is a longitudinal section of part of Fig. 1; Fig. 3 is a plan view of the fork and the manner of mounting it upon the multiple crank shaft that transmits motion thereto; Fig. 4 is a cross section of part of Fig. 1 along line A—B; Fig. 5 is an end view of the upper end of the rotatable shank upon which the fork-carrying head is mounted; and Fig. 6 represents a detached detail of part of Fig. 1, partly in section, and designed to illustrate the connection between the adjustable and fixed parts of the fork mechanism.

The same reference characters designate like parts throughout the several views.

1 represents a tubular fork-carrying arm having a two-part bearing box 2 secured thereto intermediate its ends by means of U-bolts 3, whereby it is journaled upon a multiple crank shaft 4, one member of the bearing box having a longitudinally arranged saddle portion 5 that is engaged with the arm and extends below the axis of

the bearing box toward the lower end of the arm, and integral therewith is a barrel portion 6 arranged lengthwise of the arm and provided with a vertically arranged slot 7 through its front wall that terminates at its upper end in an enlarged opening provided with a laterally arranged shoulder portion 8, and 9 represents a sliding plunger received by the barrel and provided with a handle portion 10 that projects through the slot in the barrel in position to be grasped by the hand of the operator, a compression spring 11 being operative between the upper end wall of the barrel and the plunger in a manner to yieldingly press the latter in a downward direction.

12 represents a sleeved bracket that is rotatably mounted upon the lower end of the fork-carrying arm and having a head portion at its upper end, said head portion including oppositely disposed ear portions 13 upon the front and rear sides thereof that are provided with vertical openings therein that are adapted to receive the lower end of the plunger 9 in a manner to lock the arm and sleeve in operative relation, and 14 represents other ear portions oppositely disposed and arranged at right angles with the first mentioned ear portions and having openings therein that are adapted to receive the hooked upper ends of fork sustaining rods 15, the two sets of ears being connected by means of curved rib portions 16 that form a seat for the lower rounded end of the barrel carrying the spring-pressed plunger, as shown in Fig. 6.

The lower end of the sleeved bracket 12 is provided with oppositely disposed depending arms 17 that are provided with bearings at their lower ends that receive the middle portion of a rocking tine-supporting head 18, having spring tines 19 yieldingly connected therewith in a common way, the head being preferably tubular in form and at opposite ends thereof provided with separable cap members 20, having shank portions that are received by the tubular head in a manner permitting the head to turn about the axis of the shanks, the cap members having vertical openings therein that receive the lower ends of the fork retaining rods 15.

21 represents an arm secured to the center of the fork head by means of a bolt 22, and curving upward is provided with a laterally

arranged opening that receives a pin 23 whereby the arm is pivotally connected with a shackle member 24 that is connected with the lower end of a tension rod 25 that extends upward within the tubular fork-carrying arm 1, where it is connected with the lower end of a coiled tension spring 26, the upper end of the spring being adjustably connected with a cap member 27 loosely mounted at the upper end of the arm.

In the operation of machines of the class indicated, when used as a side delivery rake, the multiple crank shaft carrying the fork arms is rotated in a direction whereby the forks are caused to traverse a path in the direction of advance of the machine, and the curved lower ends of the fork tines are directed forward. When used as a tedder, it is desirable that the shaft be caused to rotate in an opposite direction and the forks to move in a reverse path relative to the advance of the machine, with the curved lower ends of the fork tines directed rearward. With my improved construction of fork and its carrying arm the fork may be quickly turned about the axis of the arm by the operator lifting upward on the handle of the spring-pressed plunger 9 until it may be turned laterally into engagement with the shoulder 8 of the enlarged opening at the upper end of the slot in the wall of the barrel portion 6, and thereby releasing the plunger from its engagement with the head of the sleeve 12 and permitting a reversal of the position of the fork head relative to its supporting arm, when the plunger may be turned and released from engagement with the shoulder and allowed to enter the oppositely disposed opening in the head of the sleeve in a manner to rigidly secure the parts in their adjusted position.

What I claim as being my invention, and desire to secure by Letters Patent, is:

1. A fork for combined rakes and tedders including, in combination, a fork, a fork-carrying arm, a sleeved bracket rotatably mounted upon said arm and having oppositely disposed depending arms in which is mounted a rocking fork head, the upper

end of said sleeved bracket having a head portion, and a sliding spring-pressed plunger mounted upon said fork-carrying arm and operative to releasably engage with said head at oppositely disposed points in a manner to secure said fork against a turning movement about the axis of said fork-carrying arm.

2. A fork for combined rakes and tedders including, in combination, a fork, a fork-carrying arm, a sleeved bracket rotatably mounted upon said arm and having oppositely disposed depending arms in which is mounted a rocking fork head, the upper end of said sleeved bracket having a head portion including oppositely disposed ears having vertically arranged openings therein, a spring-pressed sliding plunger mounted upon said fork-carrying arm and operative to engage with either of said openings in a manner to secure said fork against a turning movement about the axis of said fork-carrying arm.

3. A fork for combined rakes and tedders including, in combination, a fork, a fork-carrying arm, a bearing box secured to said fork-carrying arm, a sleeved bracket rotatably mounted upon said arm and provided with oppositely disposed depending arms in which is mounted a rocking fork head, the upper end of said sleeved bracket having a head portion including oppositely disposed ears having vertically arranged openings therein, a vertically arranged barrel portion forming part of said bearing box and provided with a vertical slot through the wall thereof, a spring-pressed sliding plunger received by said barrel portion and having a handle portion projecting through said slot, said plunger being adapted to engage with openings in said ears forming part of said sleeved bracket in a manner to secure said fork against a turning movement about the axis of said fork-carrying arm.

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Witnesses:

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