(No Model.)

M. L. MILAM.

HORSE HAY RAKE.

No. 387,530. Patented Aug. 7, 1888.

Fig. 1.

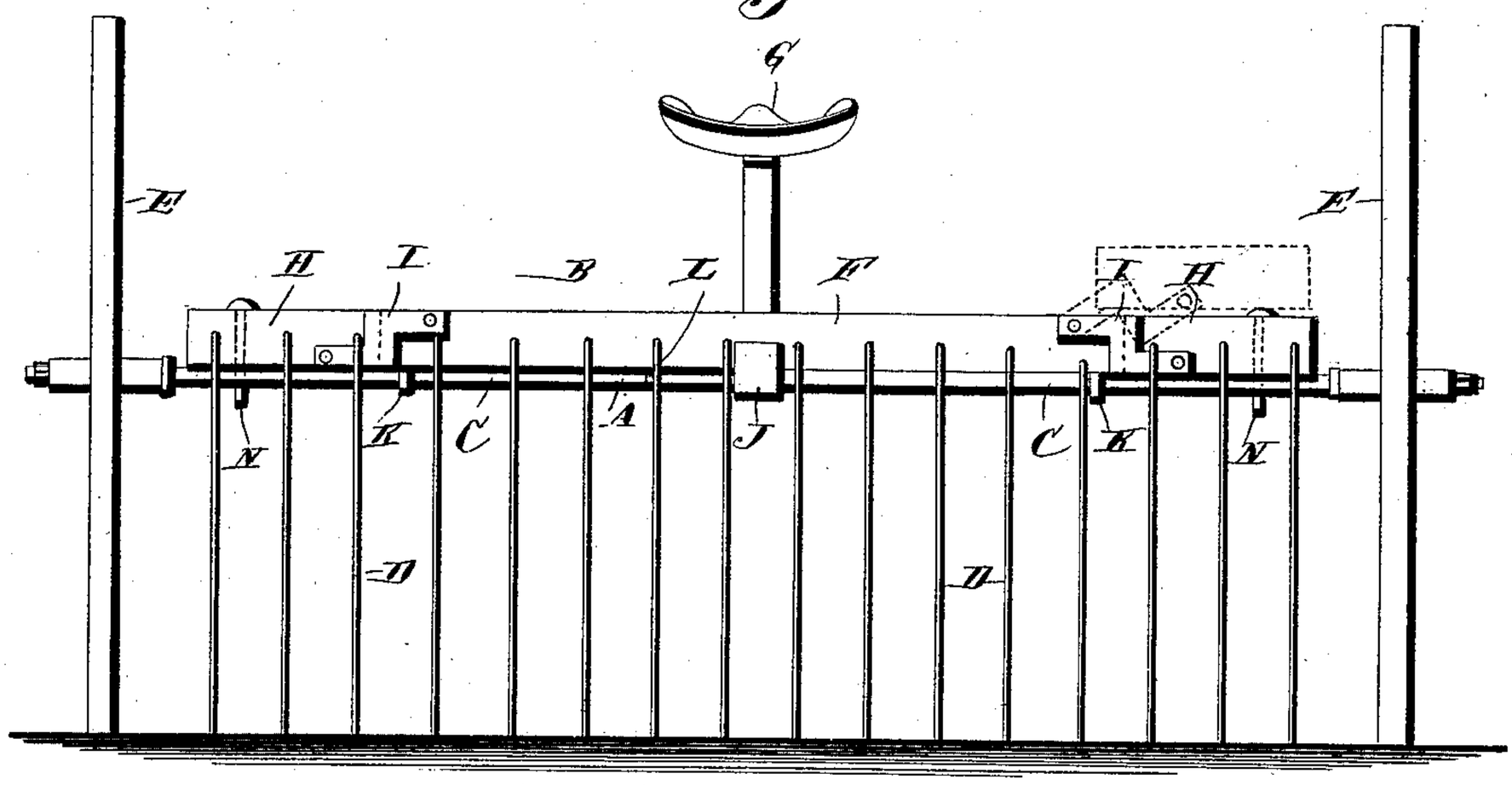


Fig. 2.

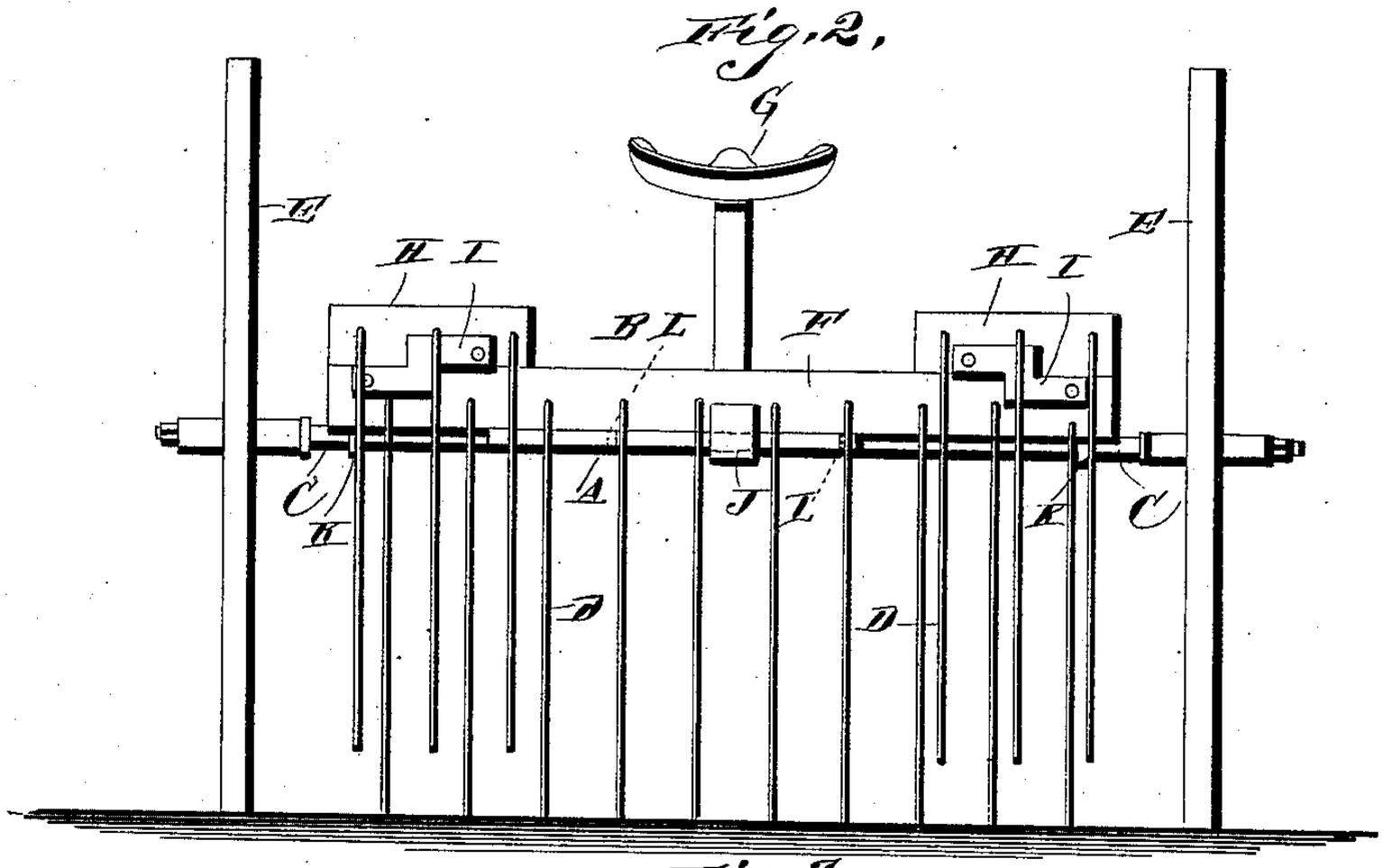
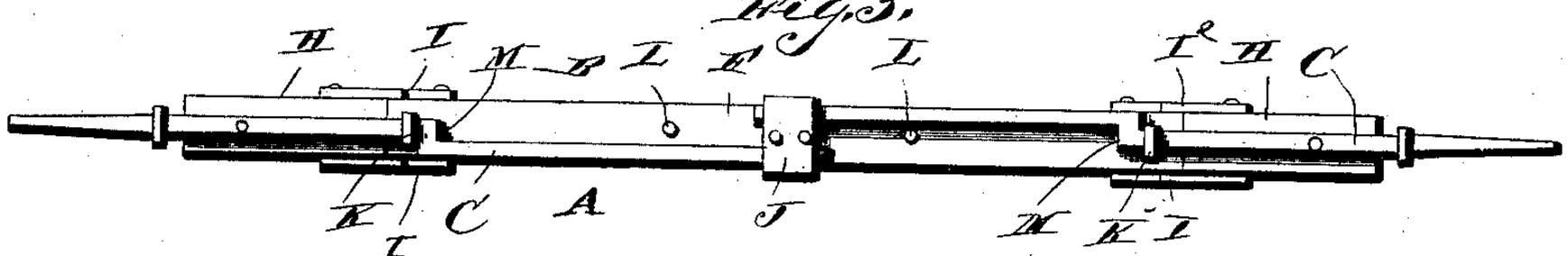


Fig. 3.



Witnesses.

C. L. Taylor,

R. W. Bishop.

Inventor,

Moses L. Milam.

By his Attorneys

C. A. Snow & Co.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

MOSES L. MILAM, OF CADDO MILLS, TEXAS.

HORSE HAY-RAKE.

SPECIFICATION forming part of Letters Patent No. 387,530, dated August 7, 1888.

Application filed February 18, 1888. Serial No. 264,478. (No model.)

To all whom it may concern:

Be it known that I, MOSES L. MILAM, a citizen of the United States, residing at Caddo Mills, in the county of Hunt and State of Texas, have invented a new and useful Improvement in Axles for Horse Hay-Rakes, of which the following is a specification.

My invention relates to improvements in horse hay-rakes; and it consists in certain novel features hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a rear elevation of a horse hay-rake provided with my improved axle. Fig. 2 is a similar view showing the axle folded, and Fig. 3 is a bottom plan view of the axle.

Referring particularly to the drawings by letter, A designates the axle, consisting of the sliding or extensible bars or spindles C, secured to the under side of the rake-head B. The rake-teeth D are secured in and project rearward from the rake-head, and the wheels E are journaled on the ends of the sliding metallic spindles, as shown.

The rake-head is constructed in three sections, the central section, F, being the largest and having the seat G mounted thereon. The end sections, H, are pivotally connected to the ends of the central section by means of the links I, which are substantially Z-shaped, so as to avoid the adjacent rake-teeth, and have their opposite ends pivoted, respectively, to the ends of the central section and the end sections, as shown. On the under side of the central section, at the center of the same, I secure the guide J, in which the inner ends of the sliding bars composing the axle are supported and work. Near the ends of this central section I secure the loops or staples K, which serve as additional guides or supports for the said sliding bars, as shown. Adjacent to and on opposite sides of the central guard, J, on the under side of the central section of the rake-head, I secure the stops L, against which the spindles contact, so as to limit the inward movement of the same. The spindles are constructed of metallic bars, as before set forth, and are bent out of a straight line at an intermediate point of their length to provide the shoulders M, which contact with the stops L when they are pushed inward, as will be understood. When the said bars are drawn out, these shoulders contact with the guide K, as shown, and are thus prevented from being entirely withdrawn from their supports or bearings. The outer ends of the bars are somewhat tapered and are made circular in cross-section, and the wheels are mounted on these tapered outer ends.

N N designate locking pins, which are inserted through the swinging end sections of the rake-head and the sliding bars to hold the same projected, as shown in Fig. 1. These locking-pins are inserted vertically downward through the sections of the rake-head and through suitable openings formed in the sliding bars near the ends of the same and project entirely through said bars. The said bars will thus be prevented from sliding by the pins, which will be held in engagement with the bars by their own gravity. If so desired, the lower ends of these pins may be threaded and nuts mounted thereon to be turned up against the axle; but ordinarily the pins will be made long and heavy enough to prevent the sections of the rake-head kicking off the axle. I prefer to dispense with the nuts, for the reason that the end sections of the rake-head can then be more readily disengaged from the axles when so desired.

The construction and arrangement of the several parts of my device being thus made known, it is thought the operation and advantages of the same will be readily understood. The normal position of the several parts is that shown in Fig. 1. In this position the sliding bars are projected and the swinging end sections of the rake-head are lowered and secured to the spindles by the locking-pins N N. When the parts are in the position just described, the rake is properly adjusted for use in a field. When it is desired to move the rake from one field to another, and it will be necessary to haul it along the roads and through gates, the several parts are adjusted to the position shown in Fig. 2. The locking-pins are raised from the sliding bars and the swinging sections of the rake-head. The said sections are then folded or swung over on the central section and the sliding bars are pushed inward, thus reducing the width of the machine nearly one-half and permitting its passage

over roads and through gateways. The swinging end sections are always horizontal, as when being folded over on the central section they turn upon their pivotal connection with the links I at the same time that the said links turn upon their pivotal connections with the central section, as will be readily understood upon reference to the dotted lines in Fig. 1. By this arrangement I obviate the necessity of inverting any of the rake-teeth, and am enabled to fold the device very readily and compactly.

The advantages of my device are thought to be obvious and need not be enlarged upon herein.

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

1. The rake-head comprising the middle section, F, and end sections, H H, and the links having their opposite ends pivoted, respectively, to the front and rear side at the outer ends of the section F and the inner ends of the sections H H, as set forth.

2. The rake-head consisting of the middle section, F, the end sections, H H, and the Z-shaped links pivoted, respectively, to the front and rear side at the inner ends of the sections H H and the outer ends of the section F, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

MOSES L. MILAM.

Witnesses:
A. K. SHERRILL,
W. C. CONE.