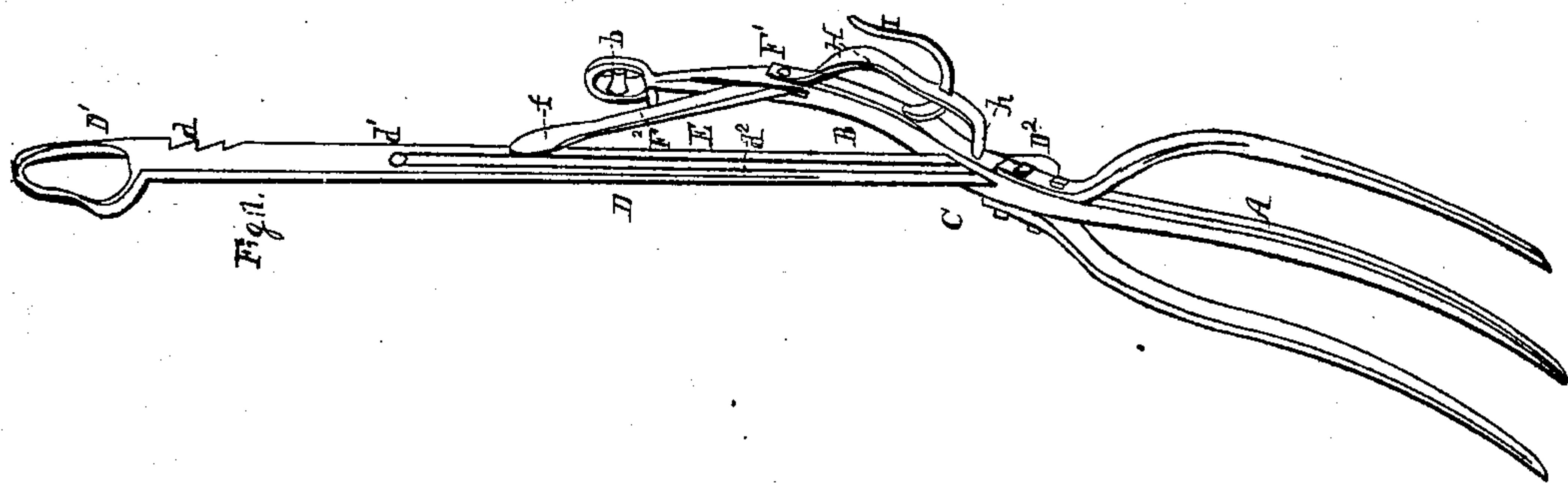
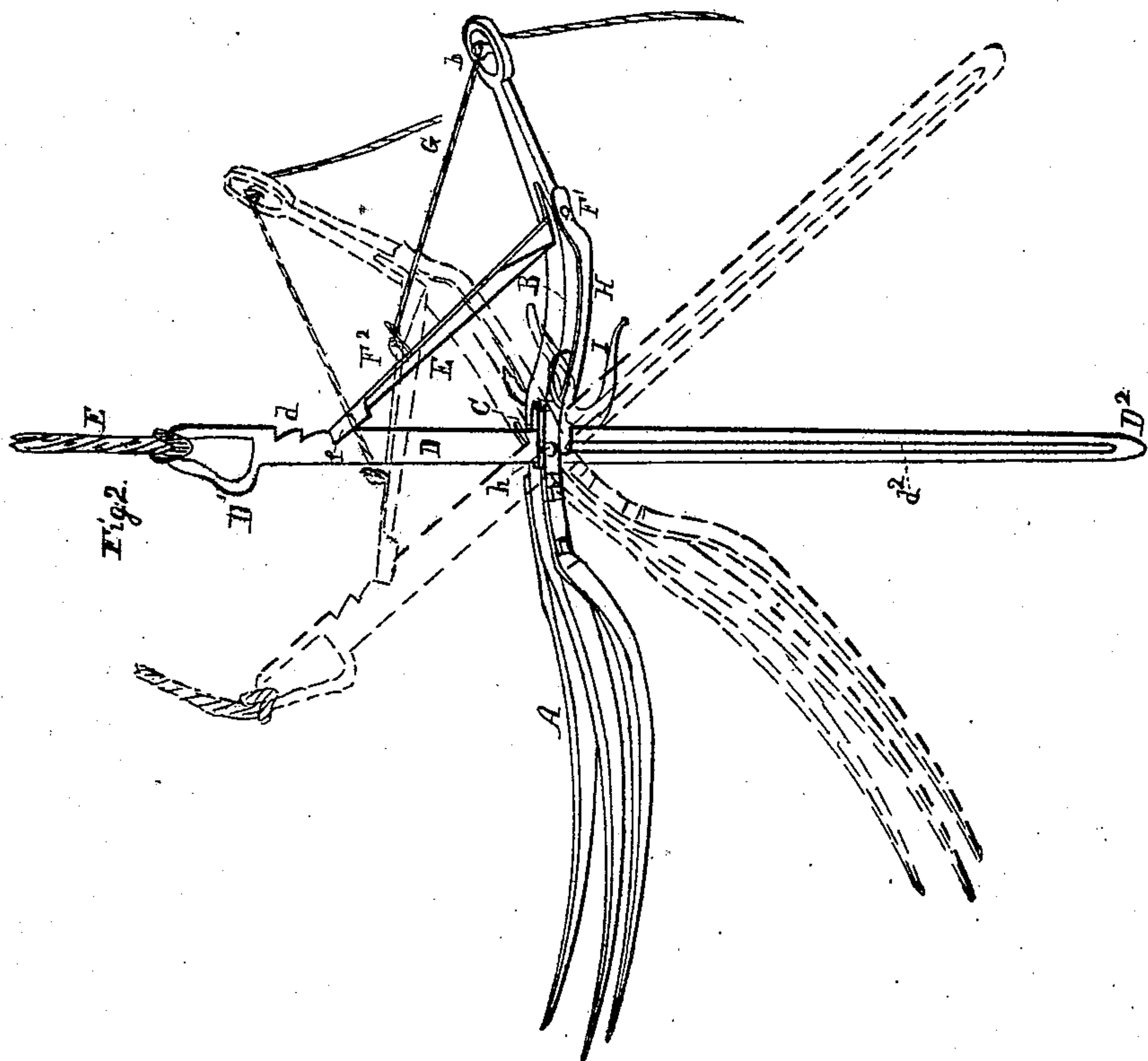


S. S. Mattis.
Hay Fork.

No. 85840.

Patented Jan. 12, 1869.



Witnesses:

Louis Brockay.

John A. Pedersheim

Inventor:

Solomon S. Mattis

By Kiedersheim & Co
Attorneys

United States Patent Office.

SOLOMON S. MATTIS, OF CURTIN, PENNSYLVANIA.

Letters Patent No. 85,840, dated January 12, 1869; antedated January 2, 1869.

IMPROVEMENT IN HORSE HAY-FORKS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, SOLOMON S. MATTIS, of Curtin, in the county of Dauphin, and State of Pennsylvania, have invented a new and useful Improvement in Horse Hay-Forks; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, which are made part of this specification, and in which—

Figure 1 is a perspective view of a hay-fork embodying my invention.

Figure 2 is a perspective view, showing the fork in two positions.

Similar letters of reference indicate corresponding parts in the two figures.

The object of this invention is to provide a simple contrivance, whereby the fork, upon being embedded in the hay, may be made to perform a sweeping or scooping movement, in order to gather upon it and elevate a complete load. To this end, a bar to which the elevating-rope is attached, is fitted in a slot in the shank of the fork, said bar being detained in the slot by a spring-catch, while the fork has descended into the hay, so that the bar may then be retracted or withdrawn, and again thrust into the hay, in a direction which shall cause the fork to undergo the sweeping or scooping movement, when the elevating-power begins to act.

In order that others skilled in the art to which my invention appertains, may be enabled to more fully understand and use the same, I will proceed to describe it with reference to the annexed drawings.

A may represent a hay-elevating fork, whose shank B is slotted at C, to receive a bar, D. The bar D is provided at its upper end with a loop, D', or other means for the attachment of the rope E, to which is applied the power whereby the fork and its load are elevated. The bar D may be slidden in the direction of its length, within the slot C, and it may also be vibrated in the plane of said slot, for a purpose presently explained.

E is the tripping or discharging-latch, which is pivoted at F¹ to the shank B, and provided at its opposite end with flanges f, which embrace the bar D, and maintain the latch in position to engage with the notches d.

G is the discharging-cord, which is led over a pulley, b, in an opening in the end of the shank B, and thence to an eye, F², on the latch F, to which eye the cord G is fastened.

H is a spring, fastened at one end, as shown at F¹, to the shank of the fork B, and provided at its opposite end with a pin or finger, which works in an aperture leading into the slot C.

The spring H has a constant tendency to force the pin h into the slot C, but the motion of the pin in that direction is obstructed by the bar D, except at such times as the aperture d' is brought into line with the pin h, when the latter enters said aperture and holds the bar D against any longitudinal-sliding movement in the slot C.

d² represents a longitudinal groove in the bar D, which serves as a guide for the end of the pin h, to insure its entrance into the aperture d', when the bar D reaches the limit of its movement on being pushed in by the end, D¹.

In order to obtain a clear understanding of this fork, let it be supposed that the fork has upon it a quantity of hay in process of elevation. At this stage of the operation, the fork is maintained in a horizontal position, by the engagement of the pin h and latch F with the bar D, which ascends in a vertical position, as shown in fig. 2. The hay being discharged by the retraction of the latch F from the notches of the bar D, and consequent tilting or vibration of the fork upon the pin h, the fork and bar D descend in an approximately-parallel position, and penetrate the hay in the pile from which it is to be lifted. The pin h is then retracted from the aperture d', by means of a bent shouldered lever, I, fitted loosely in a slot in the spring H, and bearing against the side of the shank B, and the bar D being thus released, is drawn out by grasping the end, D¹, vibrated until it assumes a position at right angles to the fork, and then rethrust into the hay, it being pushed in sufficiently to cause the pin h to enter the aperture d', and the latch F to engage with one of the notches d.

At this stage the relative position of the parts is as shown in red in fig. 2, and it is manifest that as the power is applied to the bar D, the initial movement of the fork, in rising, is performed in the arc of a circle, causing it to scoop up a large quantity of hay before the fork regularly ascends in a vertical path.

Owing to the situation of the bar D, the fork retains a quantity of hay which might otherwise fall off.

The sliding movement of the bar D is limited by the slot d², and to facilitate the penetration of said bar into the hay, its end, D², may be somewhat pointed and sharpened.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. A bar, D, when applied to a hay-fork, substantially in the manner and for the purpose herein set forth.

2. The notched, perforated, and grooved bar D d d', in combination with the fork A B, latch F, spring H, and finger h, arranged and operating as and for the purpose herein set forth.

3. The combination of the lever I with the fork A, B, bar D, spring H, and pin h, substantially as and for the purpose set forth.

To the above, I have signed my name, this 12th day of June, 1868.

SOLOMON S. MATTIS.

Witnesses:

JOHN A. WIEDERSHEIM,
P. F. LARNER.