# C. O. LUCE.

## Horse Hay-Rakes.

No. 146,347. Patented Jan. 13, 1874.

FIG. 1.

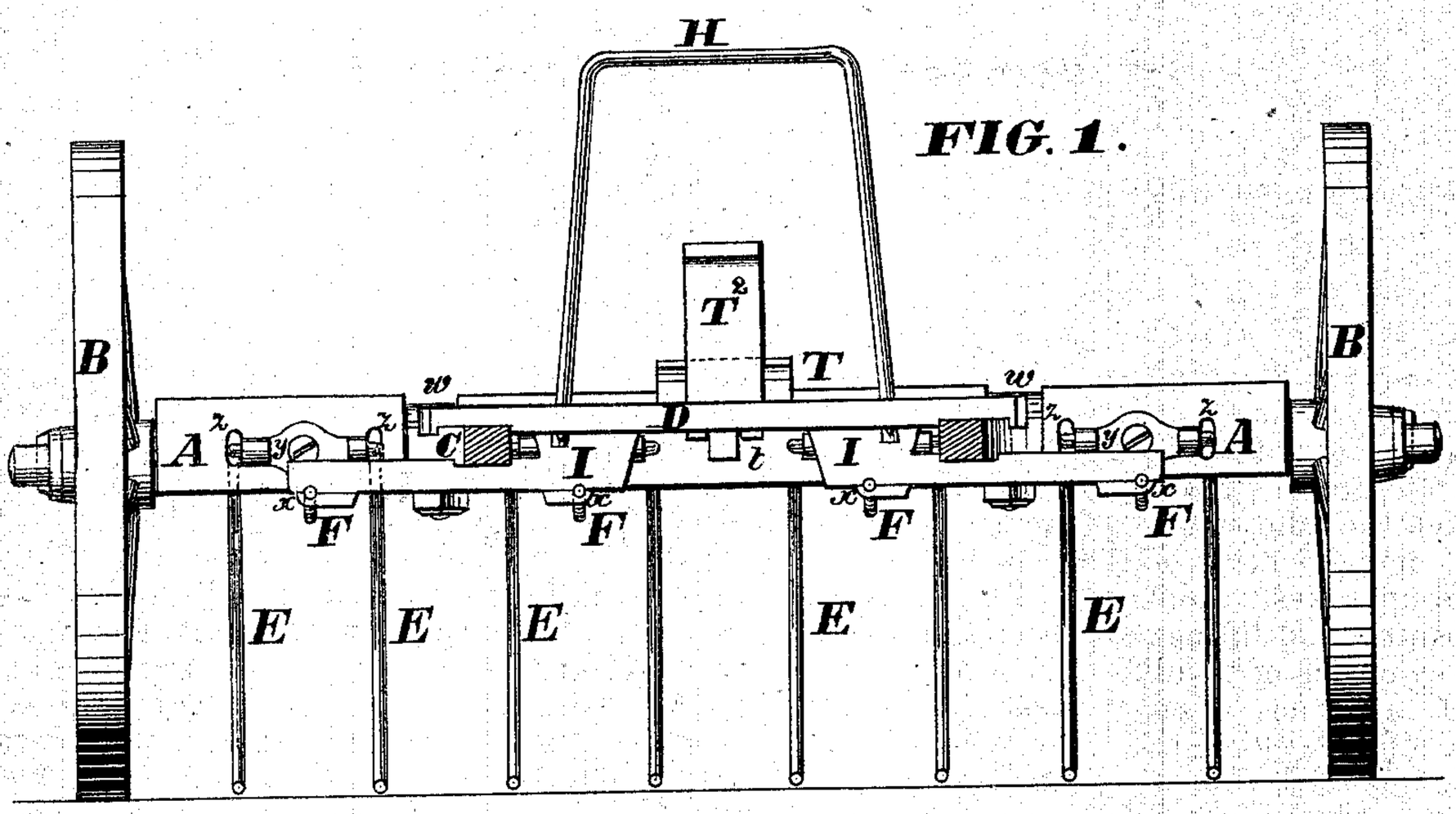
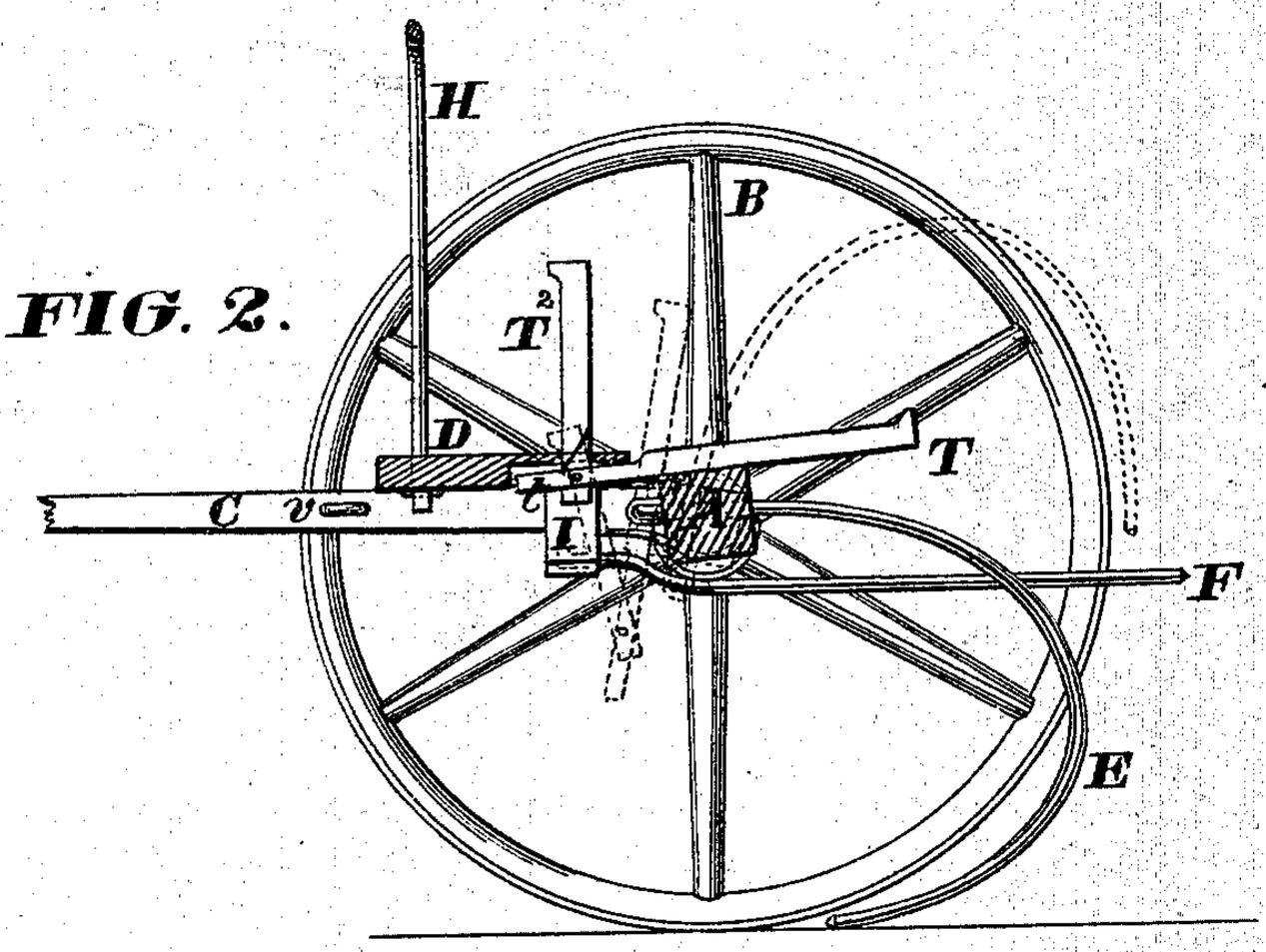



FIG. 2.




WITNESSES:

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# UNITED STATES PATENT OFFICE.

CURTIS ORANGE LUCE, OF BRANDON, VERMONT.

## IMPROVEMENT IN HORSE HAY-RAKES.

Specification forming part of Letters Patent No. **146,347**, dated January 13, 1874; application filed November 8, 1873.

CASE C.

*To all whom it may concern:*

Be it known that I, CURTIS ORANGE LUCE, of Brandon, in the county of Rutland, Vermont, have invented an Improved Horse Hay-Rake, of which the following is a specification:

This implement is of that class known as "stand-up rakes," the driver riding in standing position, and lifting and lowering the rake-teeth by means of treadles. In other respects it is of that class of sulky-rakes in which the axle-tree constitutes the rake-head, and the thills support the driver. The present invention consists in a peculiar pair of treadles, in combination with a standing platform on the thills, for lifting and lowering the rake-teeth and supporting them, in a positive manner, at proper working height.

Figure 1 is a front view of this improved horse-rake. Fig. 2 is a vertical longitudinal section of the same in a central plane.

The general parts of this improved horse hay-rake are, a combined axle-tree and rake-head, A; a pair of ground-wheels, B; a pair of thills, C, extended back and hinged to the axle-tree; a driver's platform, D, on the rear ends of the thills; spring rake-teeth E; clearing-fingers F; a pair of treadles, T $T^2$; and a hand-rail, H. The axle-tree A is, preferably, provided with slots *z* to receive the rake-teeth E, and the latter are attached in pairs, by pivot-brackets *y* applied to the front of the axle-tree, as clearly illustrated in Fig. 1; but this forms no part of the present invention. The clearing-fingers F are attached, by cleats *x*, to the lower surfaces of head-bars I, which are attached to the under side of the thills C and platform D in such manner as to accommodate the treadles between their inner ends. The thills C are attached to the axle-tree A by straps *w*, embracing cylindrical wrists turned on the axle-tree, which is thus adapted to oscillate freely on its spindles. Simple staples *v* may serve for hitching the horse to the thills. The main treadle, T, for depressing the teeth and holding them to their work, is applied to the top of the axle-tree, and its effective end projects rearwardly. Its front end, *t*, is extended beneath the driver's platform, or into a recess formed in its rear edge. The second treadle, $T^2$, is hinged at its lower end to the front extension *t* of the main treadle, and works vertically, or nearly vertically, through an orifice in the driver's platform, to elevate the rake-teeth, as illustrated in Fig. 2. The front extension of the main treadle beneath the driver's platform serves to limit the motion of the former, and, consequently, of the axle-tree and rake-teeth, and insures the positive support of the teeth at proper working height. The driver may consequently rest a portion of his weight on the main treadle to hold the teeth to their work without danger of straining them. By standing with one foot on the front treadle $T^2$ the rake-teeth may be supported in elevated position, as while driving to and from the field. By resting all his weight on the platform, the driver simply releases the axle-tree or rake-head. He has, consequently, perfect control of the teeth, and may lift them only a slight distance, so as to clear an obstruction without dumping.

The following is claimed as new, namely:

The combination, in a horse-rake, of an axle-tree, A, to which the teeth are attached, thills C, hinged to the same, a standing platform, D, on the thills, a rearwardly-projecting treadle, T, attached to the axle-tree for holding the teeth to their work, a treadle, $T^2$, in the standing platform for lifting the teeth, and an extension, *t*, of the first-named treadle beneath the standing platform, to limit the depression of the teeth and to connect the elevating-treadle to the axle-tree, as herein set forth.

CURTIS ORANGE LUCE.

Witnesses:
GEO. BRIGGS,
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