No. 728,852. PATENTED MAY 26, 1903.

A. F. BROWN & H. B. HOLTVOIGT.

HORSE HAY RAKE.

APPLICATION FILED FEB. 5, 1902.

NO MODEL.

Fig. 1.

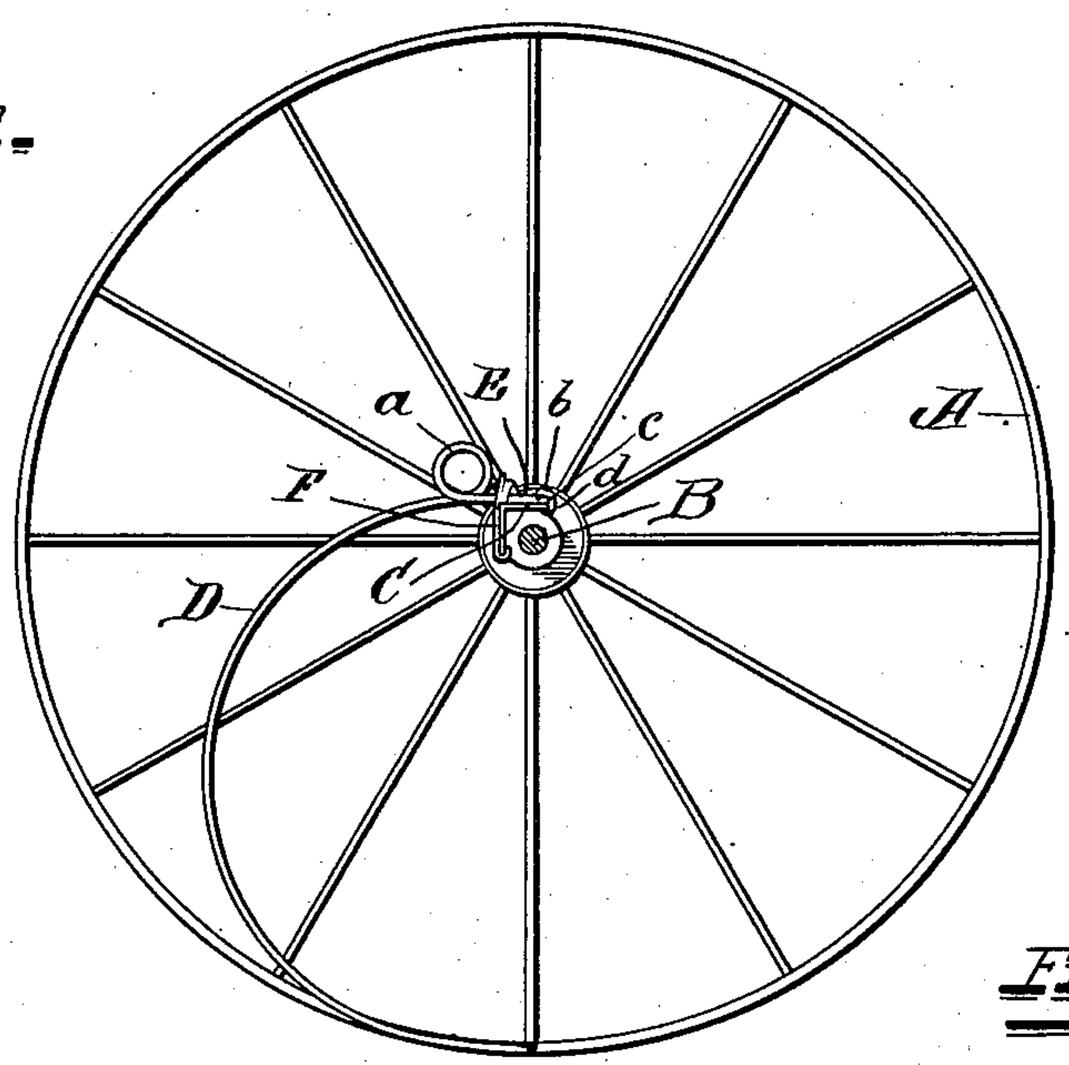
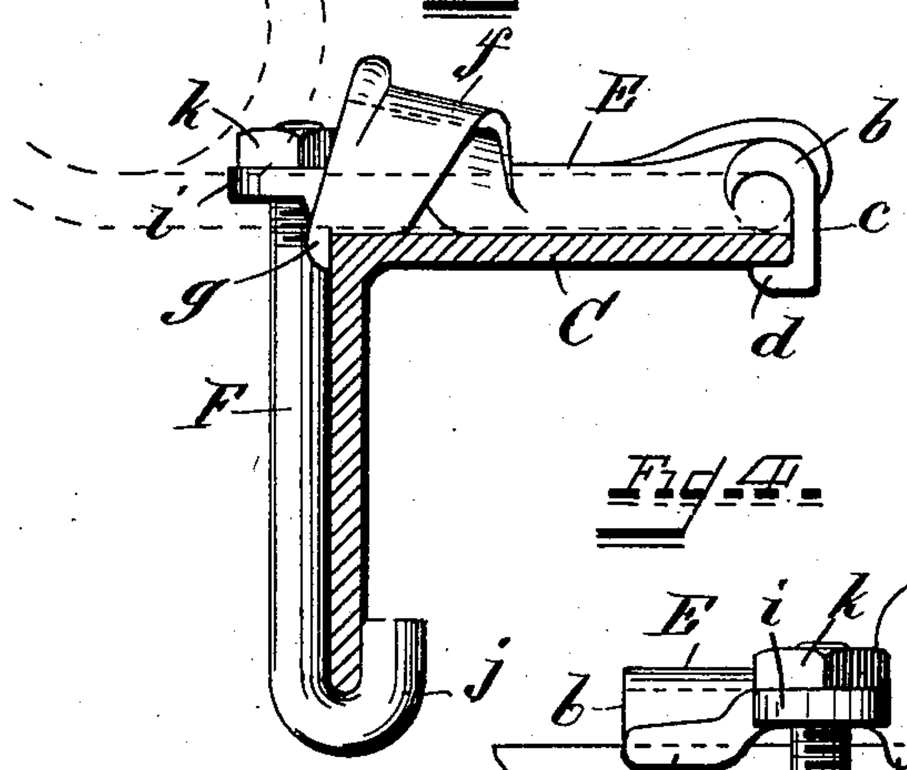


Fig. 3.

Fig. 2.



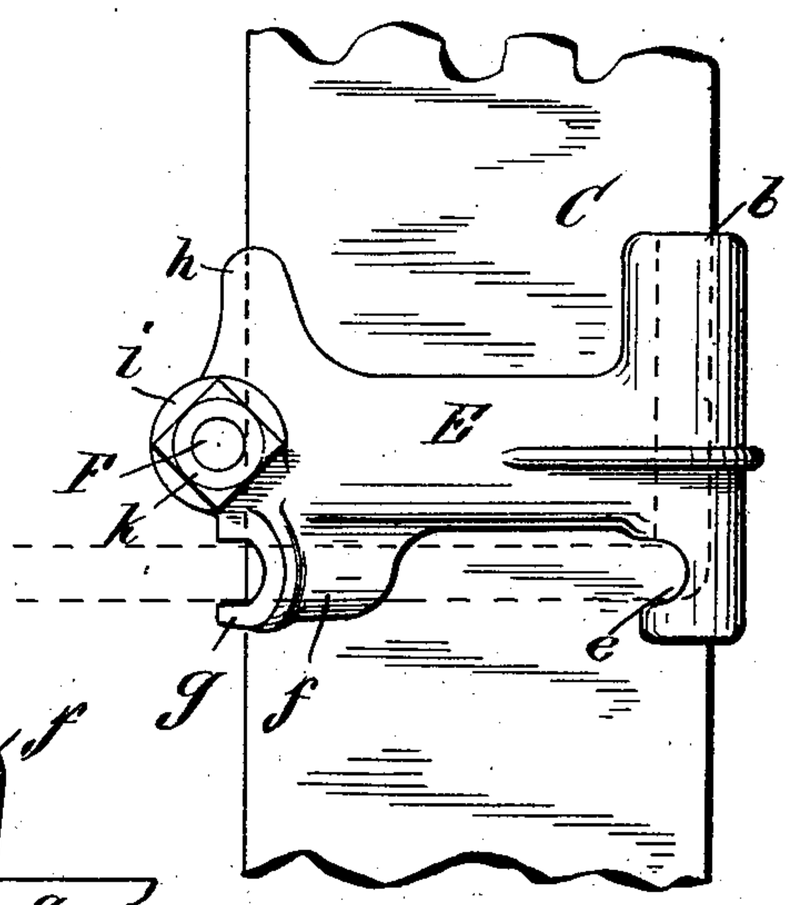
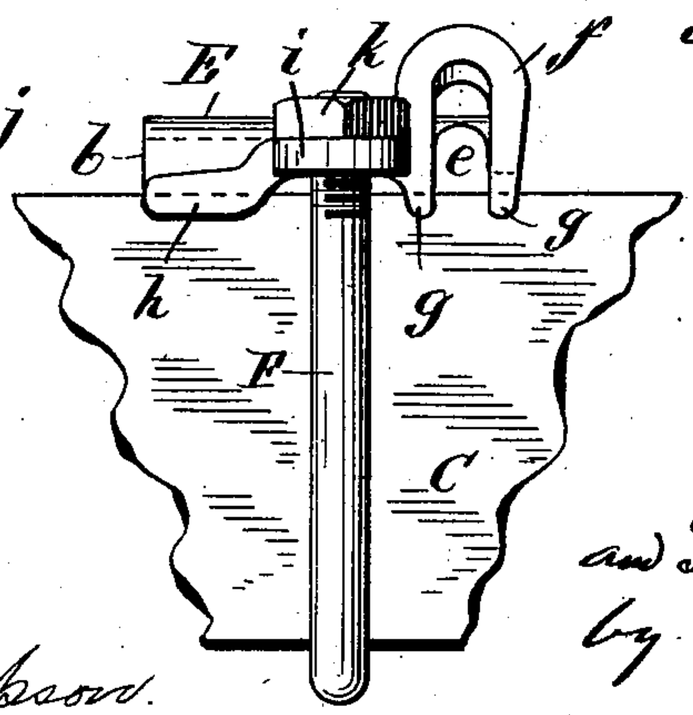


Fig. 4.



Witnesses.
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No. 728,852. Patented May 26, 1903.

UNITED STATES PATENT OFFICE.

ARTHUR F. BROWN AND HENRY B. HOLTVOIGT, OF DAYTON, OHIO, ASSIGNORS TO THE STODDARD MANUFACTURING COMPANY, OF DAYTON, OHIO, A CORPORATION OF OHIO.

HORSE HAY-RAKE.

SPECIFICATION forming part of Letters Patent No. 728,852, dated May 26, 1903.

Application filed February 5, 1902. Serial No. 92,605. (No model.)

To all whom it may concern:

Be it known that we, ARTHUR F. BROWN and HENRY B. HOLTVOIGT, citizens of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Horse Hay-Rakes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

Our invention relates to all classes of horse hay-rakes employing curved spring-metal teeth which are attached to the rake-head and which are intended to be lifted by the tilting of the rake-head to dump the collected loads into windrows; and it has for its object the provision of an improved rake-head and tooth-holder for uniting the teeth to the rake-head in such manner that they may be readily shifted to any desired point in their positions on the rake-head—as, for instance, in case of breakage of one or more teeth the remaining teeth may be shifted to equalize the space, and thus fill up the gap, without the necessity of sending to the shop or factory for a new tooth or teeth and without interruption to the work on hand.

The novelty of our invention will be hereinafter more fully set forth, and specifically pointed out in the claim.

In the accompanying drawings, Figure 1 is a side elevation in section of so much of a horse hay-rake as is necessary to illustrate the application of our invention thereto. Fig. 2 is an enlarged sectional side elevation of the rake-head and one of the tooth-holders applied thereto. Fig. 3 is a plan view of Fig. 2. Fig. 4 is a rear elevation of Figs. 2 and 3.

The same letters of reference are used to indicate identical parts in all the figures.

In Fig. 1, A is one of the carrying-wheels of a horse hay-rake of either the hand-dump or self-dump class. B is the axle or spindle thereof. C is the rake-head, preferably of inverted-L-shaped angle-iron, suitably mounted upon the rake-frame, (not shown, but which may be of the usual or any suitable construction,) and D represents the teeth of the rake, of curved spring metal, preferably with a loop *a* near their upper ends, which are secured to the rake-head C, the latter being so constructed and connected to the frame of the machine that it can be tilted either by hand or by being locked to either or both of the carrying-wheels in order to effect the dumping of the rake.

Our improved tooth-holder is composed of a flat piece E to rest upon the flat top of the rake-head and having at its forward end an arched T-shaped extension *b* with a downturned portion *c*, Fig. 2, to pass the front edge of the rake-head and an underturned lip or flange *d* to embrace or hook under its edge. The front part of the arched part *b* is cut away, as seen at *e*, Fig. 3, to make clearance for the bent end of the rake-tooth D at its elbow, said tooth being bent at right angles at its rear end and the bent portion being confined under and having its pivotal bearing in the arched part *b* of the tooth-holder.

The rear edge of the tooth-holder has on one side an elongated arched part *f*, through which the tooth in its passage rearward passes and in which it has limited vertical play, and the lower ends of said arched part have lugs *g*, which embrace the rear side of the rake-head. The opposite rear side of the tooth-holder likewise has a pendent lug or flange *h*, which embraces the rear side of the rake-head, and at the middle of the tooth-holder on its rear side is a rearwardly-projecting perforated lug *i* for the passage of a bolt F, whose lower end is hook-shaped, as at *j*, Fig. 2, to engage the under edge of the rake-head. The upper end of the bolt F is threaded and has a nut *k* screwed upon its upper end and down upon the lug *i*, thus forming a secure lock for the tooth-holder upon the rake-head.

By simply loosening the nut *k* the tooth-holder can be slid sidewise upon the rake-head and relocked thereto in any desired adjusted position. In this simple manner, in case of the breakage of one or more of the teeth while at work in the field, the operator without much loss of time and in a very simple manner can adjust the adjacent teeth so as to fill the gap and then go on with his work.

By means of the downwardly-projecting

lugs *c*, *g*, and *h* the tooth-holder is held from any twisting action upon the rake-head, and the single bolt F serves to clamp it effectually in place.

While we have thus described and illustrated what we consider our simplest and preferred form of construction both of the rake-head and of the tooth-holders, yet we do not wish our invention to be considered as limited either to the precise form of the rake-head or of the tooth-holders, provided there is that adaptability of loosening and shifting the tooth-holders on the rake-head to any position required and without any limitation of adjustment and then reclamping the same thereto. This might be done in a variety of ways as would suggest themselves to those skilled in the art.

Having thus fully described our invention, we claim—

In a horse hay-rake, the combination of a rake-head composed of angle-iron with its rear side vertical and top side horizontal, and a series of independent individual tooth-holders for the teeth, each provided with a pivot-hood for the bent ends of the teeth, said hood having hooked lower ends to engage under the front edge of the rake-head, and provided with a vertically-elongated hood at the rear edge of the rake-head to give limited play to the teeth, and a clamping-bolt extending through a lug at the rear end of each plate and provided with a hooked lower end to engage under the lower rear edge of the rake-head, whereby said holders may be shifted laterally and independently on said head and be resecured thereto, substantially in the manner and for the purpose specified.

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Witnesses:
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