

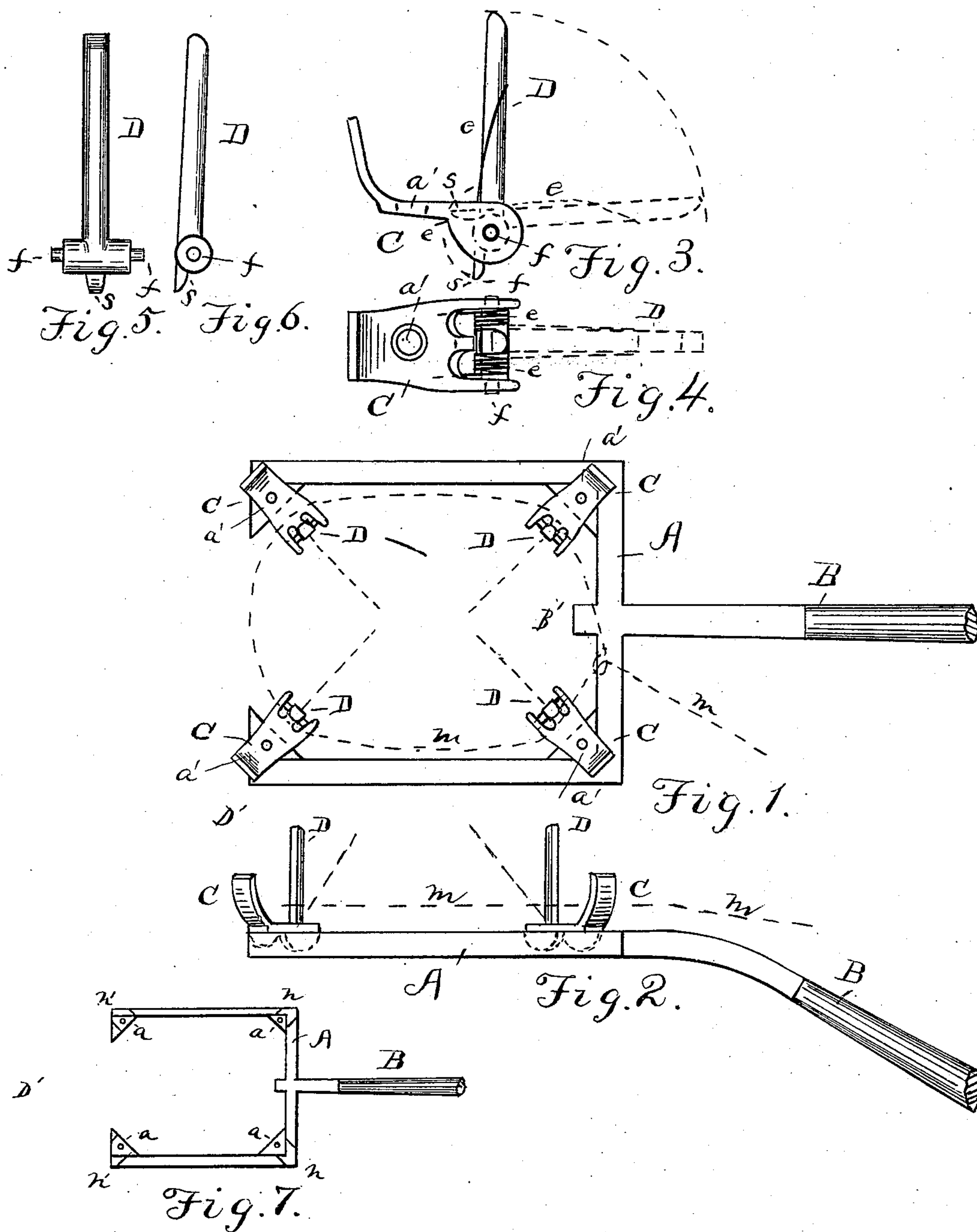
(No Model.)

E. T. MULLIGAN.

HOP YARD TWINER.

No. 316,165.

Patented Apr. 21, 1885.



WITNESSES:
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EDWARD T. MULLIGAN, OF WEST WINFIELD, NEW YORK.

HOP-YARD TWINER.

SPECIFICATION forming part of Letters Patent No. 316,165, dated April 21, 1885.

Application filed April 16, 1884. (No model.)

To all whom it may concern:

Be it known that I, EDWARD T. MULLIGAN, a citizen of the United States, residing at West Winfield, in the county of Herkimer and State of New York, have invented a useful Hop-Yard Twiner, of which the following is a specification.

My invention relates to hop-yard twiners; and it has for its object to provide a device of this character to assist in tying twine near the tops of hop-poles after they have been set in the ground.

With these ends in view the invention consists in the improved construction and combinations of parts hereinafter fully described, and pointed out in the claims.

In the drawings, Figure 1 is a plan view of a twiner constructed in accordance with my invention. Fig. 2 is a side elevation of the same. Figs. 3 and 4 are respectively side and plan views of the catch-frame; Figs. 5 and 6, front and side elevations of the arms of levers D; and Fig. 7 is a plan view of the frame to which the catch-frame C and arms D are attached.

In the accompanying drawings, in which like letters of reference indicate corresponding parts in all the figures, A represents a frame, which consists of the two parallel sides connected at their rear ends by a cross-piece having an inwardly-extending projection, B', and with a rearwardly and downwardly extending handle, B.

At the corners *a a* of the frame are provided grooves *n' n'*. In these grooves are riveted or otherwise secured catch-frames C, having the upwardly-extending rear ends, as shown. The ends of these catch-frames are recessed or cut away, and the sides of said recessed portions are provided near their ends with holes or openings in which are gudgeons *f*, formed at the lower ends of arms or levers D. Said arms or levers are provided at their lower ends with stops *s*, formed integral therewith, said stops being adapted, when the arms are lowered on a horizontal plane with the top of the frame, to bear against the under sides of the catch-frames C, and thus limit the downward movement and hold said catches in position at such point.

Upon the gudgeons *f* of the arms D are mounted the spirally-bent ends of looped springs *e*, which bear against the under sides of said arms and serve to hold them in an upright or vertical position.

The operation is as follows: A cord, *m*, is passed around the arms D, a loop is formed in one end of the cord and the other end passed through said loop. The cord is then tightened. The frame has, previous to the adjusting of the cord, been so placed a sufficient distance from the ground as to inclose the pole. The frame is raised to the desired point and the cord tightened, which lowers the arms and releases the cord therefrom, which is drawn tight upon the pole. The arms D assume an upright position as soon as the cord is removed therefrom, and the frame is then removed from the pole. The projection B' prevents contact of the cord with the pole, and supports the cord while it is being placed in position upon the pole.

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

1. The combination, in a hop-yard twiner, with a frame having a handle, of pivoted arms having stops at their lower ends, springs *e*, and catch-frames, substantially as set forth.

2. In a hop-yard twiner, the combination, with a frame having a handle, and projection B', and grooves, of catch-frames and pivoted spring-actuated arms, substantially as set forth.

3. In a hop-yard twiner, the combination, with a frame, of pivoted spring-actuated arms and catch-frames, substantially as set forth.

4. In a hop-yard twiner, the combination, with a frame, of catch-frames, arms pivoted between the bifurcated ends of said catch-frames, and springs for holding said arms in a vertical position and allowing them to be lowered on a horizontal plane with the frame, substantially as set forth.

5. In a hop-yard twiner, the combination, with a frame having projection B', of pivoted arms, frames for supporting said arms, and springs *e*, substantially as set forth.

6. The combination, with the frame A, having handle B, projection B', and grooves *n'*, open at one end, of catch-frames secured in said grooves at the corners of the frame, arms D, having stops at their lower ends, and springs *e*, substantially as set forth.

EDWARD T. MULLIGAN.

Witnesses:

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