

(No Model.)

S. R. NYE.

HORSE RAKE.

No. 352,884.

Patented Nov. 16, 1886.

Fig. 1.

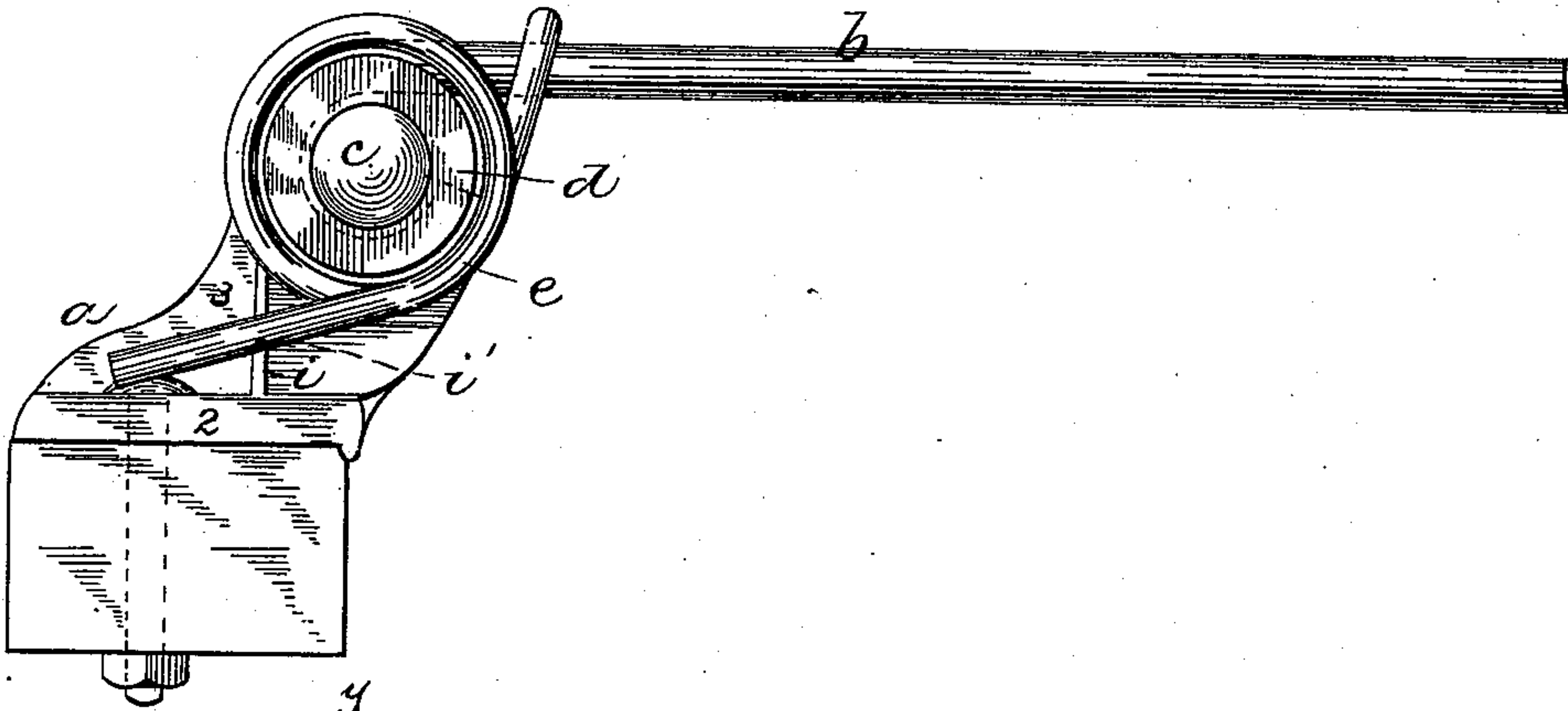


Fig. 2.

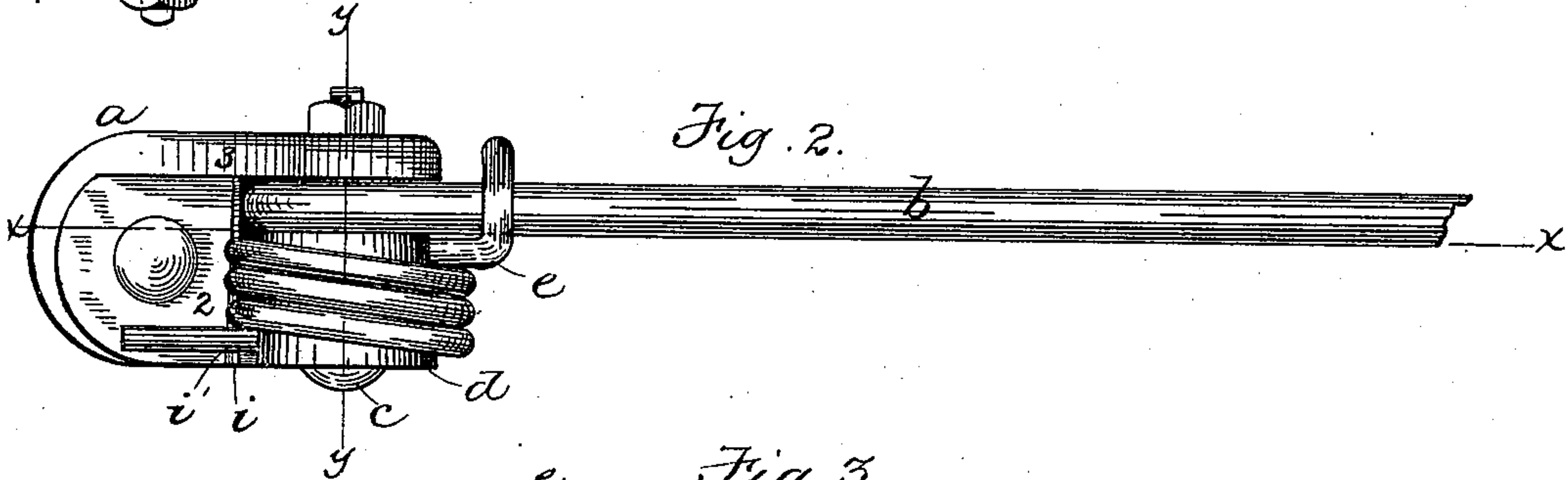


Fig. 3.

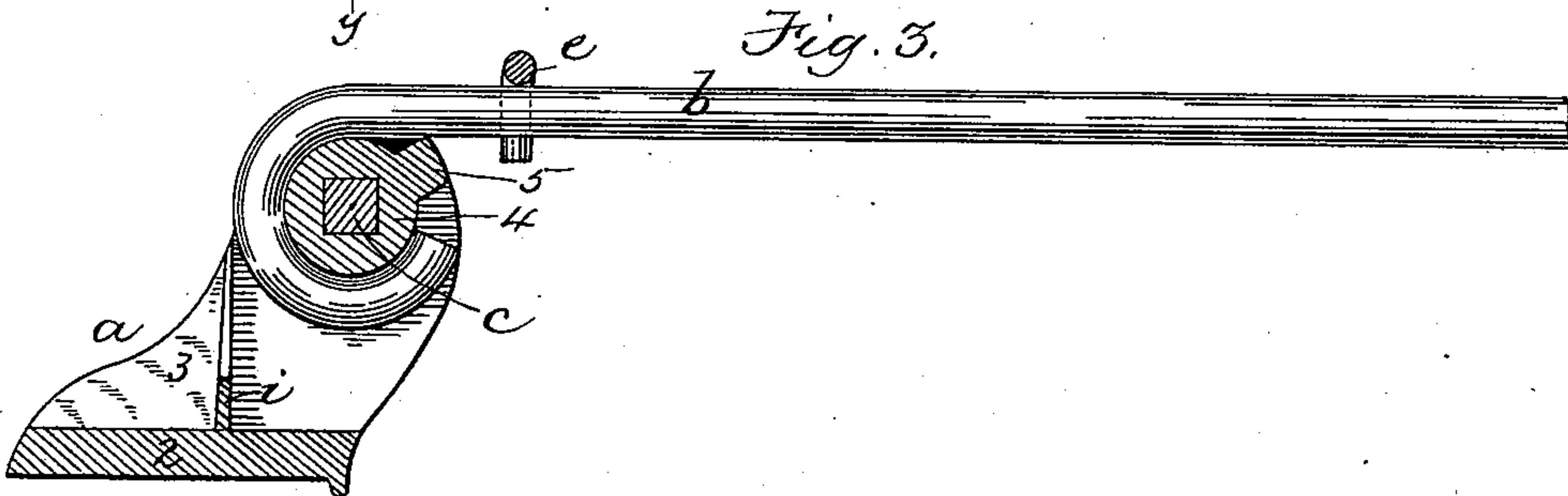
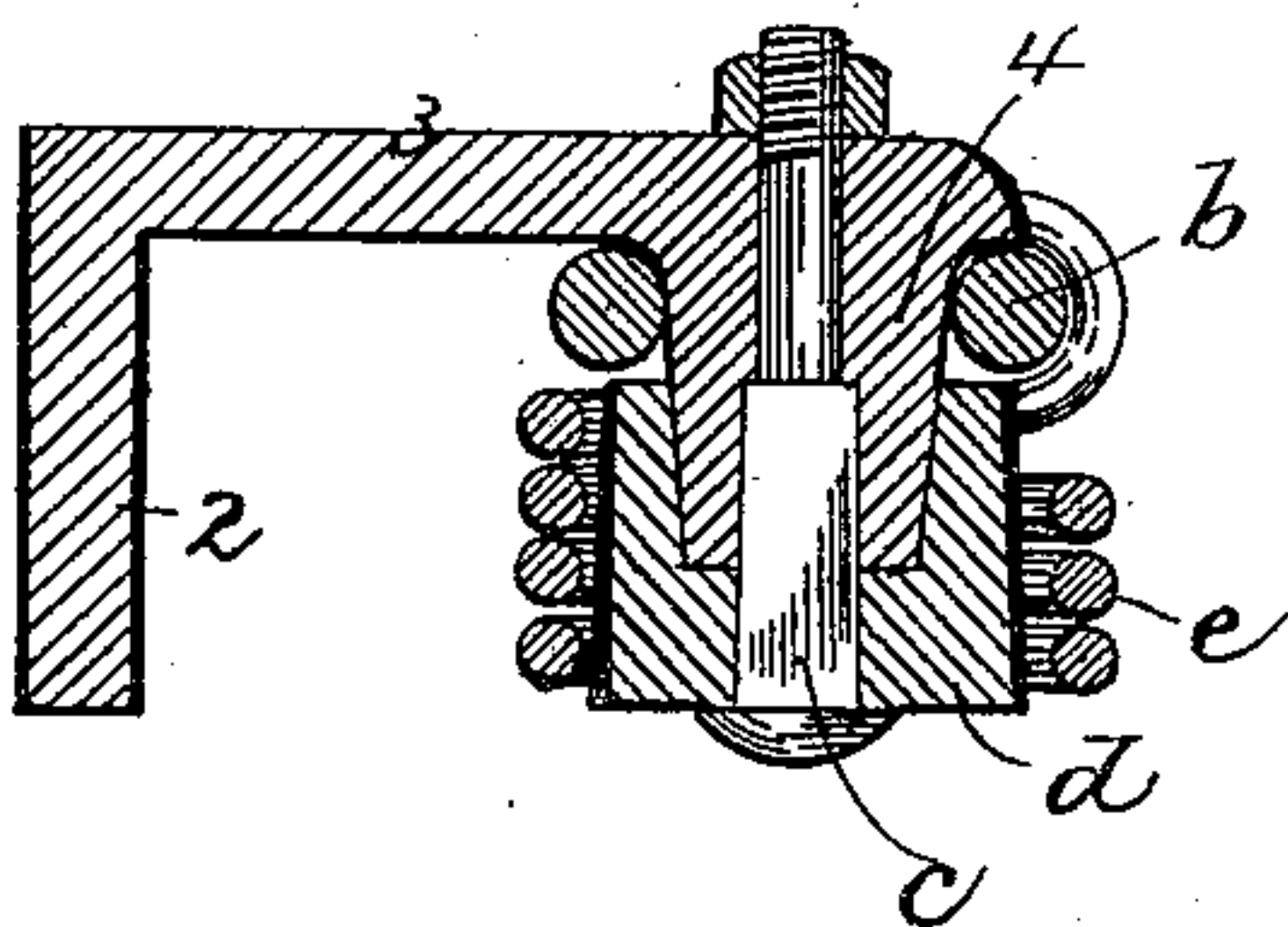


Fig. 4.



Witnesses.
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UNITED STATES PATENT OFFICE.

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HORSE-RAKE.

SPECIFICATION forming part of Letters Patent No. 352,884, dated November 16, 1886.

Application filed July 17, 1885. Serial No. 171,867. (No model.)

To all whom it may concern:

Be it known that I, SHERMAN R. NYE, of Chicopee Falls, in the county of Hampden and State of Massachusetts, have invented certain
5 new and useful Improvements in Horse-Rakes, of which the following is a specification.

This invention has for its object to provide a simple, strong, and effective device for supporting a metal tooth and its holding-down
10 spring on the head or axle of a horse hay-rake; and it consists in the improved holder, which I will now proceed to describe and claim, the accompanying drawings forming a part of this specification.

15 Figure 1 represents a side elevation of my improved holder and a part of the tooth. Fig. 2 represents a top view of the same. Fig. 3 represents a section on line *x x*, Fig. 2. Fig. 4 represents a section on line *y y*, Fig. 2.

20 The same letters of reference indicate the same parts in all the figures.

In the drawings, *a* represents a cast-metal bracket composed of a base, 2, formed to be secured to the rake-head, and a single ear, 3,
25 projecting upwardly from the base. On the inner side of said ear is formed a circular boss, 4, which has a projection, 5, on its periphery. The diameter of the boss is less than the width of the ear, so that the margin of the ear
30 forms a shoulder around the boss.

6 represents the tooth, which, as usual, is made of a curved metal rod, the upper end of which is bent into a hook or loop which partially surrounds the boss 4. The projection 5
35 on said boss stands between the body of the tooth and the end of said loop, as shown in Fig. 3, and its opposite sides constitute the stops which limit the oscillating movements of the tooth on the boss, the projection 5 being of
40 such width relatively to the space between the body of the tooth and the end of the hook thereon that the tooth is permitted a limited oscillation on the boss, and is thus permitted to rise and fall at its lower end as the inequalities of the surface of the ground require. The
45 ear 3 is perforated to receive a bolt, *c*, and on said bolt, by the side of the boss 4, is placed a collar, *d*, which is clamped securely against the boss by the bolt *c*. The diameter of the collar
50 *d* is greater than that of the boss, so that its inner end forms a shoulder, which bears against

the side of the hook of the tooth and keeps the latter in place laterally against the ear 3.

e represents the holding-down spring of the tooth. Said spring is coiled upon the collar *d*,
55 and is hooked at one end to engage with and press downwardly upon the tooth, its other end bearing upon a rib, *i*, on the base. Said rib has a notch at *i'*, which receives the end of the spring and prevents the latter from slipping
60 sidewise. The rib *i* is extended upwardly on the ear 3, and bears against the tooth to prevent it from slipping off from the boss in the direction of the length of the tooth. The collar *d* is preferably larger at its outer than at
65 its inner end, so that the spring will not have a tendency to work off from its outer end. The portion of the bolt *c* that is contained in the collar *d*, and the orifice in the collar that receives the bolt, are preferably square, so that
70 the collar cannot rotate on the bolt.

It will be seen that the described devices are extremely simply and can be put together and applied to the rake-head with comparatively
75 little time and labor. As there is but one ear to receive a bolt-hole, the amount of drilling required is reduced to the minimum, and the spring can be more readily applied and removed than it could be if placed between two ears. It is obvious that the collar *d* may be an
80 enlargement made in one piece with the bolt, instead of being in a separate piece.

I claim—

1. The combination of the holder or bracket composed of the base 2, the single ear 3, formed
85 thereon, the cylindrical boss 4, formed on and projecting laterally from the ear 3, the margin of said ear projecting outside of said boss, and forming with the body of the ear a shoulder around the boss, the collar *d*, detachably se-
90 cured to the ear, the inner end of said collar forming a shoulder surrounding the boss, the tooth having a hook portion partly surrounding the boss and confined between the two shoulders surrounding the latter, and the spring
95 coiled upon the collar and engaged at its ends, respectively, with the base and tooth, as set forth.

2. The holder or bracket composed of the base 2, the single ear 3, the cylindrical boss 4,
100 projecting laterally from the ear inside of the margin thereof, and provided with a projec-

tion, 5, a shouldered collar, *d*, detachably secured to the boss 4, the projection 5 being located in the space between the ear 3 and collar *d*, the tooth having the hook portion bent to form a part of a circle and confined on the boss 4 between the collar *d* and ear 3, the arrangement being such that the tooth can oscillate on the boss, its oscillations being limited by the projection 5, and the spring *e*, coiled upon the collar and engaged at its ends, respectively, with the base and tooth, as set forth.

3. The holder or bracket composed of the base 2, having the notched rib *i*, the single ear 3, the cylindrical boss 4, projecting laterally from the ear inside of the margin thereof, and provided with a projection, 5, a shouldered collar, *d*, detachably secured to the boss 4, the

projection 5 being located in the space between the ear 3 and collar *d*, the tooth having the hook portion bent to form a part of a circle and confined on the boss 4 between the collar *d* and ear 3, the arrangement being such that the tooth can oscillate on the boss, its oscillations being limited by the projection 5, and the spring *e*, coiled upon the collar and engaged at its ends, respectively, with the notched rib on the base, and with the tooth, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 24th day of June, 1885.

SHERMAN R. NYE.

Witnesses:

DWIGHT M. COOK,
SIDNEY SANDERS.