

(Model.)

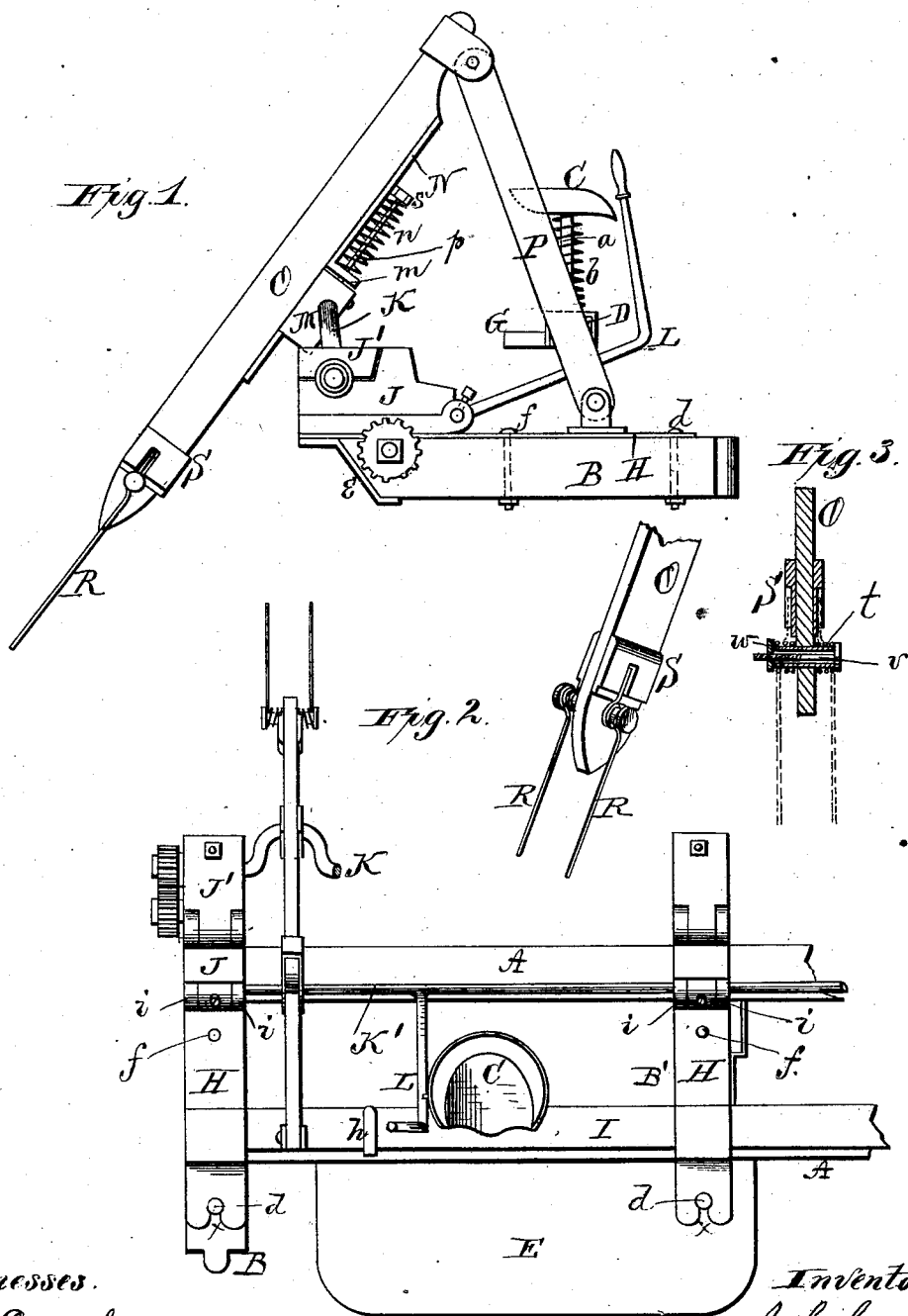
2 Sheets—Sheet 1.

I. L. LANDIS.

COMBINED HAY TEDDER AND RAKE.

No. 256,332.

Patented Apr. 11, 1882.



Witnesses.
A. L. Curande
C. L. Evert.

Inventor
I. L. Landis
By Alexander Mason
[Signature]

(Model.)

2 Sheets—Sheet 2

I. L. LANDIS.

COMBINED HAY TEDDER AND RAKE.

No. 256,332.

Patented Apr. 11, 1882.

Fig. 6.

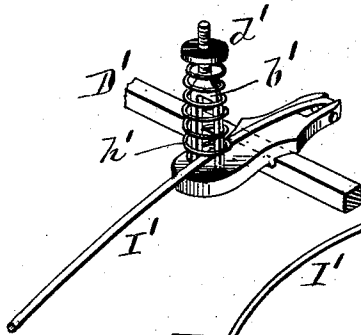


Fig. 4.

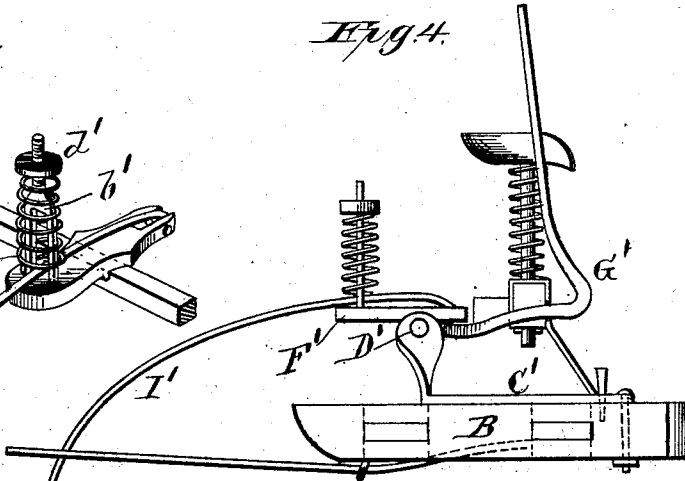


Fig. 7.

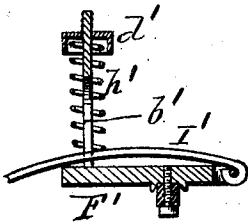


Fig. 8.

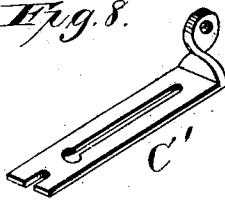
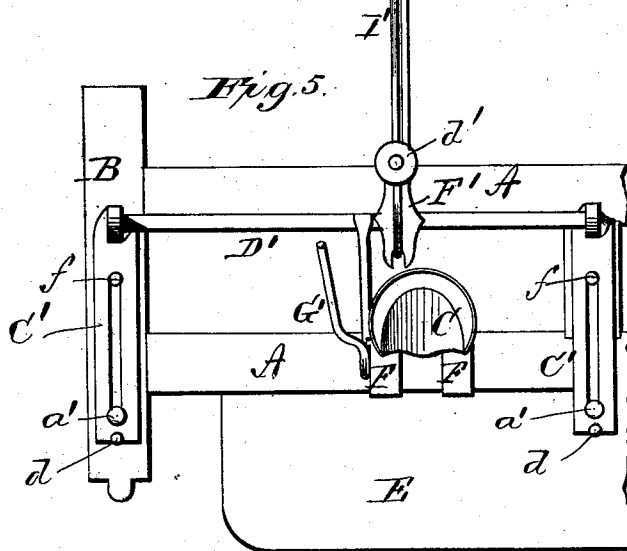


Fig. 5.



Witnesses.
P. L. Ouraud
C. L. Ewert.

Inventor.
I. L. Landis
By Alexander D. MacArthur
Att.

UNITED STATES PATENT OFFICE.

ISRAEL L. LANDIS, OF LANCASTER, PENNSYLVANIA.

COMBINED HAY TEDDER AND RAKE.

SPECIFICATION forming part of Letters Patent No. 256,332, dated April 11, 1882.

Application filed April 26, 1880. Renewed January 18, 1881. Again renewed January 30, 1882. (Model.)

To all whom it may concern:

Be it known that I, ISRAEL L. LANDIS, of Lancaster, in the county of Lancaster, and in the State of Pennsylvania, have invented certain new and useful Improvements in Combined Hay Tedder and Rake; and I do hereby declare that the following is a full, clear, and exact description of the invention, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

My invention relates to combined hay tedder and rake; and it consists in certain details of construction, as will be hereinafter more fully set forth, and pointed out in the claims.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a side view of the tedder. Fig. 2 is a plan view of the same. Fig. 3 is a detail view of the fork. Fig. 4. is a side view, and Fig. 5 a plan view, of the rake. Figs. 6, 7, and 8 are detailed views of parts of the rake.

The sulky-frame of the combined hay tedder and rake consists of two or more longitudinal parallel bars, A A, connected at their ends by cross-bars B B, which extend a suitable distance in front and rear of them. There is also a cross-bar, B', in the center between the two bars A A.

E is the foot-board.

C is the driver's seat, attached on the upper end of a rod, a, which passes down through a short bar, D, and a spring, b, surrounds the rod above said bar to hold up the seat. The bar D is supported by notched bars F F, attached to the sulky-frame, and forming the rack-bars for holding the tedder and rake-levers in place. On the back of the seat-support D F is secured the tool-box G.

The tedder-frame is composed of a metal plate, H, at each end, and a similar one in the center to lie on the three cross-bars B, B, and B' of the sulky-frame, said metal plates being connected by a plate, I, near their front ends. The front end of each plate H has a slot, x, to allow it to slip under a headed pin, d, while near the rear end of each end plate, on the under side, is a curved projection, e, to fit under the rear end of the cross-bar B. A bolt, f,

through each plate H then secures it in position. By removing the bolts f the entire tedder can be easily taken off from the sulky-frame.

The plate I of the tedder-frame may be held under catches h on the the front-bar A of the sulky-frame.

On each plate H is a journal-box, J J', to receive the crank-shafts K, to which the tedder-forks are connected, said box being made in two parts, J and J', hinged together and fastened by a bolt or otherwise, as desired. The bottom part, J, of the box is hinged on the plate H between two ears, i i, and a rod, K', extends the entire length of the tedder-frame and forms the pins of the hinges, the boxes being fastened by set-screws to the rod, so that by turning the rod the boxes with the crank-shafts can be raised, so as to throw the tedder out of gear for moving from one place to another.

The rod K' is provided with a lever, L, held in the notches on one of the seat-supports F to keep the boxes down in position or elevated, as desired.

On each crank of the crank-shaft K is placed a box, M, which is arranged to slide up and down on a metal bar, N, secured on the fork-handle O.

The bar N is provided with a lug or projection, m, against the under side of which the box M is held by means of a spring, n, surrounding a pin, p, that is attached to the box and passes upward through the lug m. On the upper end of the pin p is a nut, s, for regulating the tension of the spring n. By this construction the fork-handle is allowed to yield when striking any obstruction.

P is a bar connecting the upper end of the fork-handle to the tedder-frame, said bar being pivoted at both ends, as shown, to give the proper motion to the fork-handle when the crank-shaft is rotated.

In the lower end of the fork-handle O is inserted a hollow pin, t, projecting a suitable distance on each side. The fork is composed of two separate tines, R R, made of wire, the upper portion being twisted around the pin t and the extreme upper end springing into a notch in a plate or casting, S, fastened to the fork-handle.

A bolt, v, is passed through the hollow pin t and a nut, w, screwed on the end of said bolt,

whereby the tines are held in place, and also the tension regulated of the springs formed by the twisting of the tines around the pin, because the coils of the springs of the tines ordinarily take up more room than the length of the hollow pin, so that the head of the bolt and the nut will compress the same more or less, which will of course make them stronger or weaker, as required. When either tine strikes an obstruction and becomes turned farther than the tension of the spring will permit the upper end springs out of the notch in the plate S, thus preventing the tine from breaking. The tine can then be easily turned until its upper end springs back into place again.

By taking out the bolts *f*, as above described, the tedder can be bodily removed from the sulky-frame and the rake substituted, the bolts *f* being first replaced.

I do not wish to be understood as claiming in this application a fork-handle provided with a sliding journal-box, and the tension-spring for connecting the same with a crank-shaft, and forming a yielding joint, since such is embraced in my application filed October 15, 1880, and subsequently allowed.

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

1. The combination of the notched bars F F and cross-bar D with the seat C, rod *a*, and spring *b*, substantially as herein set forth.

2. The tedder-frame composed of the slotted plates H, having curved projections *e*, and connected by the plate I, in combination with the hinged boxes J J' and the rod K', provided with the lever L, and forming the pins for the hinges, and having the boxes secured thereto, substantially as herein set forth.

3. The combination of the fork-handle O, hollow pin *t*, the coiled tines R R, notched plate or casting S, bolt *v*, and nut *w*, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 24th day of April, 1880.

ISRAEL L. LANDIS.

Witnesses:

J. J. MCCARTHY,
H. J. ENNIS.