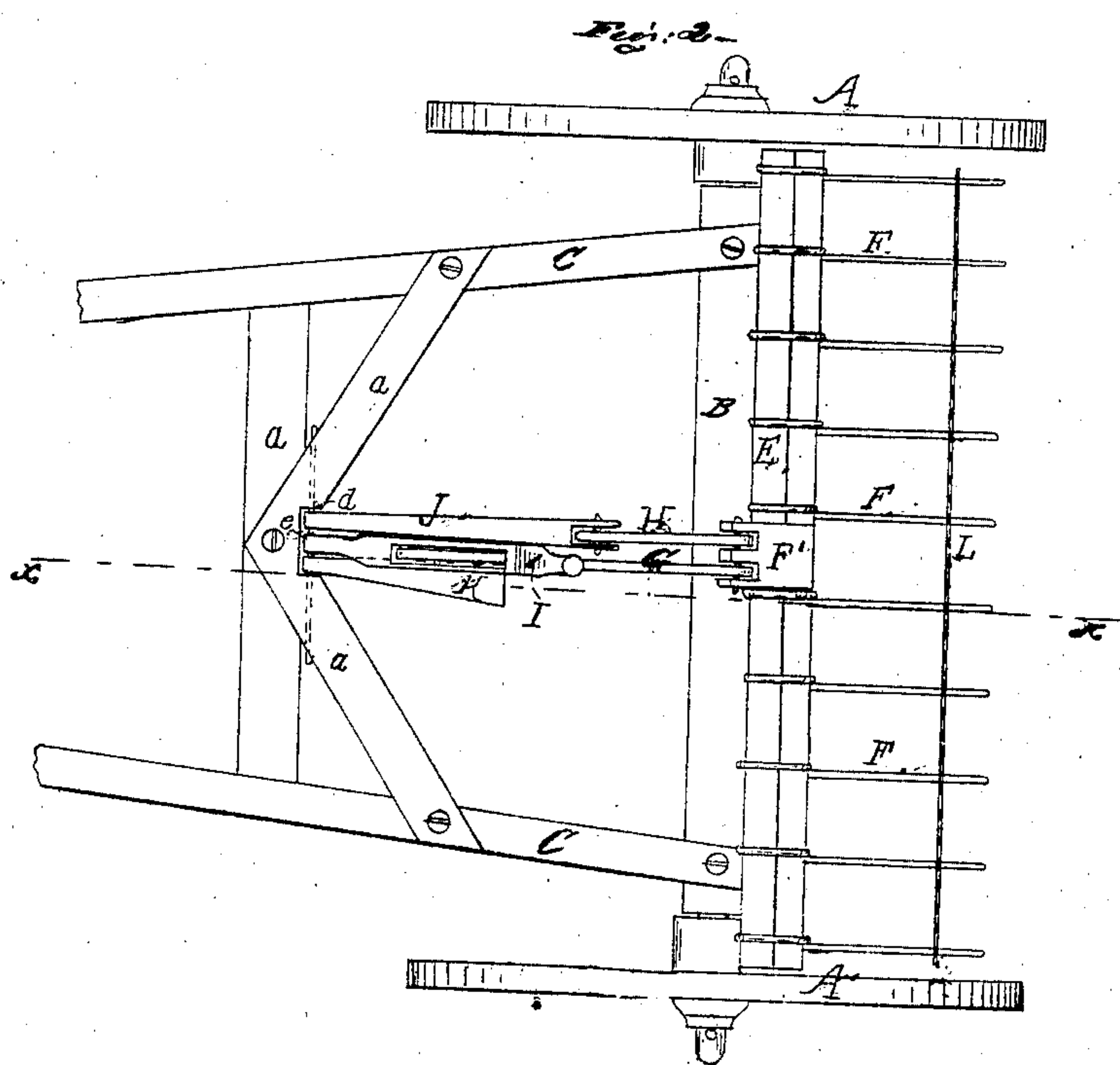
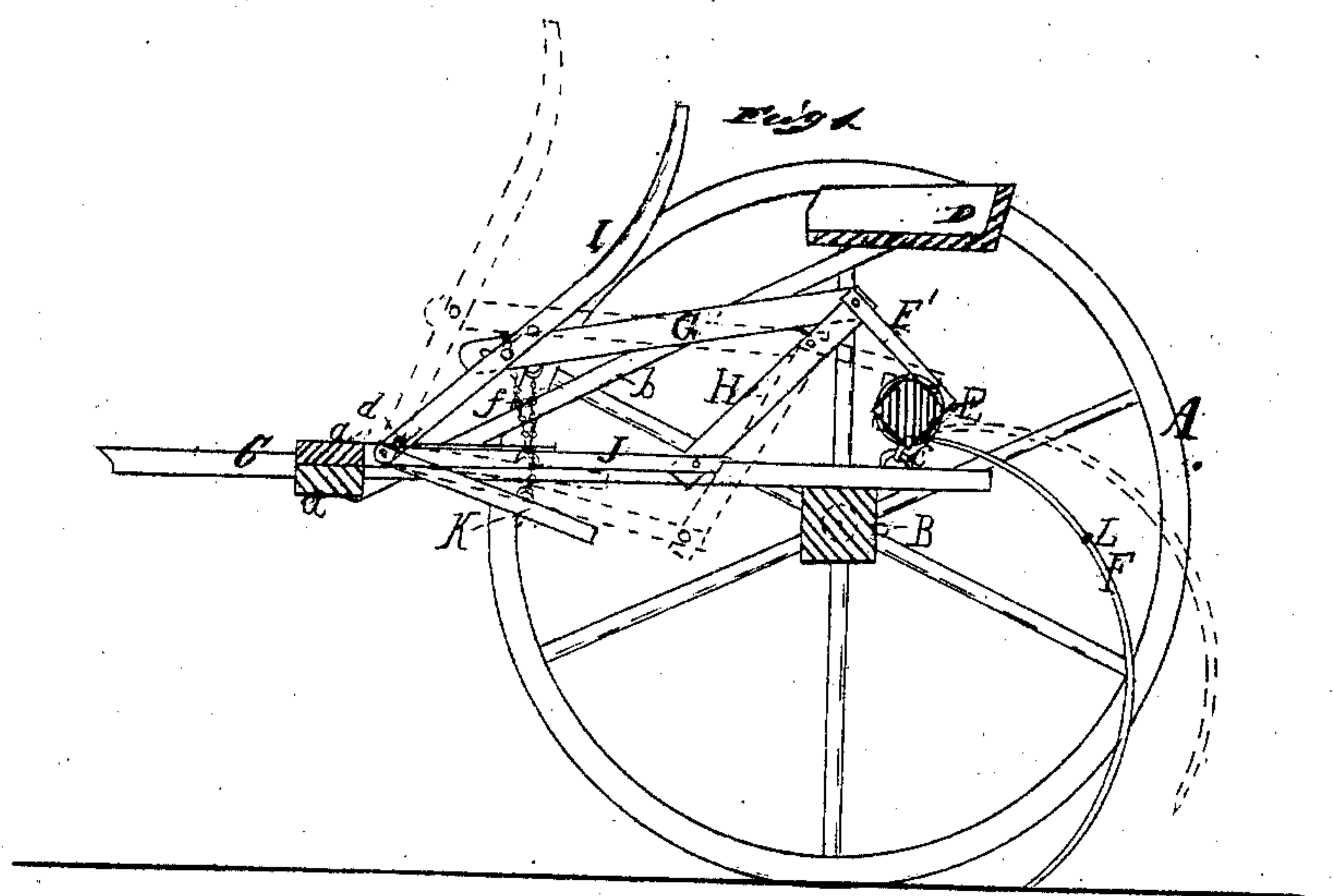


*G. Whitcomb,
Horse Plank.*

No. 21712.

Patented. Oct. 5. 1858.



UNITED STATES PATENT OFFICE.

GEO. WHITCOMB, OF PORT CHESTER, NEW YORK.

IMPROVEMENT IN HAY-RAKES.

Specification forming part of Letters Patent No. 21,712, dated October 5, 1858.

To all whom it may concern:

Be it known that I, GEORGE WHITCOMB, of Port Chester, in the county of Westchester and State of New York, have invented a new and Improved Horse-Rake; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side sectional elevation of horse-rake constructed according to my invention. *xx*, Fig. 2, indicates the plane of section. Fig. 2 is a plan or top view of the same.

Similar letters of reference indicate corresponding parts in the two figures.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A A are two wheels; B, their axle, and C C shafts or thills attached thereto, the shafts being braced, as shown at *a a a*. (See more particularly Fig. 2.)

D is the driver's seat, which is attached to the ends of springs *b*, the front ends of said springs being attached to the braces *a*. The seat and springs are omitted in Fig. 2 in order that more important parts may be clearly shown.

The back ends of the shafts or thills C C extend a trifle back of the axle B, and to the back ends of the thills, beyond the back part of the axle, a rake-head, E, is connected by joints or hinges *c*, the hinges being at the under side of the rake-head, as shown clearly in Fig. 1, so that the head may work thereon as a fulcrum. The rake-head E is parallel with the axle B, and a series of wire teeth, F, are attached, said teeth being coiled once or twice around the head, as usual, in order that they may have a certain degree of elasticity.

To the rake-head E a bar, F', is attached at right angles, and to the outer end of this bar two arms, G H, are pivoted. The front end of the arm G is pivoted to a lever, I, the lower end of which is jointed to the braces *a*, as shown at *d*, and to the lower end of the arm H one end of a treadle, J, is pivoted, the opposite end of the treadle being pivoted to the braces *a*, as shown at *e*. A treadle, K, is also pivoted to the braces *a* at *e*, and this treadle is connected to the front part of the arm G by a rod, *f*.

L is a rope, which is fitted on the teeth M, the rope being either looped around the teeth

or the teeth passes between its strands, so that the rope may be raised and lowered on the teeth.

The operation is as follows: The driver is on the seat D, his feet being placed on the treadles J K, by operating which the rake-teeth F may be raised and lowered, an arbitrary or positive movement being given the rake in both movements. The head E, in working on the joints *c*, serves to counterpoise the teeth F. For instance, in depressing the treadle J the head E is turned so that its center of gravity will pass over to the front side of joints *c*, and the gravity of the head will therefore assist in elevating the teeth F. The driver may at any time assist the feet by operating the lever I with his hand. The teeth F will not penetrate or harrow up light ground, as the rake-head E turns freely on its joints *c*, and this, in connection with the elasticity of the teeth, precludes the possibility of the ground being cut into by the teeth. At the same time the teeth are kept down so that they will not be raised casually, but still be allowed to conform to the inequalities of the ground. The rope L prevents the hay from passing up too far on the teeth F, so that the hay may always be readily discharged therefrom as the teeth are raised. If the hay were allowed to pass up closely to the head E, it could not be as freely discharged as it would in that portion of the teeth which, when raised, are nearly in a horizontal position.

I would remark that by attaching the lever I nearer to or farther from the end of the arm G the teeth F may be adjusted higher or lower from the ground. This is an essential feature, for in raking grain the teeth does not require to be so low as in raking grass.

I do not claim the wire teeth F, attached to the head E, as shown, for such device mounted on wheels is in quite common use, and known as the "wire tooth horse-rake;" but,

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

The arrangement of the treadles J K, lever I, rake-head E, arms G H, bar F', joints *c*, and adjustable rope L, substantially as and for the purposes set forth.

GEORGE WHITCOMB.

Witnesses:

WILLET MOSEMAN, Jr.,
EPHRAIM SOURS.