J. ORR.

HORSE HAY-FORK.

No. 186,607. Patented Jan. 23, 1877.

Fig. 1.

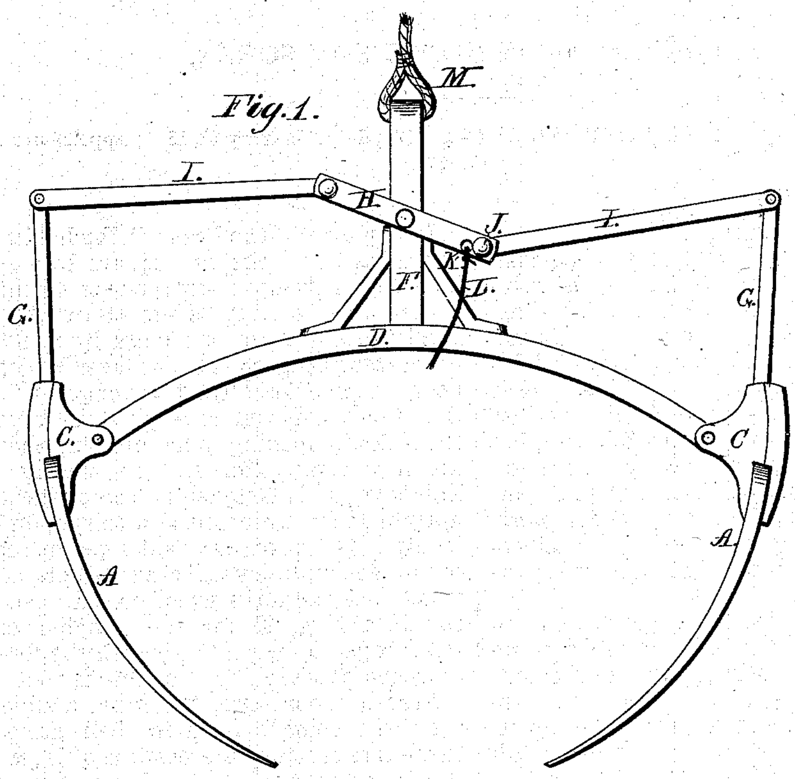


Fig. 2.

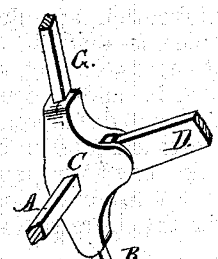
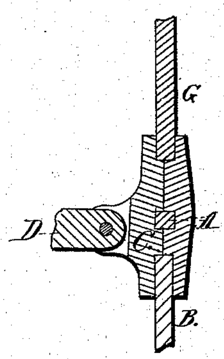


Fig. 3.



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UNITED STATES PATENT OFFICE.

JAMES ORR, OF LEAVENWORTH COUNTY, KANSAS.

IMPROVEMENT IN HORSE HAY-FORKS.

Specification forming part of Letters Patent No. **186,607**, dated January 23, 1877; application filed May 10, 1876.

To all whom it may concern:

Be it known that I, JAMES ORR, of Leavenworth county, in the State of Kansas, have invented a new and Improved Double Hay-Fork, for the lifting and conveying of hay and straw from and to wagons, stacks, ricks, barns, &c., by means of horse or other power applied to the operation of a derrick or otherwise; and I do declare that the following is a full and exact description of the construction thereof, and of the means of its use and operation, reference being had to the accompanying drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

My invention relates to improvements in double horse hay-forks; and it consists in the employment of two forks pivoted to the outer ends of a curved bow, the forks being provided with upright arms connected by pivoted levers with a central lever having its fulcrum in a vertical arm attached to the central bow, the central lever having handles at each end, by means of which the forks can be readily transported from place to place, pressed into the hay or straw to be lifted, and opened or closed, as hereinafter more fully set forth.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I construct two forks of cast-steel similar in their general form and the size of their prongs or tines, but with a greater thickness from front to back than across, but without handles. They consist merely of the two prongs or tines A and a third, B, which are inclosed in a head, C. The head is preferably cast in two parts, with a space midway sufficiently large to receive the connecting-back of the two outer prongs, and, when bolted together, to hold it firmly in its place. The middle prong is also inserted at its upper end into a hole in the lower part of the head C, and there securely bolted. The head itself is fastened by a bolt, upon which it plays as a pivot, to the extremities of a curved bow, D. This bow D is made preferably of wood, but stripped, for sufficient strength, on the sides with iron. On the top of this bow, and at the center thereof, is a perpendicular rod. Through the top of this rod F is a hole, through which to fasten the rope M for hoisting and lowering the forks.

In the tops of the heads C, for holding and operating the forks, are square iron rods G joined at their upper extremities to the horizontal and operating levers H by other rods I, all working upon the bolts by which they are fastened together. The lever H has at or near its ends handles J, by means of which the leverage power is applied for operating the forks in opening them, pressing them into the hay, straw, &c., and in closing them. This lever H is fastened at the center of the upright rod F by means of a bolt, upon which it plays. On the opposite sides and at the ends of the back of the lever H are small projections, which lock the forks when closed. Near one end is a ring, K, for the attachment of a small rope, L, by pulling which the forks are unlocked and the hay, &c., discharged.

Figure 1 represents the entire double fork, the forks being opened to their utmost extent—a reversal of the position of lever H, by a man using the handles J, closes them, so that they hold securely the hay, &c. Figs. 2 and 3 are views of the head C, Fig. 2 being a sectional view, showing the space for the back and connecting-arm of the outer prongs A, the insertion of the middle prong B, and the place of attachment of the curved bow D. Fig. 3 is a back view of the same.

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

1. The combination of bow D, having forks pivoted to its opposite ends, and a central arm, F, with the lever H pivoted thereto, and provided with connecting-rods and with handles J J, whereby the forks may be transported to any desired point, opened and closed, and forced into the material to be raised, substantially as described.

2. The combination of the bow D, having pivoted forks at its opposite ends, with the arms G G, levers I I, and central lever H, provided with locking projections on its back face, substantially as described, and for the purpose set forth.

In testimony that I claim the above as my invention, I have hereunto set my hand in the presence of two witnesses.

JAMES ORR.

Witnesses:
C. H. GROVER,
J. P. BAUSMAN.