

(No Model.)

J. D. TRACY.
HAY TEDDER.

No. 309,172.

Patented Dec. 9, 1884.

Fig. 1

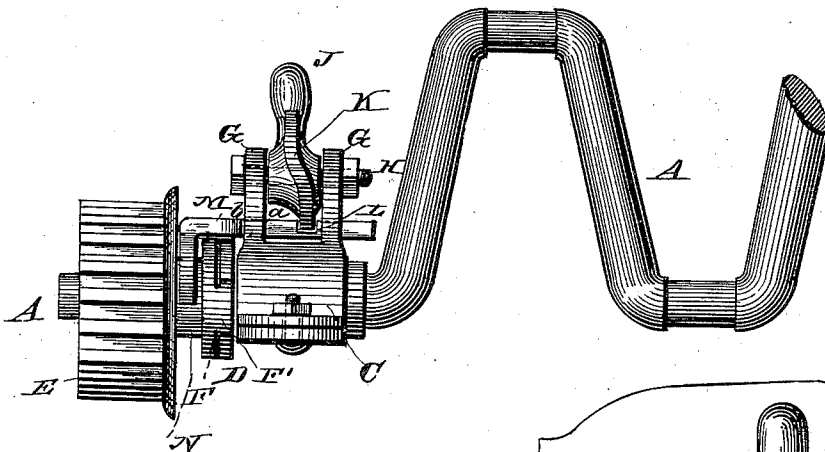
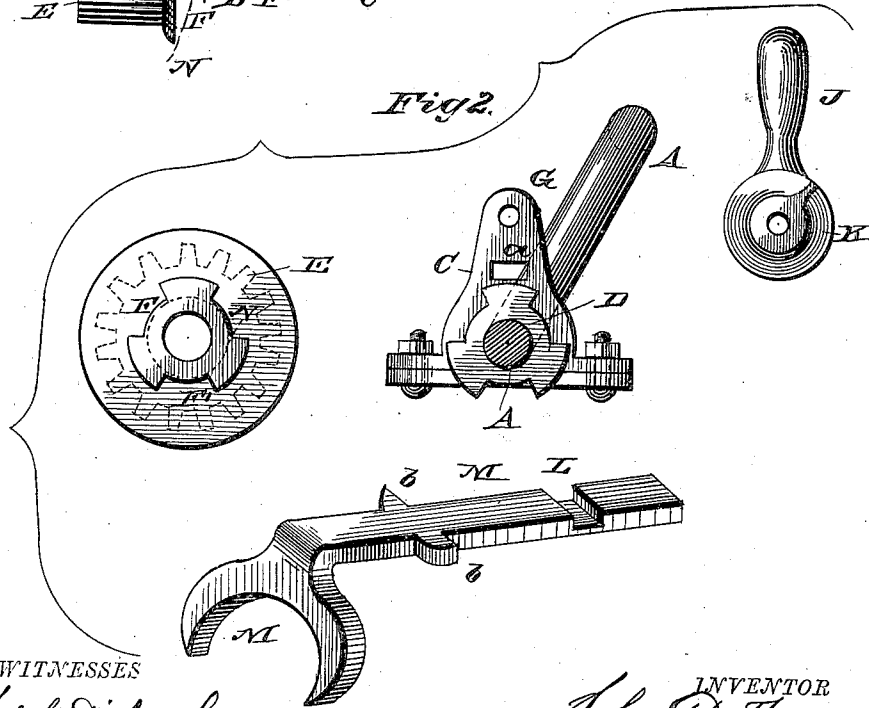


Fig. 2



WITNESSES

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HAY-TEDDER.

SPECIFICATION forming part of Letters Patent No. 309,172, dated December 9, 1884.

Application filed March 4, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN D. TRACY, a citizen of the United States, residing at Sterling, in the county of Whiteside and State of Illinois, have invented certain new and useful Improvements in Hay-Tedders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention has reference to improvements in clutches for throwing the shaft in and out of gear.

In the drawings, Figure 1 is an elevation of a portion of the crank-shaft which drives the tedder-teeth, showing the pinion which engages the gear on the driving-wheel of the machine, and thereby communicates rotary motion to such crank-shaft. Fig. 2 is a detailed view of the mechanism employed in engaging and disengaging said crank-shaft.

A is a crank-shaft suitably journaled near each end and intermediately to the tedder-frame B. The crank-shaft A at the apex of its several bends is fitted to be journaled in the teeth-arms, so as to impart a tossing motion to such arms in the usual way. The crank-shaft A is provided near its outer end, and outside of the box or bearing C, with a ratcheted collar, D, such collar being rigidly affixed to the shaft A.

On the extreme outer end of the shaft A is loosely placed the pinion E, which latter suitably engages and is driven by a cog-wheel, E', attached to one of the carrying-wheels of the machine.

On the inner face of the pinion E, and integral therewith, is formed the clutch F, having inwardly-projecting spurs F', shaped to enter and engage the ratchets or depressions on the collar D. The spurs or cogs of the pinion E are of such length that such pinion may be shifted inwardly to the point of engagement of the clutch F with the collar D without disengaging the pinion E from the gear by which it is driven. The box C is provided with upwardly-extending lugs G G, in which is

fulcrumed, by the bolt H, passing transversely through such lugs, the hand-lever J.

On the inner or pivoted end of the lever J is formed the oblique thread or flange K, which engages and traverses a recess, L, formed in the upper surface of the fork M. The head of the fork M is bifurcated, bent at right angles with its shank, and partially encircles the annular recess N, formed on the pinion E, between the inner face of such pinion proper and the clutch F. The shank of the fork M is passed loosely transversely through holes *a* in the lower part of the lugs G, such holes *a* acting as guides or ways to support and guide such fork.

On the sides of the fork M are formed the lugs *bb*, which, when the clutch F is in engagement with the collar D, and the machine thereby in gear, abut against the outer face of the outer lug, G, of the box C, and thereby prevent such fork M from clamping the collar D and clutch F against the side of the box C, and allow the outer bent ends of such fork to hang loosely in the recess N. As the lever J is moved forward or back the flange K traverses the recess L in the fork M, and projects or withdraws the fork M, as may be desired, thereby engaging or disengaging the clutch F and collar D.

It is obvious that when such clutch and collar are engaged the rotation of the pinion E is communicated to the crank-shaft A and the tedder-teeth put in operation. When, by throwing the lever J in the opposite direction, the clutch F and collar D are disengaged, the pinion E continues to rotate in mesh with its drive-gear; but as the fork M holds the clutch F out of engagement with the collar D, the pinion E simply rotates on the shaft A without communicating motion to any part of the machine.

The lever J is constructed with sufficient weight at its free end to remain in whatever position it is placed.

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

1. The combination of the shaft A, provided with the serrated collar D, the pinion E, provided with the clutch F, the box C, provided with lugs G G, the lever J, provided

with oblique flange K, the bolt H, and fork M, substantially as shown, and for the purpose described.

2. The fork M, mounted upon the box C, and provided with the recess L and lugs b, substantially as shown, and for the purpose specified.

3. The combination of the fork M, loosely mounted upon the box C, and provided with the recess L, the lever J, provided with the

oblique flange K, the box C, and bolt H, substantially as shown, and for the purpose mentioned.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN D. TRACY.

Witnesses:

WALTER N. HASKELL,
WALTER STAGER.