

*D. Lyman,
Hay Spreader.*

No. 47437.

Patented April 25, 1865

FIG 1

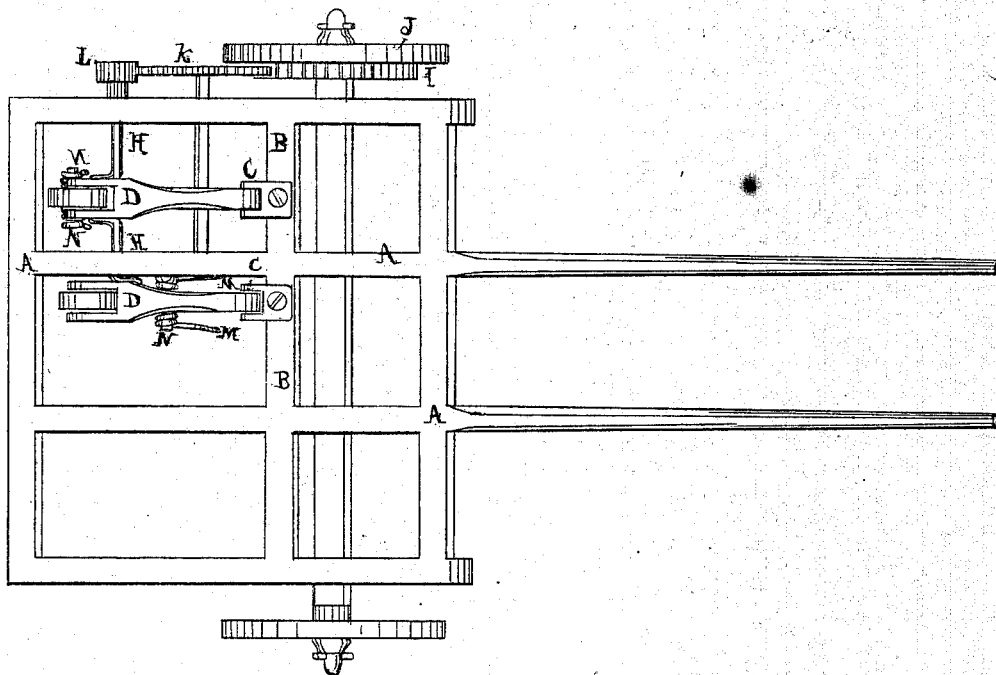
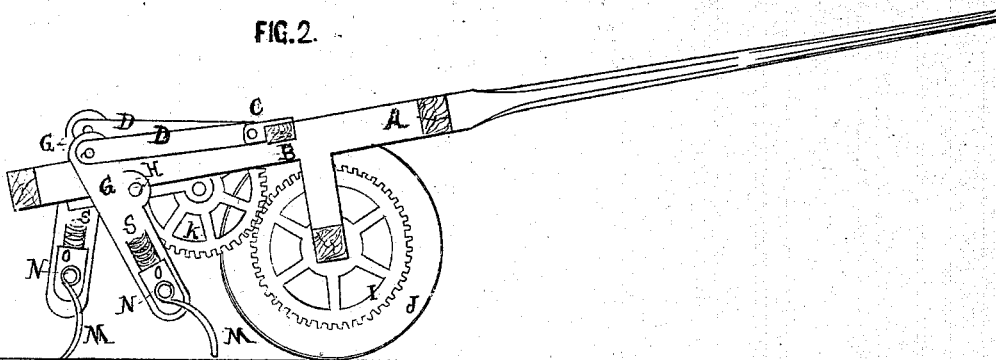


FIG. 2.



David Lyman
by J. P. Hoke
his atty.

WITNESSES.

Harry L. Smith
Jos. L. Coombs

UNITED STATES PATENT OFFICE.

DAVID LYMAN, OF MIDDLEFIELD, CONNECTICUT.

IMPROVEMENT IN HAY-SPREADERS.

Specification forming part of Letters Patent No. 47,437, dated April 25, 1865.

To all whom it may concern:

Be it known that I, DAVID LYMAN, of Middlefield, in the county of Middlesex and State of Connecticut, have invented certain new and useful Improvements in Hay Makers or Spreaders; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view, and Fig. 2 a sectional elevation, of an apparatus constructed in accordance with this my invention.

My invention relates to that class of hay makers or spreaders in which the hay gathering and disseminating teeth are attached to levers or legs operated from a driving wheel or wheels to reciprocate or oscillate upon a fixed fulcrum or fulcrum on the cart or vehicle. The teeth, as heretofore generally made, are composed of strong wire coiled at or near their point of attachment, so as to impart to them lateral spring action, in the manner similar to the teeth of hay-rakers. The objection attending this mode of construction is due to the rigidity of such teeth in the direction of the downward thrust of the levers, whereby the teeth are liable to brake or bend. This objection is less apparent when the hay-maker, constructed on the principle described, is used on a level field free from stones and other intervening obstructions; but when used over an uneven ground having knolls, stones, or other like projections, it is great and fatal. The object of this invention, therefore, is to remedy this defect, and I have accomplished it by constructing the teeth, or the parts with which they are directly or indirectly connected, in such manner as to yield in the direction of their downward thrust.

There are different ways in which this my invention may be carried into effect; but I shall describe one which, having been tested, gives satisfactory results.

Referring to the accompanying drawings, A is the vehicle or frame, to a traverse-beam, B, of which are jointed, at C, arms D, carrying at their outer ends the levers or legs G, their reciprocating back and forth and up and down motion being imparted to the latter by means of a crank-shaft, H, which derives its movement from the main gear-wheel I and the

driving-wheel J through the intermediate wheel, K, and pinion L. To the lower ends of the legs or levers G are secured the spring-teeth M, the same being constructed in pairs or coiled around a pin or attachment, N, traversing the said lever.

Thus far the description answers certain hay-makers now in use. In my improved machine, however, the lower ends of the legs or levers are slotted and contain sliding blocks O, provided with overlapping side cheeks, so as to prevent their lateral displacement. A spiral spring, S, is contained in the slot on top of the block, and has the tendency to keep the same in the bottom of the slot. Through this sliding block, to project on both sides, passes the pin, around which is coiled the spring-tooth M in any known or convenient manner. By this arrangement it will be understood the teeth have spring action both backward and upward, so that if either strike a stone or other hard and unyielding substance in its path it will recede or yield, as the case may be, to clear the obstacle without coming out of contact therewith. The operation of gathering and scattering the hay is in this way accomplished more perfectly than this can be effected by any machine or apparatus known to me.

Numerous modifications in point of constructive details and arrangements may be suggested without, however, departing from the principle of my invention. Thus, instead of applying spring action to movable sliding blocks to which the teeth are attached, it may be applied with equal advantage to the bearings around the crank-pins to which the legs themselves are attached.

Having thus described my invention and the manner in which the same is or may be carried into effect, I shall state my claims as follows:

1. In hay making or spreading machines of otherwise ordinary or suitable construction, the combination, with the teeth for scattering the hay, of a spring attachment so arranged as to allow the teeth to yield upward in accordance with the irregularities of the ground, substantially in the manner herein set forth.

2. The method herein described of attaching the teeth of hay making or spreading machines to blocks or the equivalents thereof

capable of sliding up and down, substantially as set forth.

3. In hay making or spreading machines in which levers are used having an up-and-down and back-and-forth motion, the teeth when constructed and combined with springs giving them elasticity both backward and upward, as described.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

DAVID LYMAN.

Witnesses:

W. S. CAMP,

J. E. BIDWELL.