

(No Model.)

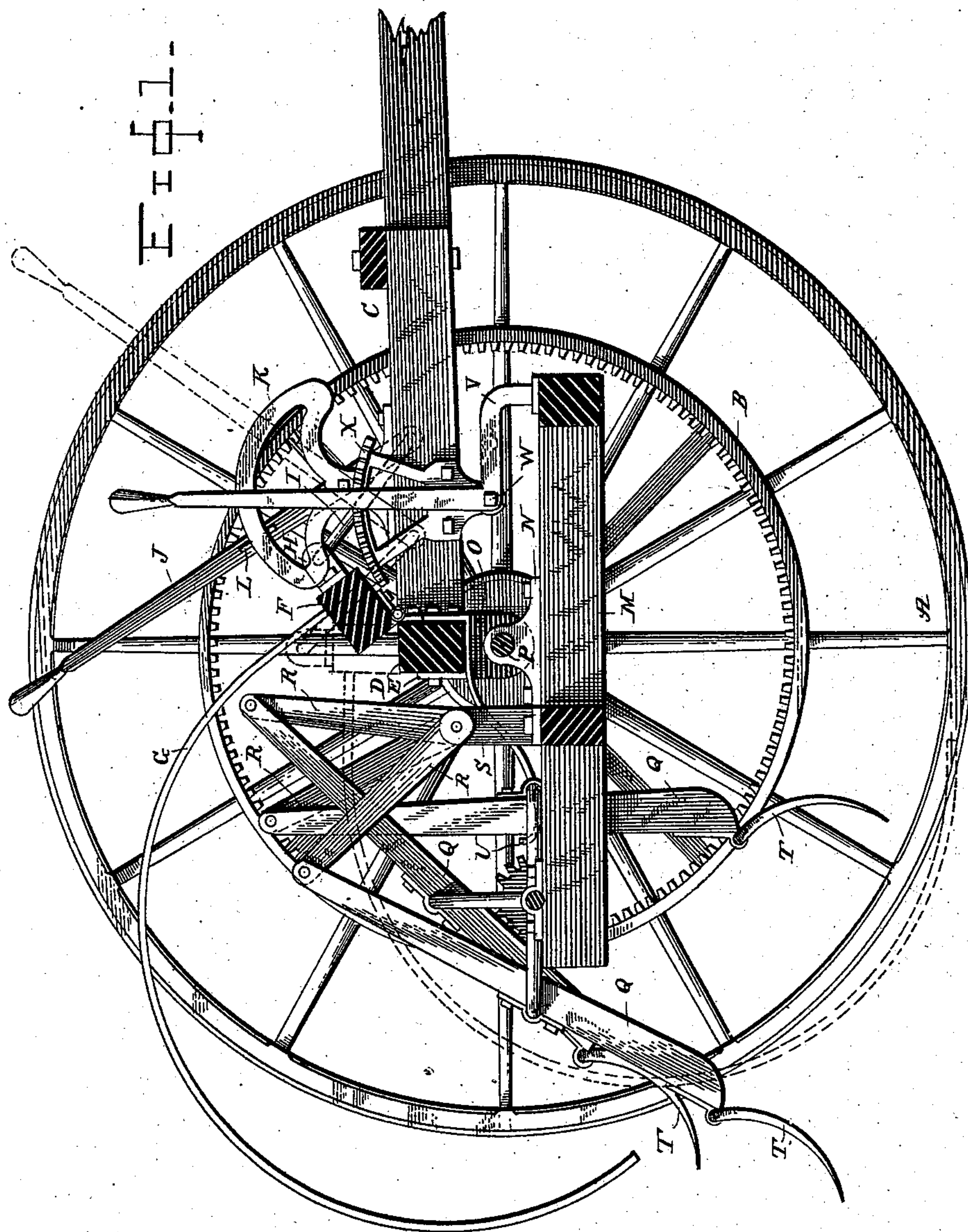
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W. D. MILLER.

COMBINED TEDDER AND RAKE.

No. 379,972.

Patented Mar. 27, 1888.



WITNESSES,

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Edwin L. Bradford

INVENTOR.

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By Touhin & Gennies,
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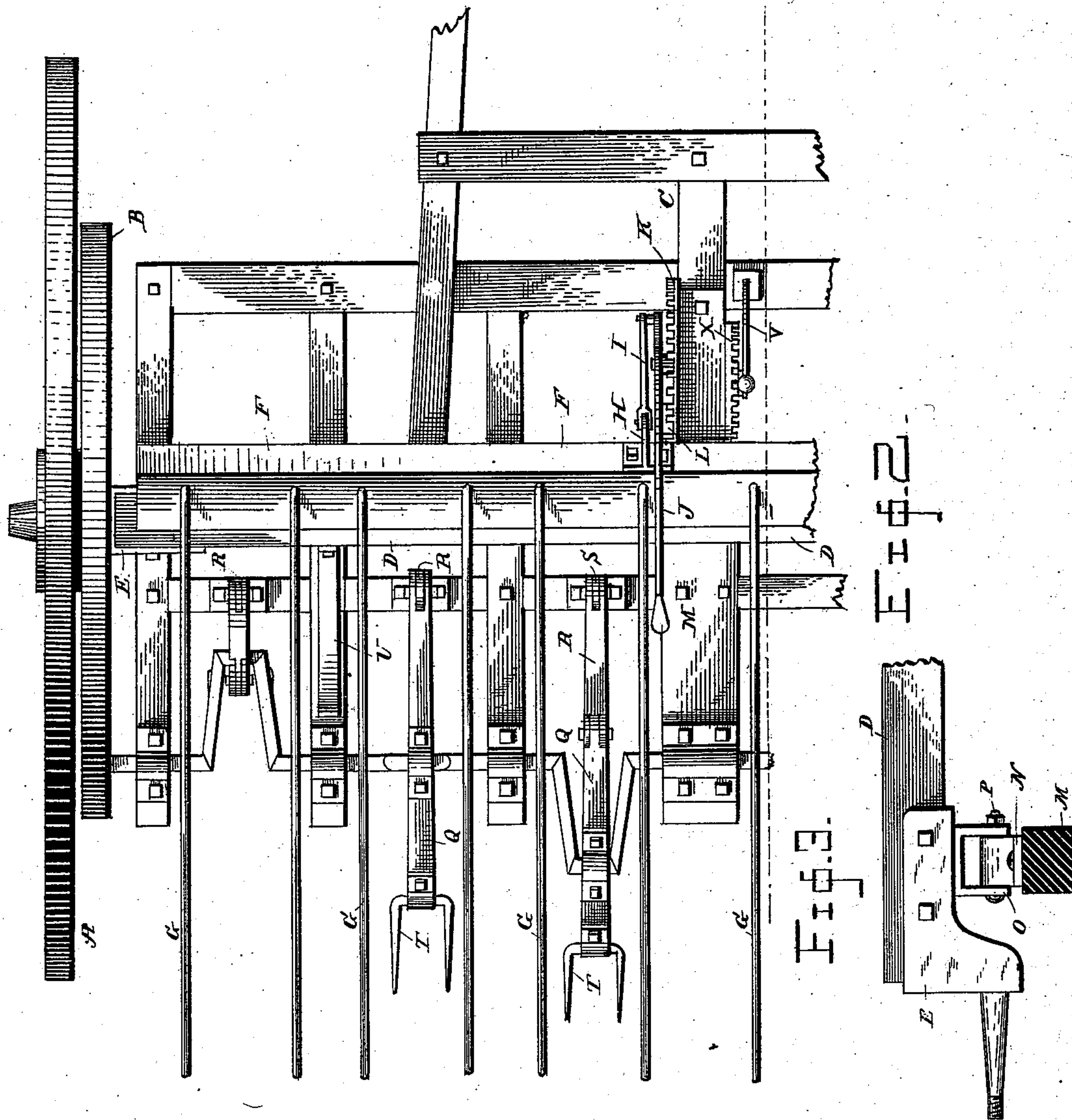
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his Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM D. MILLER, OF SPRINGFIELD, OHIO.

COMBINED TEDDER AND RAKE.

SPECIFICATION forming part of Letters Patent No. 379,972, dated March 27, 1888.

Application filed October 26, 1886. Serial No. 217,264. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM D. MILLER, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in a Combined Tedder and Rake, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to new and useful improvements in a combined hay-rake and tedder; and it consists in the peculiarities hereinafter more fully pointed out.

In the accompanying drawings, forming a part of this specification, and on which similar letters of reference indicate the same or corresponding features,

Figure 1 is a vertical sectional view of my improved machine, showing some of the parts in side elevation; Fig. 2, a plan view of a portion thereof; and Fig. 3, a detail rear and sectional view of a portion of the axle-spindle, the tedder-frame, and the devices which suspend it.

The letter A designates one of the ordinary supporting-wheels to which is secured a gear-wheel or rim, B, so as to rotate therewith, and the letter C refers to the thill-frame, which is provided with an axle, D, to which the wheel-spindles E are connected in any approved way. Mounted upon the axle D by any suitable hinge-connection is a rake-head, F, to which is secured a number of rake-teeth, G, of the usual construction, and to the head is also attached a standard, H, which in turn is connected by a link or pitman, I, with an adjusting hand-lever, J, whose position is maintained wherever adjusted by engagement with a segment, K. A short fin, L, is formed on the lever J, and is thrown into and out of engagement with the teeth on the side of the segment K, as more clearly seen in Fig. 2. This is a cheap manner of constructing a segment and lever, so as to engage or disengage them.

When the lever J is set in the position shown in full lines in Fig. 1, the rake-teeth are lifted, as also shown in Fig. 2, and the tedding mechanism is free to operate. When, however, the lever and the teeth are adjusted to the position shown in dotted lines in Fig. 1, the rake is performing its function. Before this is done,

however, the tedder-frame is removed in a manner presently to be described.

Referring now to the tedding mechanism, the letter M designates the tedder-frame, which may be constructed in the usual manner, or substantially so, and to which is connected a suitable number of metallic blocks, N, while depending from the axle D is a corresponding number of lugs, O, having holes therein, whose center is coincident with the axis of the supporting-wheels. By means of bolts P the blocks N and lugs O are connected together, and the tedder-frame thus supported beneath the axle and concentrically to the axis of the supporting-wheels and gear-wheels B. This frame is free to rise at its rear end should the tedder-forks meet with an obstruction in their descent, which frequently occurs, especially on uneven ground, or where the ground is more or less rocky. This preserves the tedder mechanism against undue strain, and by reason of the frame being mounted concentrically with the gear-wheels B the operating-pinions on the tedder-shaft do not lose their engagement with the said gear-wheels when the frame experiences a rise or fall at its rear end.

The tedding mechanism which I intend employing may be of any of the approved kinds, and in the accompanying drawings I have illustrated a crank-shaft having a plurality of cranks, each carrying a tedder bar or arm, Q, to which a pitman, R, is attached at one end, while the pitman at its other end is connected with a standard, S, on the tedder-frame. The usual or any approved tedder-forks, T, are carried by the arms Q.

A spring, U, is connected with the axle or some convenient part of the thill-frame, and arranged so as to bear down, more or less strongly, upon the tedder-frame in the rear of its supporting-point, for the purpose of preventing that end of the frame from rising under the influence of the gear-wheels B, as also for the purpose of making it quickly return to normal position in case it is lifted by one or more of the tedder-forks coming in contact with an obstruction.

The letter V refers to an adjusting-lever having a fulcrum-point at W, and constructed, like the lever J, with a fin to engage with a

segment-bar, X. The lower end of the lever terminates over one of the beams—say, the forward cross-beam—of the tedder-frame, and by moving the lever so as to depress its lower end the tedder-frame is adjusted properly with respect to the ground.

It will be understood that the tedder-frame, by reason of its tedding mechanism, is heaviest in the rear of its supporting-points, and hence it is unnecessary to positively connect the lever V with that frame, though this may be done, if it were desired.

One feature of importance is the fact that there is nothing below the tedder-frame to prevent its dropping to the ground immediately upon withdrawing the bolts and pins P from the blocks, and lugs N and O, the result of which is the ready and easy detachment of the tedder-frame from the running-gear when it is desired to rake.

Tedder-frames and their mechanism are usually quite heavy, too heavy to be readily removed by one man; but as thus constructed no such difficulty is experienced, and for this reason the tedder-frame may be dropped at any point in the field with little or no manual labor, assistance only being needed to replace the frame.

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

1. In a combined hay rake and tedder, the following features arranged substantially as

described: the axle, the rake-head and its teeth, the lever, the pitman and the segment, the tedder-frame pivotally and detachably suspended below the axle and axially with the supporting-wheels, the tedder mechanism, the adjusting-lever therefor, adapted to bear upon the front end of the tedder-frame, the holding-down spring bearing upon the rear of said frame, and the operating-gears for operating the tedder mechanism.

2. In a combined hay rake and tedder, the combination, with the supporting-wheels, the thill-frame, the axle and lugs secured thereto and depending downward, of the tedder-frame having blocks, bolts connecting the blocks to the lugs, the center of the bolts being coincident to the axis of the supporting-wheels, the holding-down spring secured to the axle, extending rearwardly and bearing down upon the tedder-frame, the adjusting-lever pivoted to the thill-frame and bearing down upon the front of the tedder-frame, the tedding mechanism on the rear of the tedder-frame, the pinions on the tedder-shaft, and the gear-wheels meshing therewith and carried by the supporting-wheel.

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

WM. D. MILLER.

Witnesses:

CHASE STEWART,
A. A. YEATMAN.