

UNITED STATES PATENT OFFICE.

JAMES S. FOSTER, OF YANKTON, DAKOTA TERRITORY.

IMPROVEMENT IN MACHINES FOR TWISTING HAY FOR FUEL.

Specification forming part of Letters Patent No. **181,160**, dated August 15, 1876; application filed August 3, 1876.

To all whom it may concern:

Be it known that I, JAMES S. FOSTER, of the city and county of Yankton, Dakota Territory, have invented a new and Improved Machine for Twisting Hay for Fuel; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 represents a side elevation; Fig. 2, a plan view.

The invention is an improvement upon that for which I have received Letters Patent No. 180,218, and relates, chiefly, to the combination of a rotating hook, a sliding extensible frame carrying the fixed or non-rotating head, and devices for locking said extensible frame and the rotating head, when required, in the operation of the machine, as hereinafter fully described.

In the accompanying drawing, A A represent the frame of the machine, in the transverse bars *a a* of which the rotating twisting-head B has its bearings. Said head is turned by a crank-handle in the usual way, and rotates in front of the fixed portion C of the extensible frame. To the opposite end of the sliding portion C' of said frame is firmly attached the non-rotating head B'. Both heads B B' are provided, respectively, with the upright pins *b b'* on their upper surfaces, and curved catches D D' pivoted on the outer surface of the heads, and moving in the deep slots *d d'* in the edges thereof. In the portion C of the extensible frame are the holes *e e*, &c., arranged longitudinally, for the accommodation of the transverse bar E, bearing the rotating hook *e*. The sliding portion C' of the extensible frame is fixed, when drawn out, by the side catches *e' e'* engaging its inner ends. F is the sliding lever, pivoted on one side of the frame of the machine, which fixes or locks the rotating head B, when neces-

sary, by engaging the projection or shoulder *g* on the outer side of said head.

The operation of the machine is as follows: The sliding part C' of the extensible frame being drawn out and fixed by the side catches *e' e'*, a single strand of hay is bent at each end around the pins *b* and *b'*, respectively, and fixed by means of the curved catches D D'. The twisting-head B is then rotated by the crank-handle until the hay is twisted sufficiently, when the strand is released from the head B', and bent over the hook. Then, by holding the free end in one hand, and turning the crank-handle with the other, the portion between the hand and hook *e* is twisted around the portion which remains stretched between the hook and head B, and upon releasing the looped end of the strand from the pin on the head B, and thrusting the other end through the loop or eye, the fagot is complete.

What I claim as new is—

1. In a machine for twisting hay for fuel, the combination of the extensible frame C C', twisting-heads B B', and adjustable rotating hook *e*, substantially as shown and described, for the purpose specified.

2. In a machine for twisting hay for fuel, the combination of the extensible frame C C', twisting-heads B B', upright pins *b b'*, and catches D D', all constructed and arranged substantially as shown and described, for the purpose specified.

3. In a machine for twisting hay for fuel, the combination, with the rotating head B, having a shoulder, as described, of the pivoted lever F, substantially as and for the purpose specified.

The above specification of my invention signed by me this 2d day of August, 1876.

JAMES S. FOSTER.

Witnesses:

CHAS. A. PETTIT,
SOLON C. KEMON.