

(No Model.)

E. C. COMSTOCK.
SPRING TOOTH HARROW.

No. 267,404.

Patented Nov. 14, 1882.

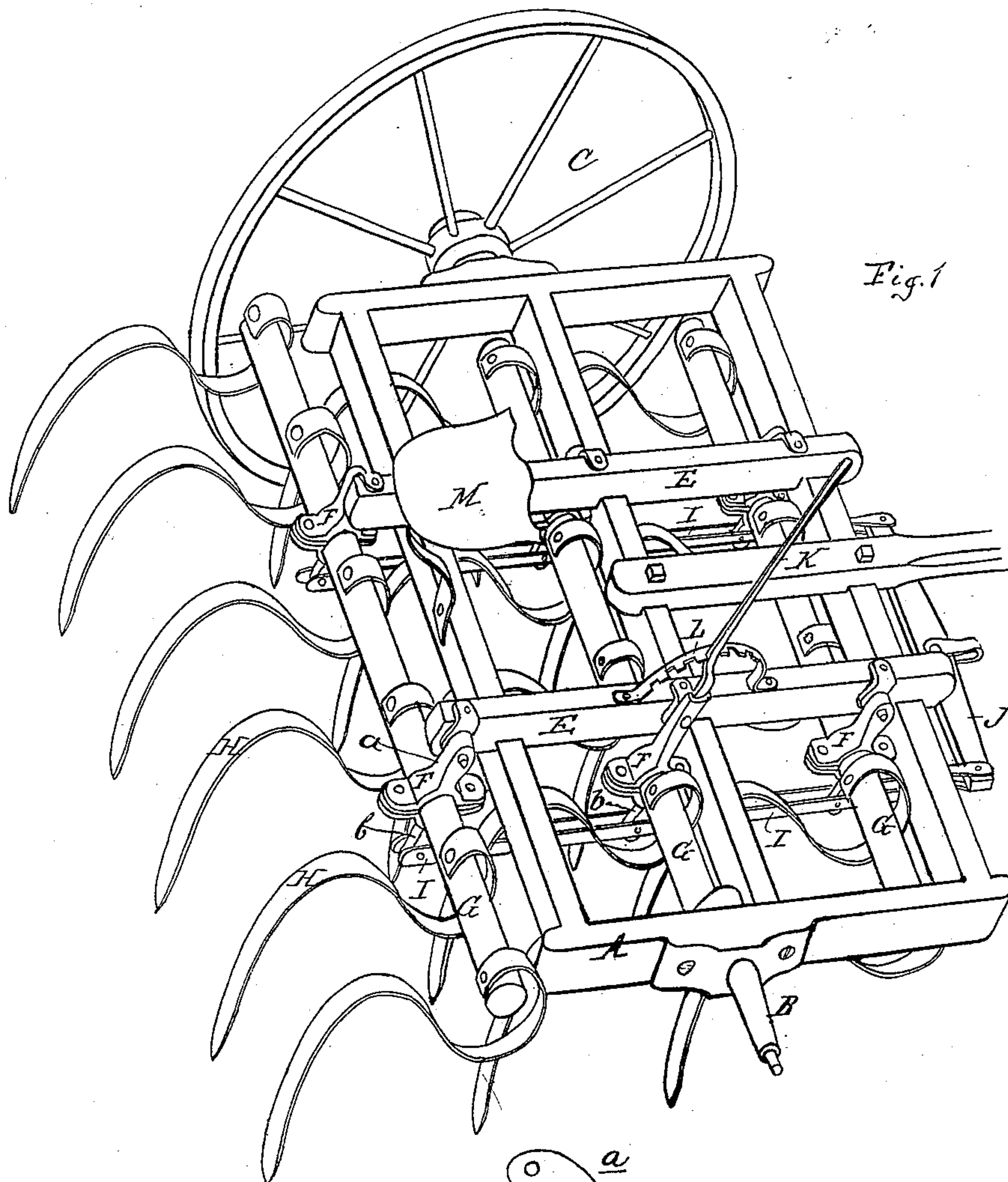


Fig. 1

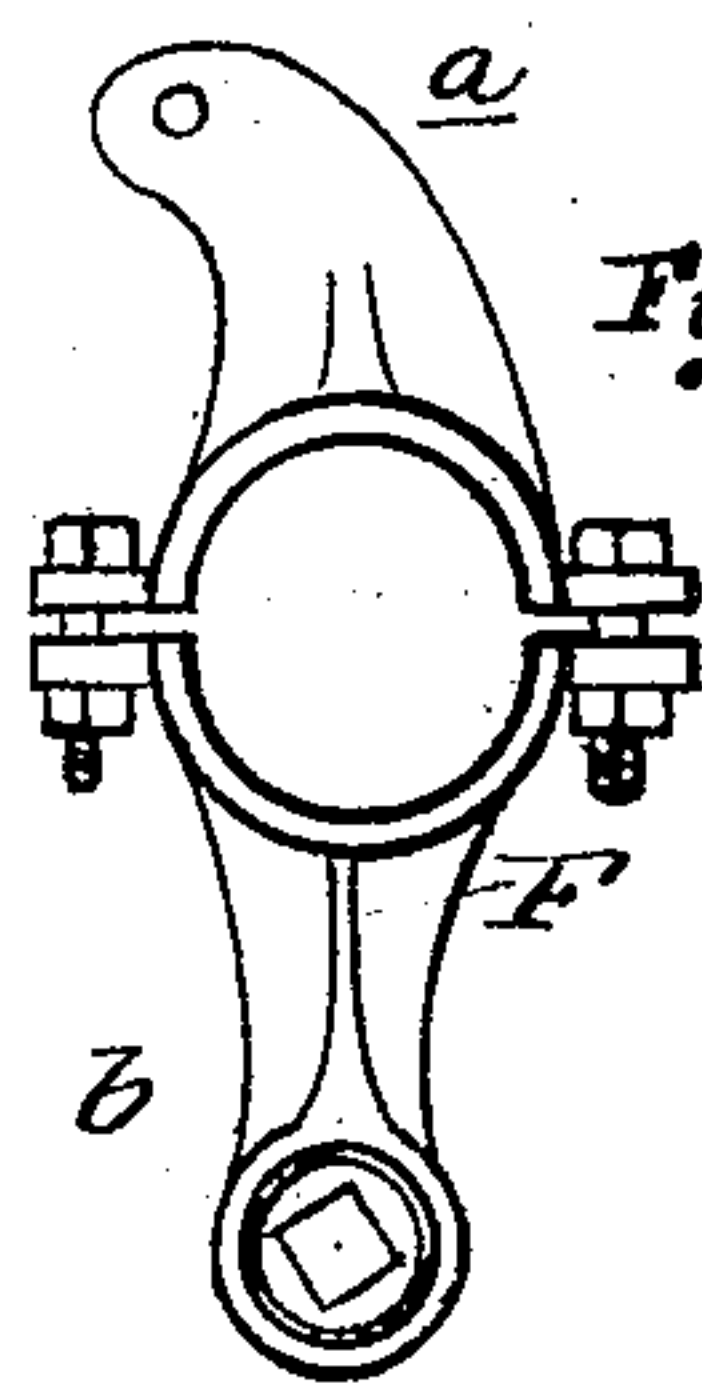


Fig. 2.

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Att'y

UNITED STATES PATENT OFFICE.

EBEN C. COMSTOCK, OF SPRINGPORT, MICHIGAN, ASSIGNOR TO HIMSELF
AND CHARLES J. COMSTOCK, OF SAME PLACE.

SPRING-TOOTH HARROW.

SPECIFICATION forming part of Letters Patent No. 267,404, dated November 14, 1882.

Application filed June 10, 1882. (No model.)

To all whom it may concern:

Be it known that I, EBEN C. COMSTOCK, of Springport, in the county of Jackson and State of Michigan, have invented new and useful
5 Improvements in Spring-Tooth Harrows; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

10 The nature of this invention relates to certain new and useful improvements in the construction of spring-tooth sulky-harrows; and the invention consists in the peculiar construction, arrangement, and combination of the
15 parts, all as more fully hereinafter set forth.

Figure 1 is a perspective view from the top, with one wheel removed. Fig. 2 is a detail view of one of the clips.

20 In the accompanying drawings, A represents a suitable frame, provided with stub-axes B at each side, which carry the traction-wheels C.

E represents longitudinal bars of the frame A, and to these bars E are pivotally secured
25 the upper arms, *a*, of the clips F, which are made in two parts, so as to embrace the rods or bars G, which carry the teeth H, the lower arms, *b*, of said clips F being connected to the bars I, the forward ends of which carry a bar,
30 J, to which the draft is applied in any proper manner.

To the upper end of one of these clips F, on the central bar G, is secured a lever, K, which engages with the rack-bar L, rising from the
35 frame, and within easy reach of the driver when seated upon the seat M.

By this construction and arrangement of parts I provide for an adjustment of the points
40 of the teeth by having the bars which carry the teeth fulcrumed to the main frame, which is supported by the traction-wheels, such teeth-

carrying bars being connected together by the bars I, as described, and adapted to be operated simultaneously by a lever within easy reach of the driver when seated upon the seat. 45 By carrying the connecting-bars I to the front, as shown, the draft is applied directly to the harrow, thereby avoiding the tendency to a downward draft when it is applied to the frame, which causes an irregular or uneven operation 50 of the teeth upon the ground.

The clip F is made preferably of two parts, *a b*, Fig. 2, the former extending upward and pivotally connected to the frame, while the latter extends downward and is pivotally con- 55 nected with the bars I. There are two or three clips so attached to each of the rods G as to embrace the same in line, and with their projecting ends connected, as already described, so that a movement of the lever to the front 60 or rear will rotate all the bars, with their connected teeth, as desired.

What I claim as my invention is—

1. In a pivoted-tooth-bar harrow, and as a means for hanging the tooth-bars thereof, the 65 clip F, made in two parts, adapted to be clamped on the tooth-bars by drawing the halves together, one-half carrying the arm on which the tooth-bars swing and the other half carrying the arm to connect the tooth-bars with adjust- 70 ing-bars, substantially as specified.

2. In a pivoted-tooth-bar harrow, the clip F, formed in two parts, the upper part being pivoted to the frame and the lower part being connected to the adjusting-bars I, com- 75 bined with the tooth-bars G, teeth H, lever K, bar J, and frame A E, as and for the purposes set forth.

EBEN C. COMSTOCK.

Witnesses:

H. S. SPRAGUE,
E. W. ANDREWS.