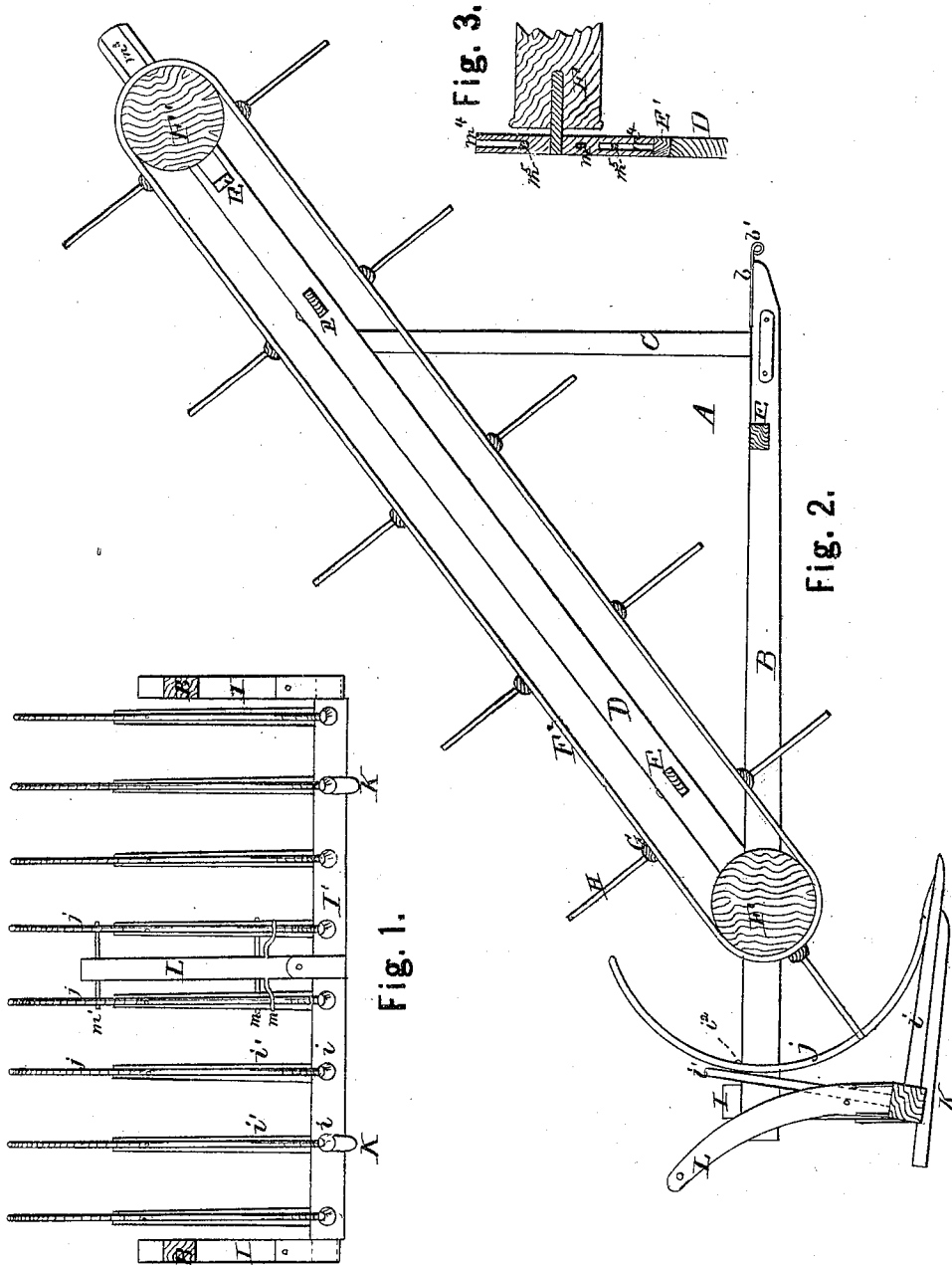


W. A. DEAN.

Improvement in Hay-Rakes and Loaders.

No. 129,009.

Patented July 16, 1872.



WITNESSES.

J. E. Upham.
J. A. Bunnolly

INVENTOR.

William A. Dean,
Chipman & Foster & Co.,
Attys.

UNITED STATES PATENT OFFICE.

WILLIAM A. DEAN, OF NEW LEXINGTON, OHIO.

IMPROVEMENT IN HAY RAKERS AND LOADERS.

Specification forming part of Letters Patent No. 129,009, dated July 16, 1872.

To all whom it may concern:

Be it known that I, WILLIAM A. DEAN, of New Lexington, in the county of Perry and State of Ohio, have invented a new and valuable Improvement in Hay-Rakes and Hay-Loaders; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of an end view of my invention. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a detail view of the same.

This invention has relation to the construction of hay-loading attachments for wagons; and it consists in the arrangement and bracing of the teeth and guides, whereby strength and durability are secured without opposing any obstacles to the free passage of the hay from the teeth to the elevator.

In the accompanying drawing, the letter A designates the triangular sides of the frame, the main bar B of each side being horizontal, and provided at its end with means of attachment by which it may be connected with a wagon. At the rear end of these horizontal bars vertical arms I are extended downward, and receive at their lower ends the journals or pivot-pins of the rotary rake-head I'. This bar I' is the only transverse piece used in the construction of the rake, and in consequence of the arrangement of the parts this bar is placed at the furthest distance from the guides or ways, presently to be described, so that there shall be no obstruction to the elevation of the hay from the teeth to the endless-band elevator. The rake-teeth *i* are formed of straight pieces of wood, and are mortised into the head I'. At right angles with each tooth an upright support or bar, *i'*, is also mortised into the head. Each tooth, therefore, has an upright at its rear end, and the semicircular guides *j*, which may be of metal or bent wood, are attached by their lower ends to the forward portions of the teeth, and by their middle portions to the upright bars *i'*. The teeth and guides are, therefore, firmly and separately braced. The guides *j* are nearly semicircular in form and are designed to extend from the forward portion of the teeth of the rake in vertical planes around above

the lower roller F of the elevator, which roller is pivoted to the horizontal bars of the frame. The guides are concentric with said roller, the object being to permit the use of long teeth H on the elevator-band, which shall extend to the guides. The upper roller F' of the elevating endless band is made adjustable, so that the band may be tightened up when it sags. For this purpose the journals of this roller are seated in slides *m*, which are set out by keys or wedges, in the manner indicated in the drawing. Shoes K are secured to the under side of the rake-head, for its support in running over even ground, and these shoes are provided with extensions to the rear, so that the operator, by bearing down on the handle, may easily clear a stone or small obstruction.

It is designed by this invention to produce a simple and durable hay-loader, which any farmer can make with the tools at his hand, at limited expense, and which will not be liable to get out of order from the clogging of the parts and the consequent breaking or bending of the teeth. As the teeth of the elevator-band reach to the guides the hay will be all carried up, and more rapidly than with short teeth and close guides. This result will also be aided by the small comparative diameter of the rollers; yet, the rake-head with its guides may be moved up and down with perfect freedom, for the teeth, being all separately braced in the manner shown, there are no obstructing bars to interfere, the rake-head being placed at the furthest distance from the guides that the construction will admit of.

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

In a hay-loading attachment, the arrangement of the horizontal bars B with their dependent arms I, the rake-head I' having the extended shoes K, teeth *i*, vertical supports *i'*, and semicircular guides *j* concentric with the lower roller of the endless belt, which is pivoted to said horizontal bars, all constructed in the manner and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM A. DEAN.

Witnesses:

D. D. KANE,
G. E. UPHAM.