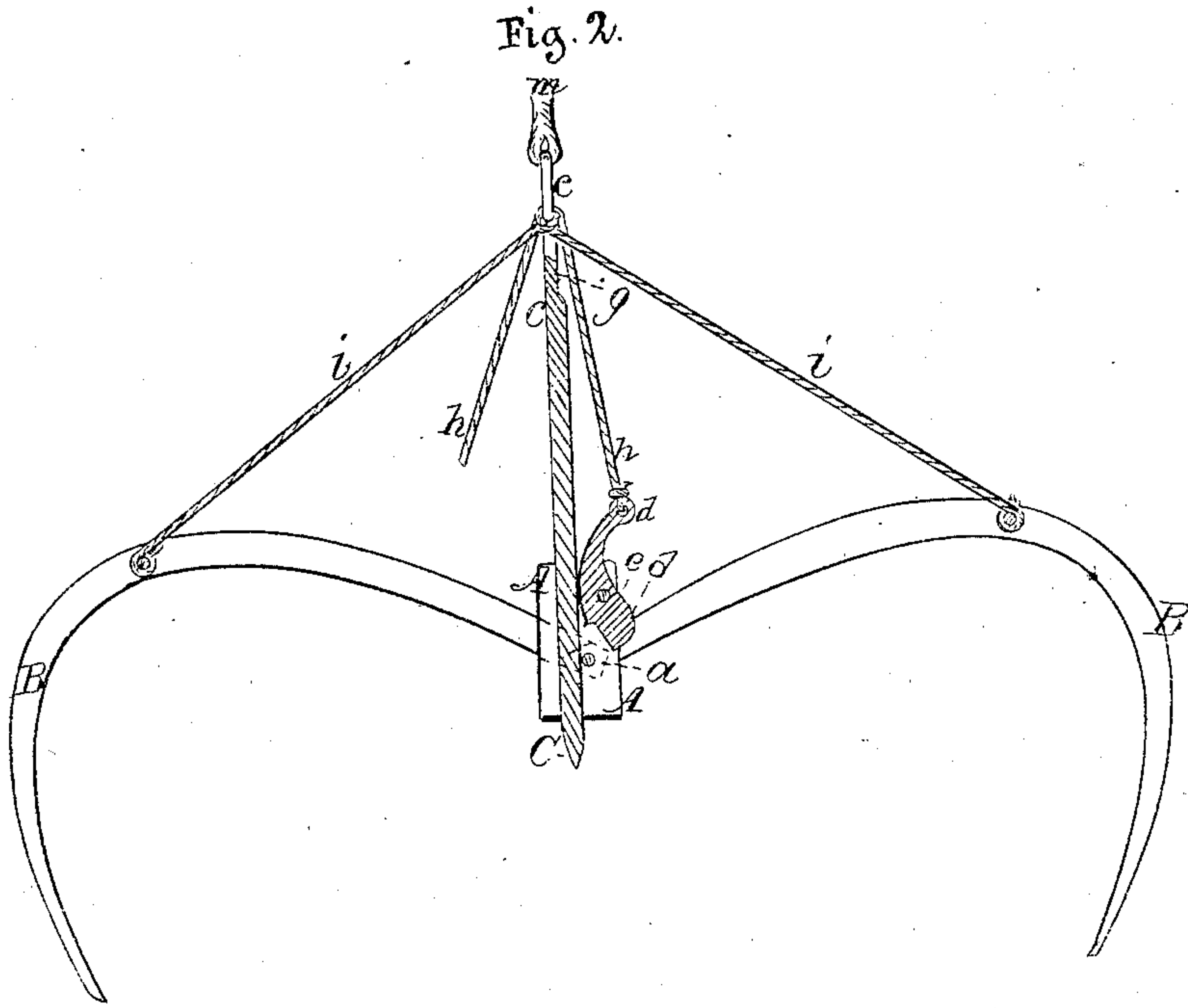
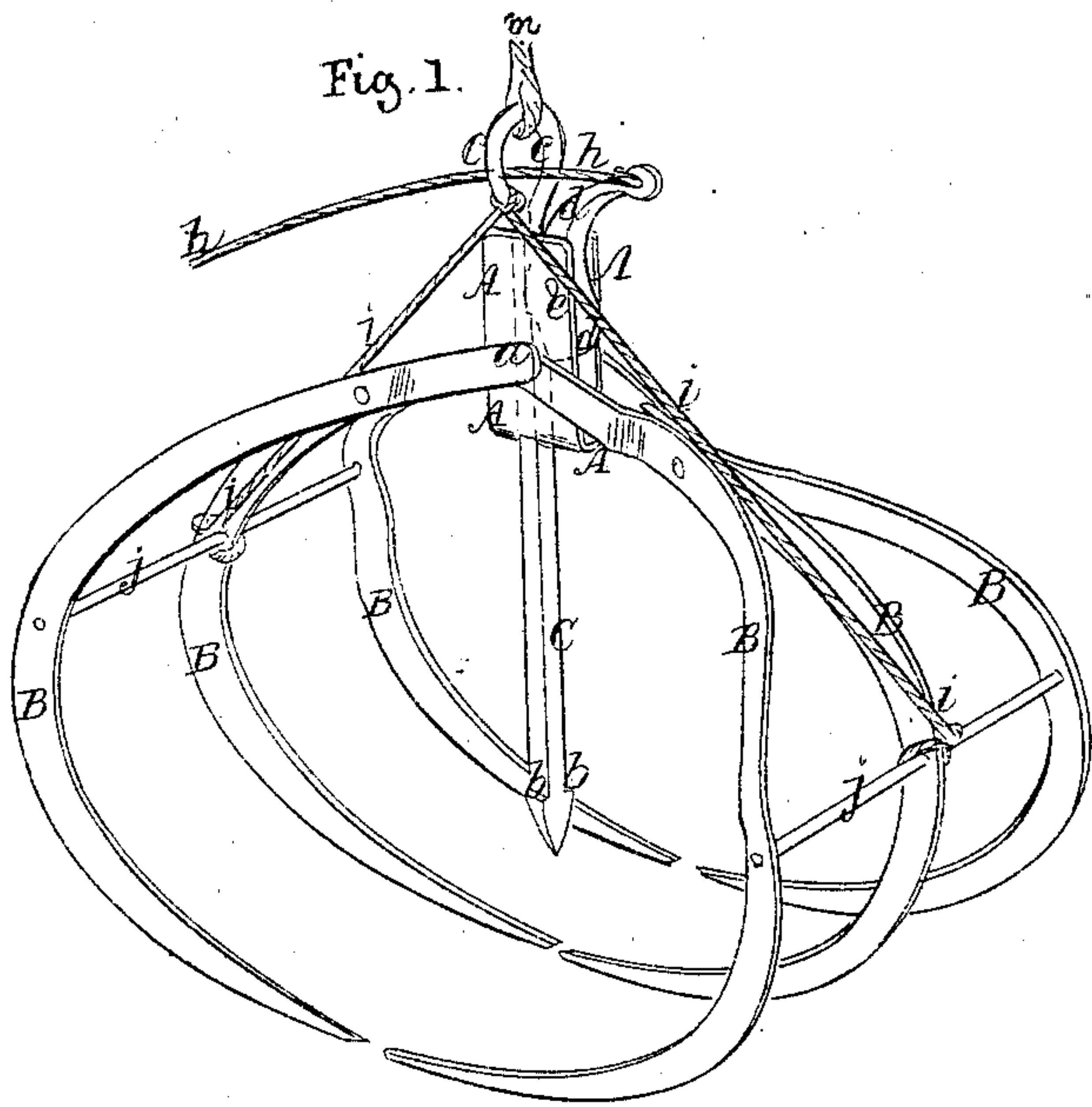


E. Raber.

Hay Fork.

Patented. Sept. 7. 1869

No. 94644.



Witnesses.

Chas. C. Wilson
Edmund Nasson Del

E. Raber.

By atty. A.B. Stoughton.

United States Patent Office.

EMANUEL RABER, OF ROANOKE, INDIANA.

Letters Patent No. 94,644, dated September 7, 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, EMANUEL RABER, of Roanoke, in the county of Huntington, and State of Indiana, have invented certain new and useful Improvements in Horse Hay-Forks; and I do hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a perspective view of the hay-fork, as it appears when closed upon its load.

Figure 2 represents a section through the same, as it appears when tripped, opened, and as having discharged its load.

Similar letters of reference, where they occur in the separate figures, denote like parts in both of the drawings.

I am aware that a hay-fork has been made in which the caliper-shaped prongs and a straight piercing-shaft have been used; but the means of operating them were so complicated, heavy, and uncertain in their action, as to make such a hay-fork of little practical value or use.

My invention consists in a simple way of connecting and uniting the prongs, spear, and trip-motion or lever to a common head, so that whilst the whole construction is light, simple, and cheap, its practical efficiency is much greater than any hitherto known or tried constructions of prong-and-spear arrangement, for the purpose of grasping, holding, and releasing loads of hay, or other similar thing.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same, with reference to the drawings.

A represents a head, to which the two sets of prongs, B B, are pivoted at *a*.

This head is but a simple piece of plate-iron, wrought into an U-form, and through it passes a spear, C, which can move through it, without, however, becoming disconnected from it, its motion in one way being defined by the shoulders *b b* at one end of it, and the ring or dead-eye, *c*, on its other end, which defines its motion in the other direction.

In this head is also pivoted, as at *e*, a cam-lever, *d*, shouldered as at *f*, whilst near the upper end of the spear there is a recess, *g*, into or against which this cam-lever rests when the fork is loaded and carrying its load.

To the dead-eye *c* is fastened the rope or chain *m*, by which the fork and its load are elevated, and to the top of the cam-lever *d* there is attached a line or rope, *h*, which is held by the operator, to trip the fork at the proper time, to allow it to drop its load.

There are also connected to the dead-eye (for convenience, as they may be united to the spear elsewhere) two lines or ropes *i i*, one connecting with each of the sets or series of prongs B, through the brace-rods *j* therein, or otherwise.

These parts constitute the entire construction of the hay-fork.

The hay-fork is used as follows:

The prongs B B being pressed into or against the load or bundle it is to raise, the spear C is forced down into said bundle, until the ring at its top comes against or nearly against the head A. The cam-portion of the lever *d* is then brought up into the recess *g* of the spear, and the fork is thus secured to the bundle, or rather, the bundle to the fork. The weight of the bundle, steadied in place by the spear, has no tendency to open the prongs. The fork and its load are now raised by horse or any other suitable power, applied to the rope or chain *m*, the operator allowing the cord *h* to slip through his hand to guide the load.

When the load has arrived at its place of deposit, the operator pulls upon the cord *h*, which draws the cam-lever from its contact with the shank of the spear C, and the spear being thus relieved of its friction, and holding the whole weight of the fork and its load, the latter slip down upon the spear, whilst the latter is held by the rope *m*.

The cords *i*, being united to the spear, cause the prongs to be opened as they drop, and the load is dropped, the spear being drawn out of the hay or other article as it drops or slides down with the prongs.

Having thus fully described my invention,

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

Pivoting the tines to the head A, to which the lock-lever is also pivoted, the tines and lever being operated by cords, substantially as described.

EMANUEL RABER.

Witnesses:

HENRY H. DINIUS,
ABRAHAM DINIUS.