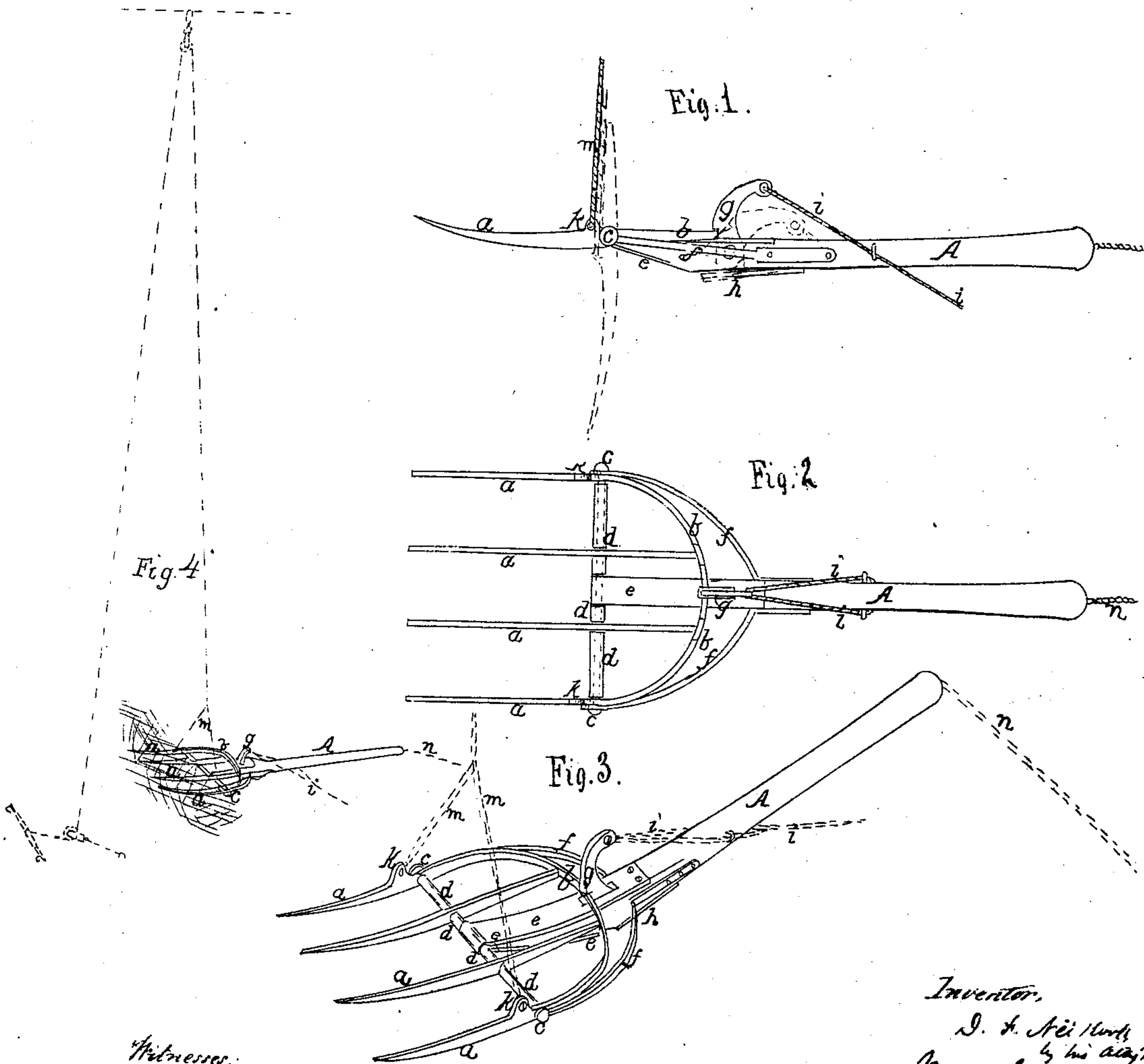


D. F. Neikerk,
Hay Fork.

No. 41,715

Patented Feb. 23, 1864.



Witnesses:
R. T. Campbell
O. Schaefer.

Inventor.
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UNITED STATES PATENT OFFICE.

D. F. NEIKIRK, OF REPUBLIC, OHIO.

IMPROVEMENT IN HAY-ELEVATING FORKS.

Specification forming part of Letters Patent No. **41,715**, dated February 23, 1864.

To all whom it may concern:

Be it known that I, D. F. NEIKIRK, of Republic, Seneca county, State of Ohio, have invented a new and Improved Elevating-Fork; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view of my fork, showing the tines in two positions. Fig. 2 is a top view of Fig. 1. Fig. 3 is a perspective view of the fork. Fig. 4 is a view showing the operation of my invention.

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

This invention relates to an improvement on that class of hay-forks which are used in connection with pulleys and ropes for elevating and stacking hay in barns and elsewhere.

The object of my invention is to obtain a fork by means of which the load can be discharged from it in an exceedingly small space, enabling me thereby to unload a load of hay through a very small hole, to unload without the handle of the fork striking against the roof of the barn, and also to draw the fork very close under the roof of a barn, all as will be hereinafter described.

To enable others skilled in the art to make and use my invention, I will describe its construction and operation.

The fork proper consists of prongs or teeth *a a*, which are slightly curved, as represented in the drawings, and united to a semicircular head, *b*, the ends of which latter may be extended so as to form the two parallel outside prongs, as shown in Figs. 2 and 3. This fork is pivoted to a rod, *c*, which passes transversely through all its teeth at an intermediate point between the ends thereof, and which has tubes *d* slipped loosely over it between each of the teeth for the purpose of keeping the latter at a proper distance apart. The rod *c* is rigidly secured to the end of the fork-handle *A* by means of a metal strap, *e*, which passes around the rod at the middle of its length, and is then bolted to the upper and lower sides of the tapering end of the handle, as shown in Fig. 3. Rod *c* is firmly braced in its position at right angles to handle by means of the two curved or bow braces *f f*, which are secured respectively to the ends of rod *c* and to the sides of

the fork-handle. The fork being thus pivoted to the braced bar *c* of the rake-handle, it can be readily upset, as indicated in red lines, Fig. 1, when it is desired to discharge the load. A vertical slot is made through the fork-handle just in rear of the fork-head *b*, in which is pivoted a spring-catch, *g*, that is acted upon by the flat spring *h*, and to the extended upper end of this catch a chord, *i*, is attached, which is carried back and passed through staples on the sides of the handle *A*. This chord *i* is used to release the fork from the catch *g* by withdrawing this catch, as indicated in red lines, Fig. 1, and upon releasing the chord *i* the spring *h* will throw the catch back again in its former position to receive and hold the fork when the latter is brought back to its position. The forward edge of the spring-catch *g* is curved for the purpose of allowing the fork to lock itself when returned to its place. Eyes or hooks *k* are formed on the two outside prongs of the fork, slightly in advance of the rod or pivot connection *c*, and to these eyes the ends of a rope or chain, *m*, are securely attached, to which is fastened the end of the pulley-rope that is used for elevating the fork, as indicated in Fig. 4. Thus it will be seen that the points of suspension of the fork are in advance of the pivot-connection thereof with the handle *A*, and hence the weight or load of hay on the ends of the fork will in a great measure keep the same in place on the handle until the catch *g* is drawn back, when the fork will upset and discharge its load, and then return to its former position under the catch *g*.

To the rear end of the fork-handle *A*, I attach a rope, which serves as a guy to steady and direct the fork as it is drawn upward with its load. This guy-rope *n* also serves to enable the attendant to keep the fork in a horizontal position while it is being elevated, for which purpose the weight of the load of hay on the teeth must be counteracted by drawing on the guy and keeping it taut until the load is discharged.

From the above description it will be seen that I so apply the fork to its handle that the former can be upset without tilting the latter, and then returned to its former position and secured in place before it is brought down again.

The attachment of the suspension-ropes to the tines in advance of the pivot-connection of these tines to the fork-handle causes the tines

to spring back and lock themselves immediately after the load has been dropped, so that the instrument can be withdrawn through the same hole through which it was passed when loaded.

In Fig. 4 I have represented the manner of suspending the fork and of elevating it to the desired height. This consists in attaching a pulley to the barn-roof and another pulley to the floor, and passing the rope which is attached to the suspension-rope *m* of the fork over the uppermost pulley and under the lower pulley. Now, by drawing off the lower end of the rope the fork will be elevated, and when brought over the stack of hay the load can be discharged by pulling the catch-rope, as above described.

I am aware that the head of a hay-elevating fork has been hinged to the handle of such fork at the rear termination of the tines; but I believe it is new to pivot the fork to the handle at a point about midway of the length of the tines in such manner that the tines themselves extend back upon the handle, and through the agency of a curved head are all supported back

of the pivotal connection also in such manner that the pivotal connection is supported at the center of its length and at both ends, and each and all of the tines have a support from said pivotal connection. Now, therefore, while I do not claim broadly a fork hinged to its handle so that it can be tilted independent of the handle,

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. A hay-elevating fork constructed substantially as herein described, and hinged to its handle at a point about midway of the length of its tines, and controlled by means of devices *g k i m*, all for the purposes set forth.

2. A pivotal connection, *d*, when passed through the fork at a point about midway of the length of the tines, and supported by devices *e f*, in the manner and for the purpose described.

D. F. NEIKIRK.

Witnesses:

E. T. STICKNEY,
ASA WAY.