

(No Model.)

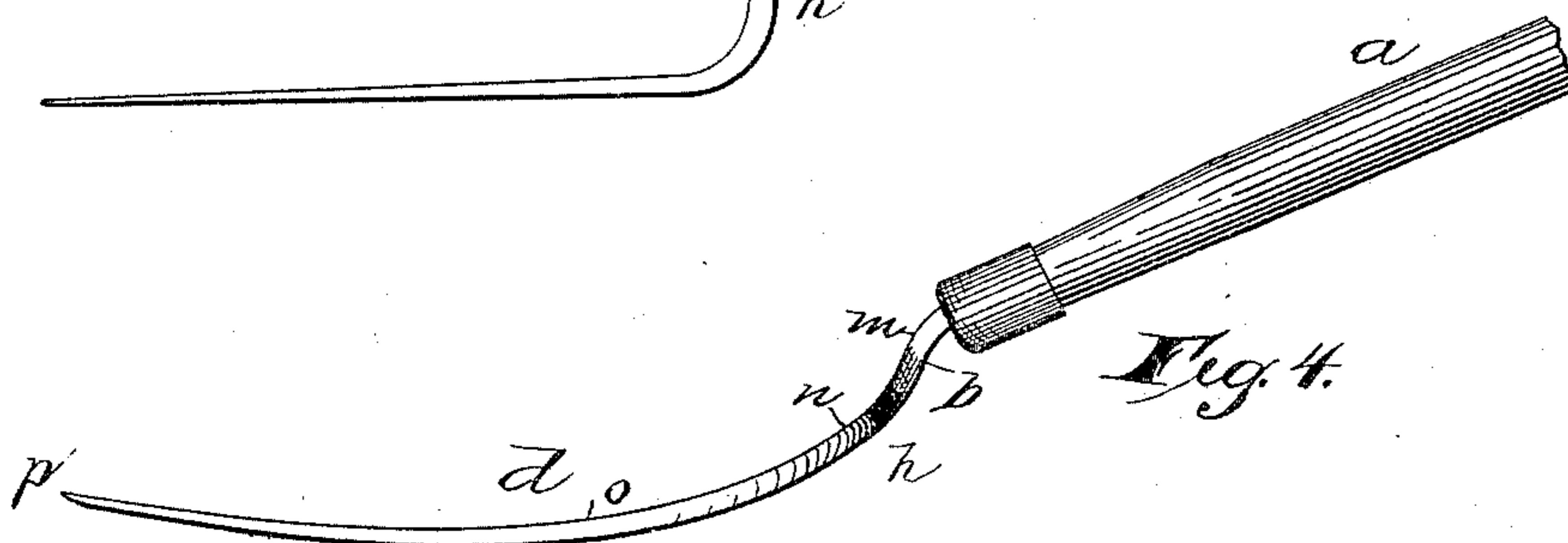
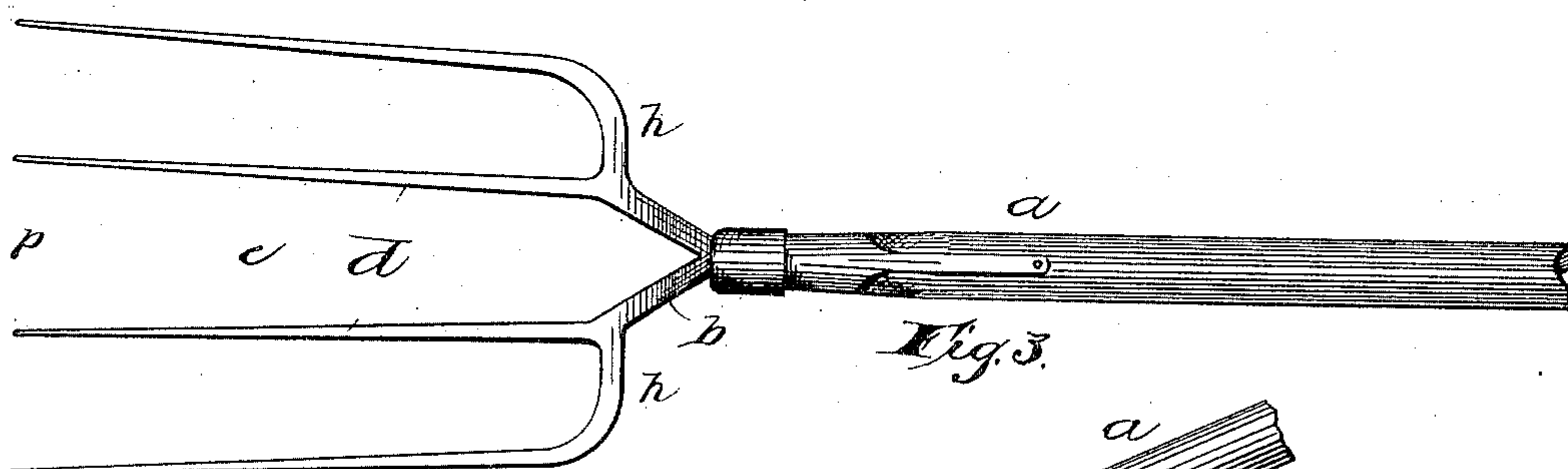
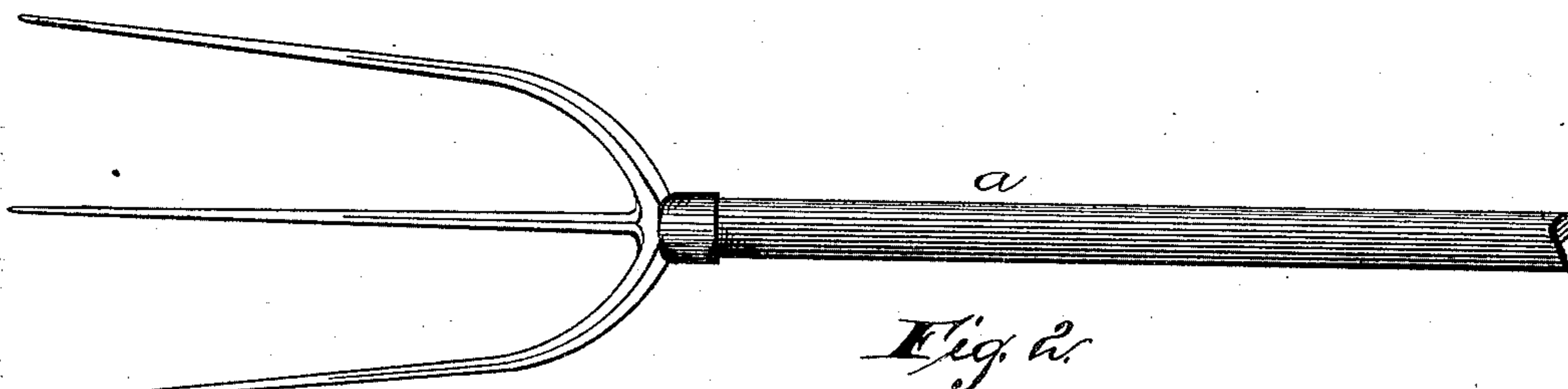
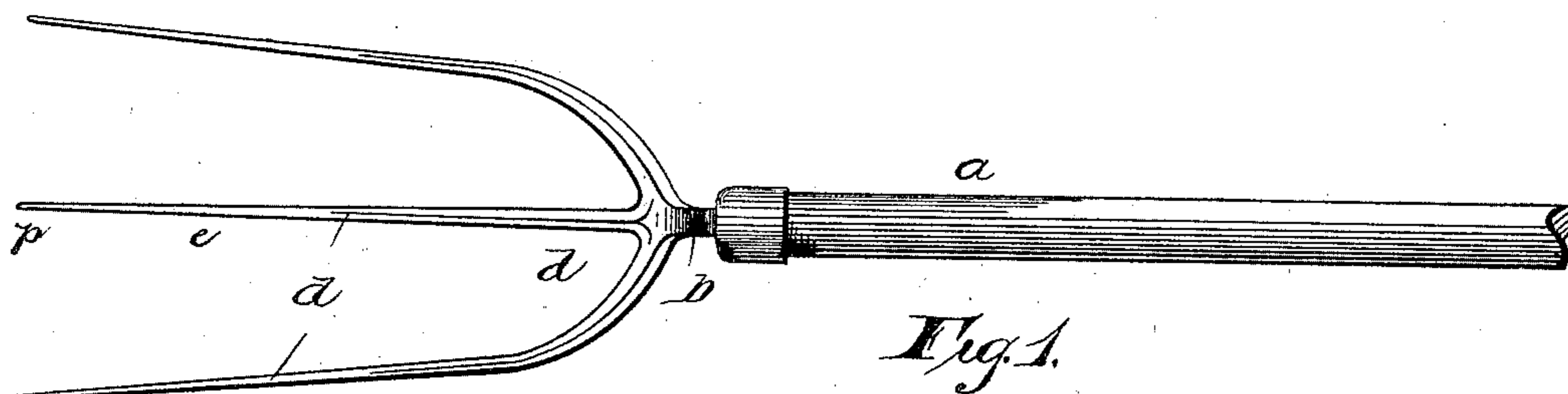
2 Sheets—Sheet 1.

W. H. WITHINGTON.

FORK.

No. 324,908.

Patented Aug. 25, 1885.



Artist.  
Samuel Edmonds.  
H. L. Beruhard

Inventor.  
William H. Withington  
By his Attorneys  
Edson Bros.

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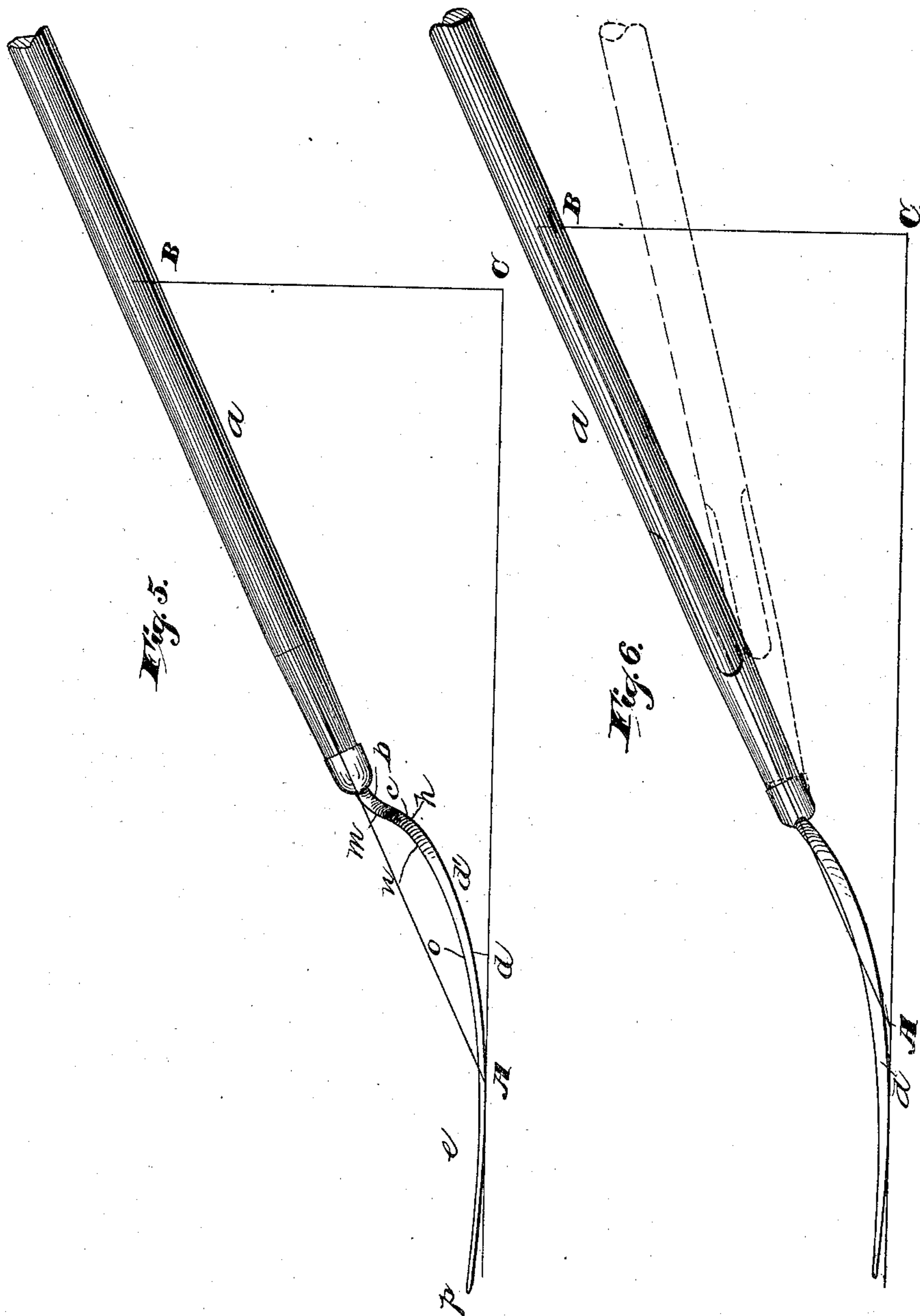
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# UNITED STATES PATENT OFFICE.

WILLIAM H. WITHINGTON, OF JACKSON, MICHIGAN.

## FORK.

SPECIFICATION forming part of Letters Patent No. 324,908, dated August 25, 1885.

Application filed May 2, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. WITHINGTON, a citizen of the United States, residing at Jackson, in the county of Jackson and State of Michigan, have invented certain new and useful Improvements in Forks, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to forks for handling hay and the like; and the novelty consists in the construction and adaptation of parts, as will be more fully hereinafter set forth, and specifically pointed out in the claims.

The object of the invention is to provide a fork which shall, by reason of its peculiar form and adaptation, combine ease both in obtaining and handling the load, and ease of delivery in retreating the fork after the load has been deposited. These objects I attain, and the accomplishment is largely due to such improvements in construction as give a better "hang" to the fork. The hang of a fork is the feature of construction which throws the weight of the fork proper, the tines, and head to one side of the axis of the handle, whereby the gravity will bring the tines concave side up and in the same horizontal plane. The importance of this feature has been well known, and many attempts have been made to improve upon it; but I find that many of these attempts, while they succeed in accomplishing the hang and in throwing the weight of the fork proper to one side of the axis of the handle, sacrifice other important advantages which should accrue to a proper adaptation of parts, an easy delivery of the hay being a feature notably sacrificed in such attempts.

In Patent No. 64,789, of 1867, the hang was obtained in connection with a straight handle by a cast head-frame having arms extending at right angles to the plane of the handle, and sockets which received detachable or separate tines. This construction threw the weight of the fork proper to one side of the axis of the handle; but it made the delivery so difficult that separate mechanism had to be devised to keep the hay from getting behind the head and preventing the withdrawal of the fork. In my device the shank, head, and tines are all forged from one piece of steel and made integral, and to this feature I attach importance. I have demonstrated that it is possible

to obtain this hang with a straight-handled fork and not sacrifice any of the remaining features of importance. I arrange the dish of the fork at a proper distance from the end of the handle and eccentric to the axis thereof, so as to make the fork easy to handle whether empty or loaded. The tines have a gradual curve throughout their entire length to insure easy delivery of the hay, and the hang, the dish is brought in the portion of the fork nearest the handle.

The invention belongs to that class of devices in which slight changes, a curve even, may effect a saving of labor, and comprise an important improvement, a new result.

I illustrate the invention by comparing the improved fork with an ordinary fork with straight shank and handle.

Figure 1 is a face view of the invention, while Fig. 2 is a similar view of an ordinary straight-handled fork. Figs. 3 and 4 show a form with a bifurcated head or shank embodying the invention, Fig. 3 being a face and Fig. 4 an edge view of the same. Fig. 5 is an edge view corresponding to Fig. 1, and Fig. 6 is a similar view corresponding to Fig. 2.

Referring to the drawings, it will be observed that I employ a straight handle, *a*, in which is secured the shank *b*. This shank extends beyond the end of the handle, and in a curve, *c*, between points *m* and *n*, is deflected from the plane of the axis of the handle to an angle say thirty (30) degrees. Between points *n* and *o* the curved tines run approximately parallel or form a dish, *d'*, the general bottom of which is parallel with the axis of the handle. Between points *o* and *p*, which constitutes the delivery portion *e* of the tines, the said tines cross the path of the axis of the handle at an angle, say, of twenty (20) degrees. While I do not specify these angles as being exact, I assert that the relations of the parts as thus set forth—viz., the handle *a* straight, the shank *b*, having curve *c*, the dish *d'*, and delivery portions *e* of the tines *d*, in their relations to the axis of the handle *a*, constitute the features of aggregate novelty upon which depend the improved results attained. Now, it cannot be said that this improvement is due simply to the formation of a bend in the shank, for in Fig. 6 I illustrate an ordinary fork holding exactly the same relation to a horizontal line,

A C, and to an inclined line, A B, as does the improved device shown in Fig. 3. It will be seen that if the fork and handle were held in those positions an axial line drawn through the handle of the fork the concave or dish or hang would be absent. Now, to force the handle down, the tines remaining in position to give the dish or hang mentioned, as indicated in dotted lines, would bring the points of the tines on a line with the axis, and the delivery portion *e* would be absent. To attain the best results this axial line must agree with about the central portion of the tines, and the shank must throw the head of the fork considerably beyond the end of the handle, and to one side of the axial line thereof. The theory of the improvement is well brought out in Fig. 5. In this case the shank *b*, by its curves *c*, throws the head *h* beyond and eccentric to the axis of the handle, while the length of the tines is nearly equally divided between a dishing part upon one side of the axis and a delivery portion upon the opposite side thereof, the delivery portion being slightly less than the other.

The device shown in Figs. 3 and 4 illustrates the complete invention, the shank being bifurcated and each leg carrying two tines. These legs have the curve *c* to throw the two heads away from the axial line of the handle.

When proportioned as seen in Fig. 5, about three fifths of the heavier part of the fork form the dish or hang upon one side of the axial line, and the other two fifths comprise the lighter ends of the tines projecting upon the other side of said line. This construction gives a very desirable and labor saving "hang" to the device, holding the load firmly and evenly within the control of the operator, the tine ends or portions *e* serving to hold the load in place. As the hay is deposited upon the load, or elsewhere, with the fork reversed the fork may be retracted easily, the gradual curve throughout the tines allowing such movement with slight deflection.

Patent No. 48,665, of 1865, is familiar to the inventor. It has an extended shank, extended for the purpose of allowing a hinge to be formed thereon, and curved to agree with a supplemental fork. The hang, if it has the feature at all, is at the expense of the delivery, requiring a guard in one instance and the points being about on a line with the axis of the handle in the other.

In applying my improvements to forks adapted to certain special uses—as, for example, a manure-fork—I preferably spring or bend the handle for a distance of about six or eight inches, beginning at a point about four inches from the end of the handle.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A hay or other fork having a shank projecting beyond the end of the handle, which shank is curved to throw the head eccentric to the axis of the handle, and curved teeth or tines lying partly upon either side of said axis, as and for the purpose set forth.

2. A hay or other fork having a bifurcated shank bent to throw the heads eccentric to the axis of the handle, and having curved teeth or tines, which project across the line of said axis, as and for the purpose set forth.

3. The fork described, consisting of the handle *a*, the shank *b*, curved at *c* to throw the head *h* eccentric to the handle, and the tines *d*, curved to form a dishing part upon one side of the axis of the handle to give the proper hang, and projecting delivery and holding portions upon opposite sides of said axis, all arranged and serving as and for the purpose set forth.

In testimony whereof I affix my signature in the presence of two witnesses.

WILLIAM H. WITHINGTON.

Witnesses:

E. A. SUMNER,  
W. I. GORDON.