L. L. Pollard.

Horse Rake.

No 45626 Patented Dec. 27, 1864.

Fig. 2

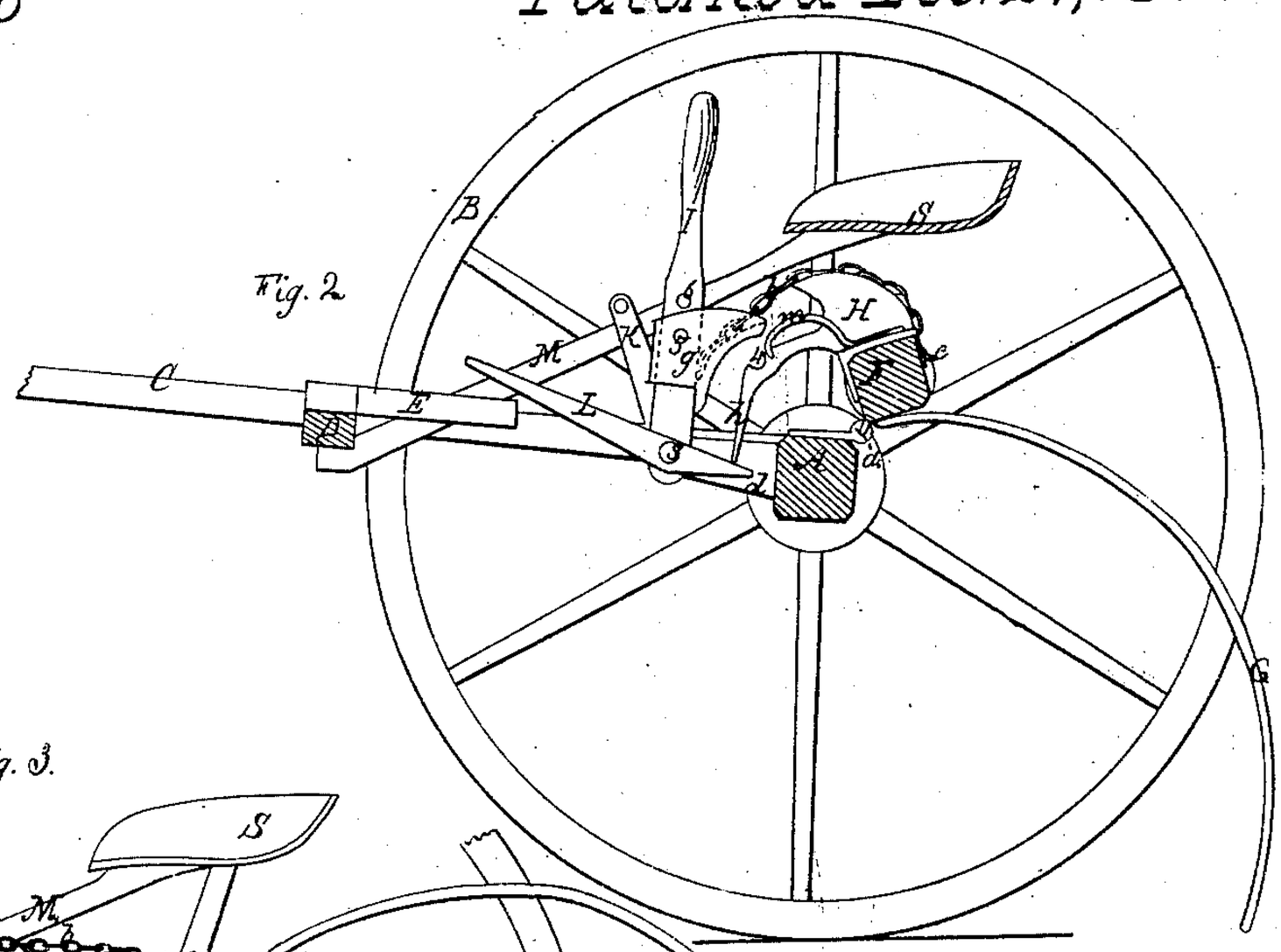


Fig. 3.

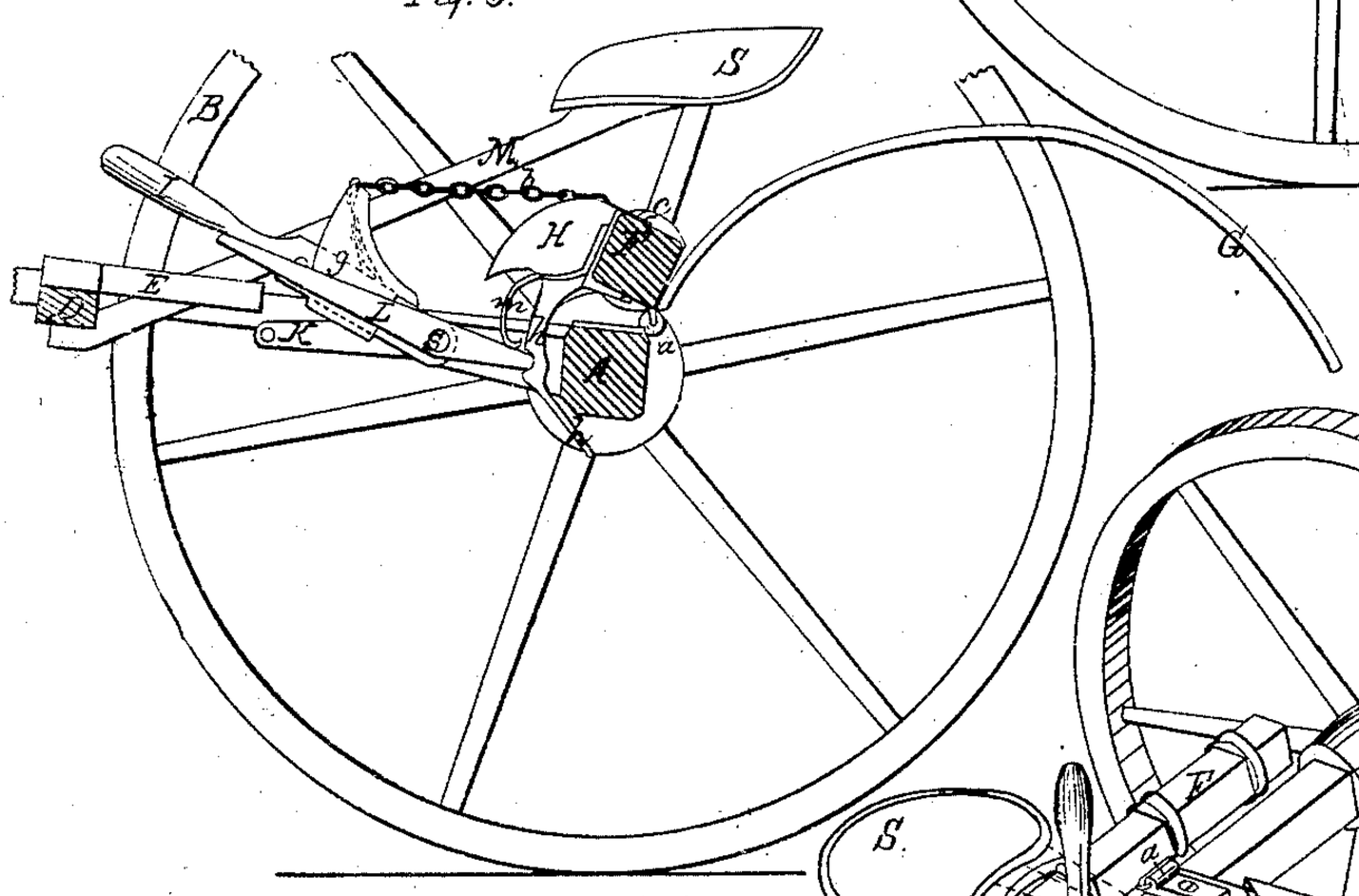
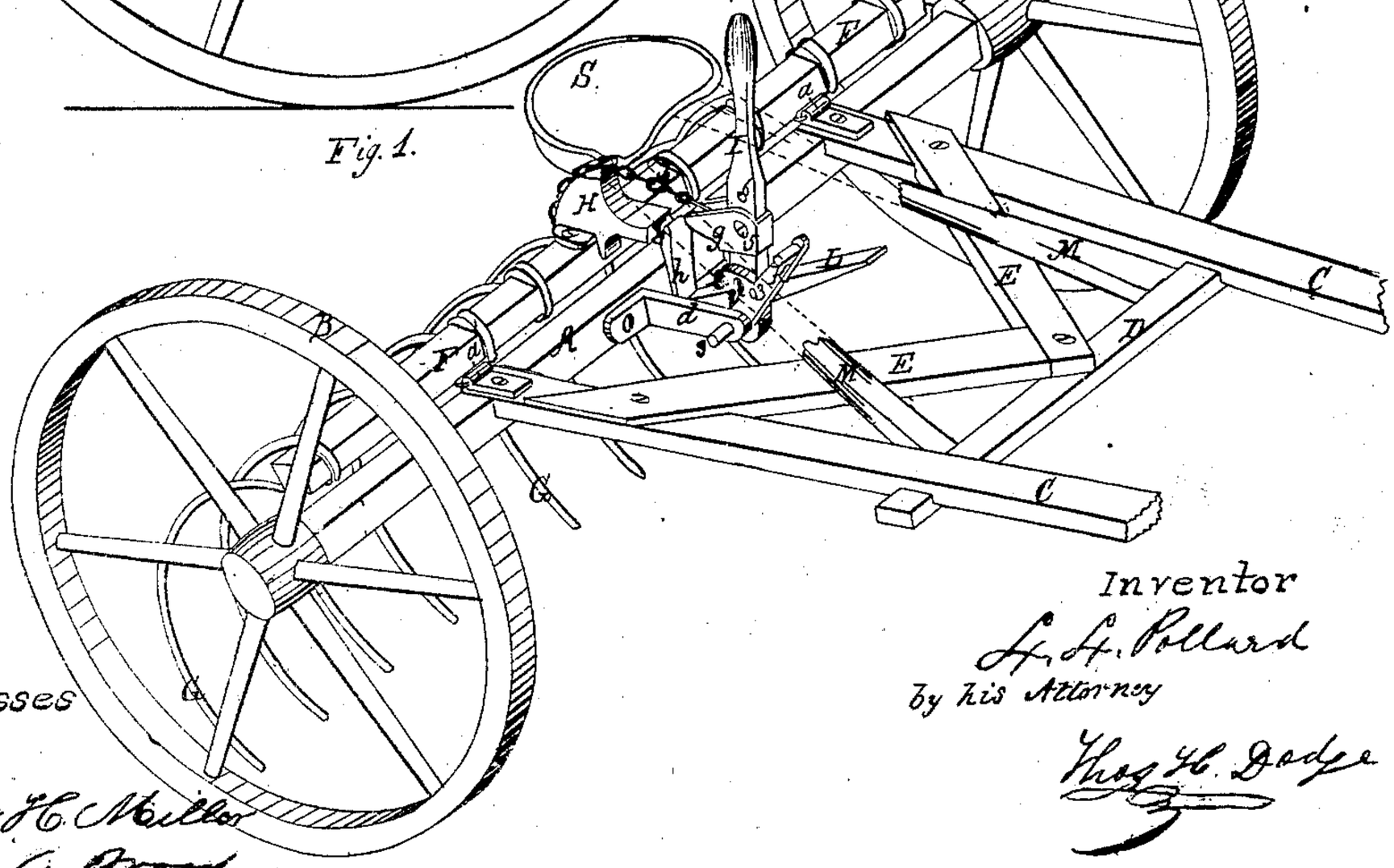


Fig. 1.



Witnesses

Geo. H. Miller

E. A. Brooks

Inventor

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Thos. H. Dodge

UNITED STATES PATENT OFFICE.

L. L. POLLARD, OF WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN HORSE-RAKES.

Specification forming part of Letters Patent No. **45,626**, dated December 27, 1864.

To all whom it may concern:

Be it known that I, L. L. POLLARD, of the city and county of Worcester, and State of Massachusetts, have invented certain new and useful Improvements in Horse-Rakes; 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 accompanying drawings, in which—

Figure 1 represents a perspective view of said horse-rake. Figs. 2 and 3 represent longitudinal vertical sections through the same.

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

A represents the axle of the horse-rake, which is supported on the wheels B, and to which the thills C are secured. The driver's seat S (shown in red lines in Fig. 1) is secured to the spring-rods M, which are fastened to the cross-bar D, and are supported by the ties E.

F represents the rake-head. It is hinged to the axle A by means of the hinges *a*.

G represents the rake-teeth.

H represents a cam-shaped chain-support, which is secured to the rake-head F. A chain, *b*, which is fastened to a hook, *c*, on the rear side of the rake-head, passes over said chain-support, and its front end is secured to a hand-lever, I, which is pivoted at *s* to the brackets *d* of the main axle. The lever I is also provided with a cam-shaped chain-support, *g*, which sustains the front end of the chain *b* in the operation of the rake. It is secured to the lever I by means of a screw-bolt, 5, and said lever is provided with one or more adjusting-holes, 6, so that the position of the chain-support *g* can be adjusted on the lever I to tighten the chain *b* or to regulate the throw of the rake-head and the elevation of the rake-teeth.

K represents a foot-lever, which is also pivoted at *s* to the brackets *d*, and which is, besides, secured to the side of the lever I by means of the set-screw *v*. It is provided with adjusting-holes 2 3, by means of which its position can be adjusted to suit the convenience of the driver on his seat S, and to obtain any desired leverage. The driver can thus, by means of the hand-lever I and foot-lever K, elevate and lower the rake-teeth at pleasure and with the greatest facility, either by hand or by the pressure of his foot.

When the rake is in operation it is necessary that the teeth should be held to the ground to rake the hay. This must be effected by the use of considerable force to counterbalance the weight of the hay upon the rake-teeth. I accomplish this by the application of the foot-lever L, which is pivoted at *s* to the brackets *d*, and the rear or short arm of which is pressed up against the lower end of the extension part *h* of the chain-support H, as represented at Fig. 2. The driver therefore in raking has only to rest his foot on the long arm of the lever L, and by reason of the leverage of said lever and the leverage of the extension-piece *h*, which has its fulcrum in the hinges *a*, no heavy pressure upon the lever L is required to keep the rake-teeth on the ground. The operation of raking and discharging the hay is thus accomplished with the greatest ease and facility, the former by the driver resting his left foot on the lever L, the latter by pressing down with his right foot the lever K or by operating the hand-lever I.

In moving the rake it is desirable that the rake-teeth should be retained in an elevated position. This is accomplished in the following manner: A notch, 4, is formed in the extension-piece *h* of the chain-support H, and when the rake-teeth are raised to their highest position, as shown in Fig. 3, the driver, by treading on the foot-lever L, presses the front of said lever downward, and thus forces the rear end thereof into the notch 4 of the extension-piece *h*, thereby effectually locking the rake-teeth in said elevated position.

m represents a spring, which is secured to the side of the chain-support H or to the rake-head, and when the rake is locked in its elevated position the end of said spring is nearly in contact with the lever L, as represented at Fig. 3. By means of this spring the driver is enabled to unlock the rake automatically when in its elevated position by depressing slightly the hand-lever I or foot-lever K, for on doing so the spring *m* comes in contact with the rear part of the lever L, throws it out of the notch 4, and thus disengages the extension part *h* from said lever, and the rake-teeth will drop down to the ground by their own weight.

Having thus fully described the nature of

my invention, what I claim herein as new, and desire to secure by Letters Patent, is—

1. The combination, with the hand-lever I, of the adjustable foot-lever K, when used for operating the rake-head, substantially as herein set forth.

2. The combination, with the rake-head and chain-support H, of the stop-lever L and spring *m*, substantially in the manner and for the purposes described.

3. Making the front chain-support, *g*, adjustable on its lever I, for the purposes herein stated and described.

4. The combination of the lifting and holding devices herein described, consisting of levers I K, chain-supports H *g*, chain *b*, and spring *m*, with the rake-head F and axle A, substantially as and for the purposes described.

L. L. POLLARD.

Witnesses:

THOS. H. DODGE,

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