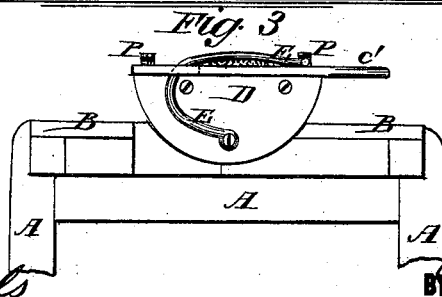
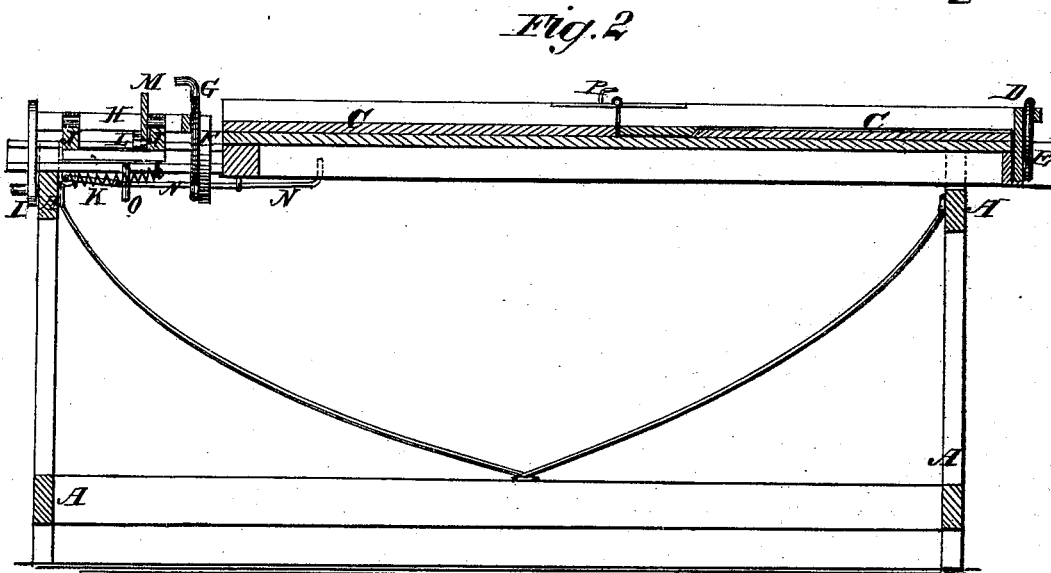
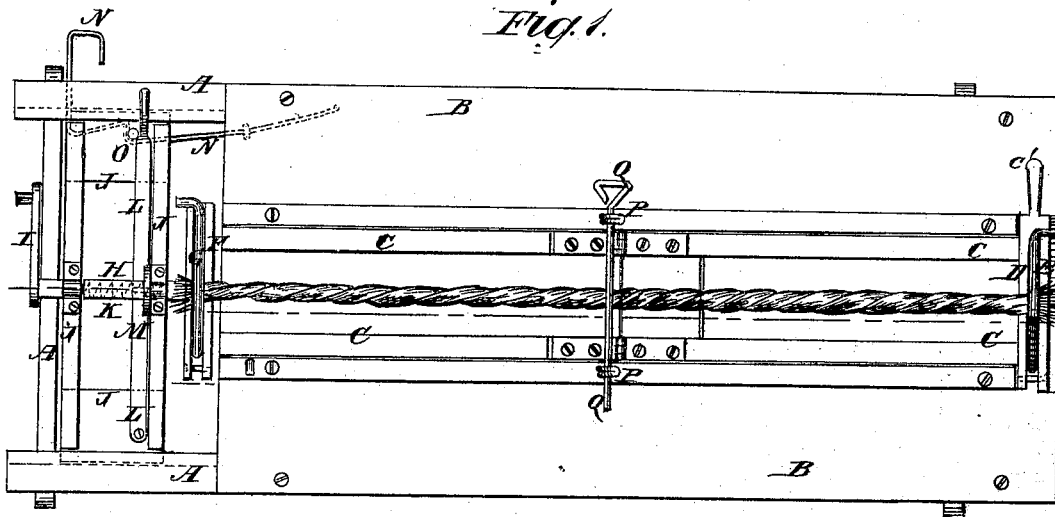


J. S. FOSTER.

MACHINES FOR TWISTING HAY AND STRAW FOR FUEL.

No. 180,218.

Patented July 25, 1876.



WITNESSES:
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JAMES S. FOSTER, OF YANKTON, DAKOTA TERRITORY.

IMPROVEMENT IN MACHINES FOR TWISTING HAY AND STRAW FOR FUEL.

Specification forming part of Letters Patent No. **180,218**, dated July 25, 1876; application filed May 1, 1876.

To all whom it may concern:

Be it known that I, JAMES S. FOSTER, of Yankton, in the county of Yankton, Dakota Territory, have invented a new and useful Improvement in Machine for Twisting Hay and Straw for Fuel, of which the following is a specification:

Figure 1 is a top view of my improved machine. Fig. 2 is a vertical longitudinal section of the same, taken through the line *x x*, Fig. 1. Fig. 3 is an end view of the same.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved machine for twisting hay and straw into wisps for fuel, which shall be simple in construction, inexpensive in manufacture, and effective in operation, enabling the wisps to be formed rapidly.

The invention consists in the box made in two parts—one stationary and the other loose—hinged to each other, the two heads and their clamps, the crank-shaft, the sliding frame, and the spiral spring, in combination with each other and with the main frame; in the combination of the catch-lever and the notched disk with the sliding frame and the crank-shaft; in the combination of the spring-catch and the catch-pin with the sliding frame and the main frame; and in the combination of the hooks and the rod with the hinged box and the table or frame, as hereinafter fully described.

A is the frame of the machine. B is the top or table, which does not extend quite to one end of the frame A. Upon the top of the machine is placed a box, C, made in two parts, hinged to each other at their adjacent ends. The forward half of the box C is attached to the table B, and the other half is loose, so that it can be folded down over the said stationary half. To the free end of the box C is attached a head, D, which is provided with a spring-clamp, E, for holding the end of a wisp of hay or straw. The free end of the hinged half of the box C is provided with a handle, *c'*, for convenience in folding and extending it. To the end of the stationary part of the box C is attached a head, F, and clamp G, similar to the head and clamp D E. The head F is attached to the inner

end of the shaft H, to the outer end of which is attached the crank I, by which the head and clamp F G are rotated. The shaft H revolves in bearings attached to the small frame J, which slides in ways in the top bars of the frame A. K is a spiral spring, one end of which is attached to the end of the frame A, and its other end is attached to the inner end of the sliding frame J, so as to draw and hold the said frame J back. L is a lever, one end of which is pivoted to the frame J, and which is provided with a catch or projection to catch upon a notch of a disk, M, attached to the shaft H, to prevent the said shaft from being turned back by the twist of the hay or straw when the crank I is released. N is a spring-catch attached to the frame A, to catch upon the pin O, attached to the frame J, to prevent the said frame J from being drawn back by the spring K. P are hooks or open keepers attached to the table B, to receive a detachable rod, Q, for holding the middle of the twisted hay or straw while doubling it.

In using the machine, a handful of hay or straw is placed in the box C, and its ends are secured to the heads D F by the clamps E G. The crank I is then turned, and as the hay or straw is twisted, its contraction draws the head F and frame J inward until the said head F strikes the end of the box C. The shaft H is then locked from turning by the catch-lever L, and the frame J is locked from being drawn back by the spring-catch N. The rod Q is then placed in the hooks P, and the movable half of the box C is folded over upon the stationary half, doubling the twisted hay or straw. The rod Q is then withdrawn, allowing the hay or straw to twist itself into a wisp. The ends of the wisp are then grasped with the left hand, and the clamps E G are opened with the right hand, releasing the wisp. The loose straws at the open end of the wisp are then twisted around said open end, and tucked in to prevent the wisp from untwisting, and the wisp is ready for use.

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

1. The combination of the box C, made in two halves, one stationary and the other loose, hinged to each other, the two heads D F and

their clamps E G, the crank-shaft H I, the sliding frame J, and the spiral spring K, with each other and the main frame A, substantially as herein shown and described.

2. The combination of the catch-lever L and the notched disk M with the sliding frame J and the crank-shaft H, substantially as herein shown and described.

3. The combination of the spring-catch N and the catch-pin O with the sliding frame J and the main frame A, substantially as herein shown and described.

4. The combination of the hooks P and the rod Q with the hinged frame C and table B or frame A, substantially as herein shown and described.

JAMES S. FOSTER.

Witnesses:

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