E. V. R. GARDNER.

Horse Hay-Fork.

No. 161,404. Patented March 30, 1875.

Fig. 1

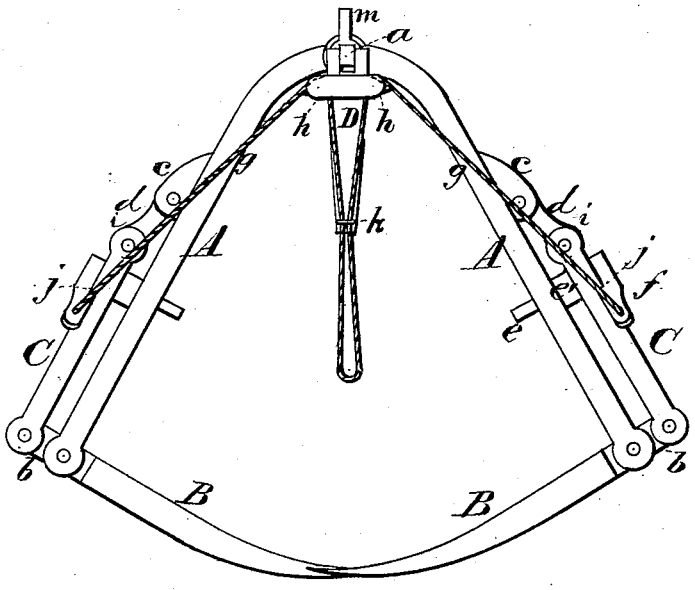


Fig. 2

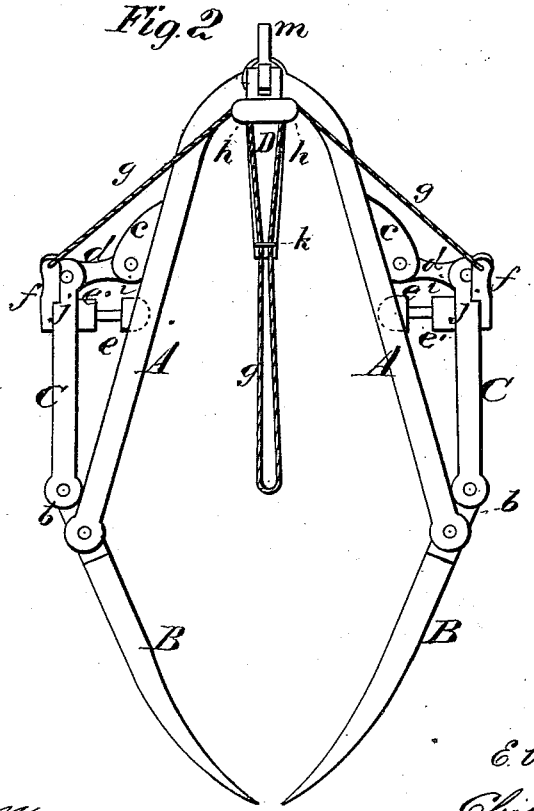
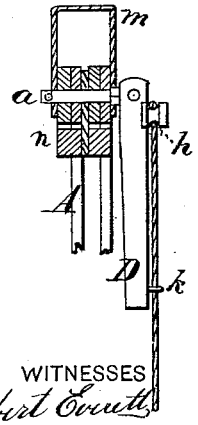


Fig. 3



WITNESSES

Robert Everett

Geo. E. Upham

INVENTOR

E. V. R. Gardner

Chipman Howson & Co

ATTORNEYS

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

EMMET V. R. GARDNER, OF JOHNSON, NEW YORK.

IMPROVEMENT IN HORSE HAY-FORKS.

Specification forming part of Letters Patent No. **161,404**, dated March 30, 1875; application filed March 6, 1875.

To all whom it may concern:

Be it known it that I, EMMET V. R. GARDNER, of Johnson, in the county of Orange and State of New York, have invented a new and valuable Improvement in Hay-Fork; 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 drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figures 1 and 2 of the drawing are representations of front views of my hay-fork, and Fig. 3 is a sectional detail view of the same.

This invention has relation to horse hay-forks, wherein the tines proper are pivoted to jointed arms, so that the tines will embrace the load to be elevated.

The nature of my invention consists mainly in the employment of links, vibrating tripping-buttons, and tripping-ropes, in combination with slotted arms and pivoted forks, as will be hereinafter explained. It also consists in applying a pivoted handle to the arms at their junction, and passing the tripping-ropes over pulleys, and through a staple on this handle, as will be hereinafter explained.

In the annexed drawings, A A designate two arms, the upper ends of which are curved, as shown, and connected together by means of a pivot, *a*. These arms are slotted longitudinally, and between their lower ends the shanks *b b* of two forks, B B, are pivoted. To the upper ends of the shanks *b b* slotted links C C are pivoted, which links are connected by shorter links *d d* to blocks *c c*, fixed rigidly to the backs of the arms A A. Near the joints *i i*, arrow-headed catches *e e* are applied to the links C C, so that they will turn about their axes, and on the outer ends of these catches arms *f f* are secured, having stop shoulders *j* on them for limiting their movement. When the arrow-head catches are inserted through the arms A A, as shown in Fig. 1, and turned at right angles to these arms, the forks B B will be firmly held in the positions indicated in this figure. To the outer or free ends of the arms *f f* ropes *g g* are attached, which are carried over pulleys *h h*, and passed through a staple, *k*, on a handle, D. By pulling on these ropes *g g*, and turning the catches, as shown in Fig. 2, the forks will drop to the positions shown in Fig. 2. Enlargements *e' e'* on the stems of catches *e e* will abut against the backs of the arms A A, when the forks are set, and prevent the links C *d* from arranging themselves in the same line. The handle D, which is used while plunging the forks into a body of hay, is pivoted to the flattened end of the pivot *a*, so as to receive vertical, but not lateral play on its own pivot. The pivot *a* is square near its head, and is fitted into a corresponding hole in the suspension loop *m*. In the crotch of the arms A A, a block, *n*, is applied, which prevents the lower ends of these arms approaching each other too closely.

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

1. In combination, with the forks B B, pivoted to the slotted arms A A, the links C *d*, arrow-head catches *e*, arms *f*, and ropes *g*, substantially as described.

2. The handle D, pivoted to the arm A, and having the pulleys *h h*, and staple *k*, for the tripping-ropes *g g*, substantially as described.

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

EMMET VAN RANSELAER GARDNER

Witnesses:

DANL. CORWIN,

D. CONKLIN.