

(No Model.)

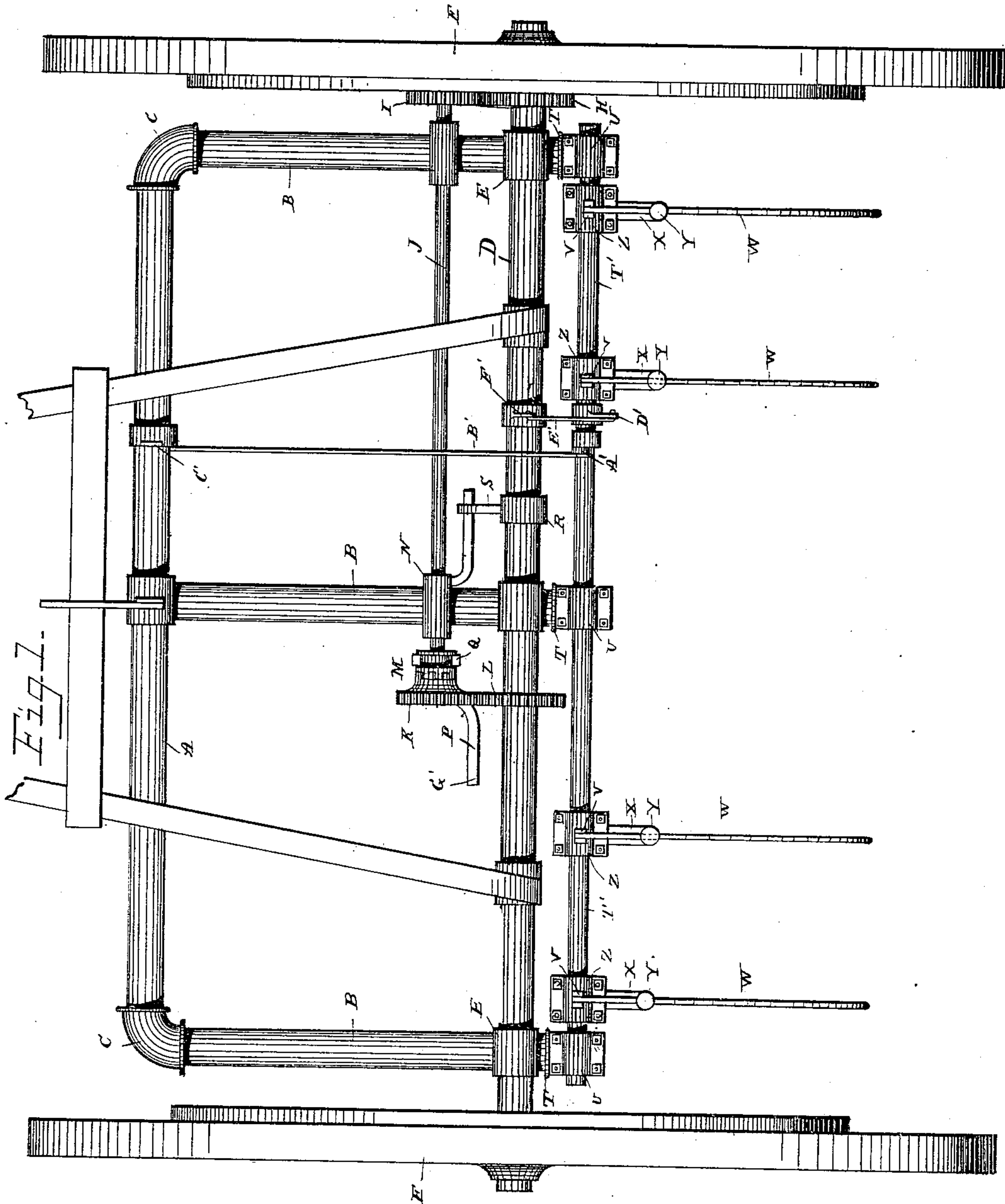
2 Sheets—Sheet 1.

J. E. OFFUTT.

HORSE HAY RAKE.

No. 329,766.

Patented Nov. 3, 1885.



WITNESSES

Edmund L. Bradford.

Leonard Bradley

INVENTOR

Joseph E. Offutt
By *Pauline J. Offutt*
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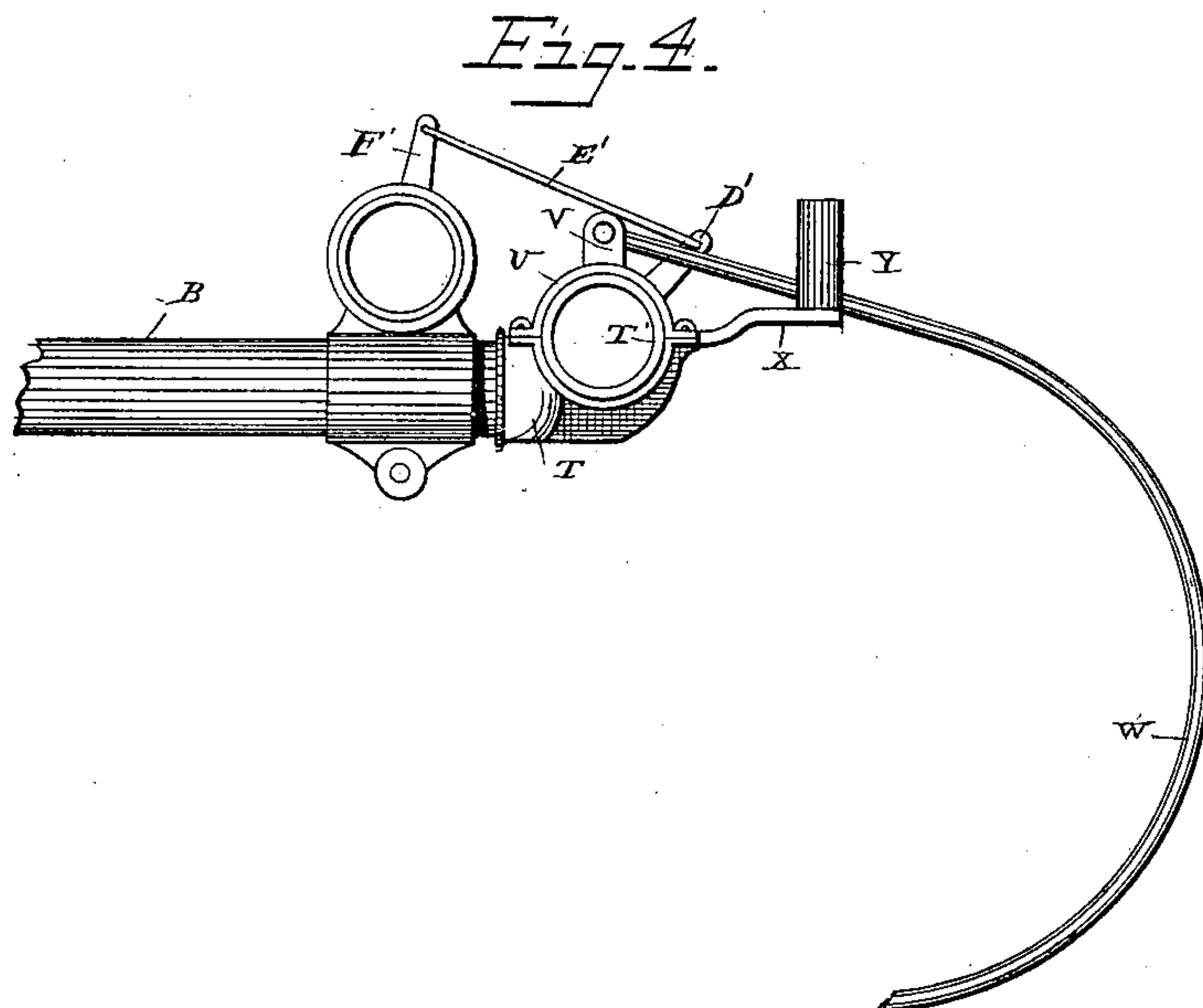
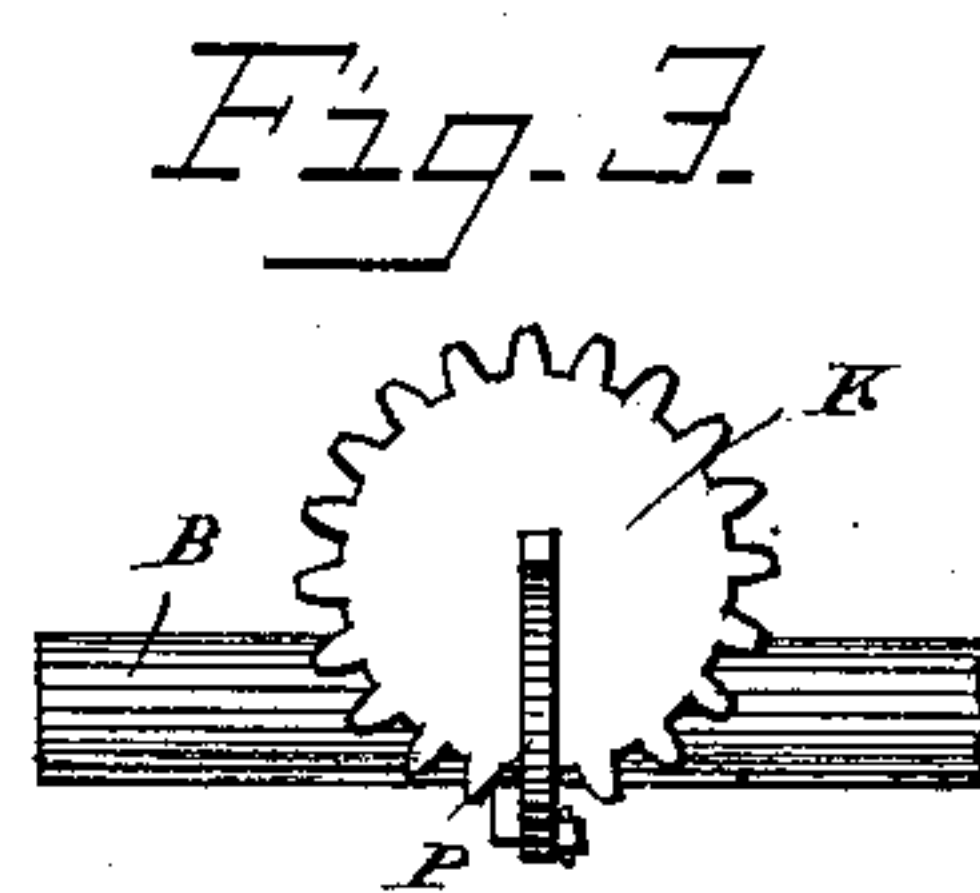
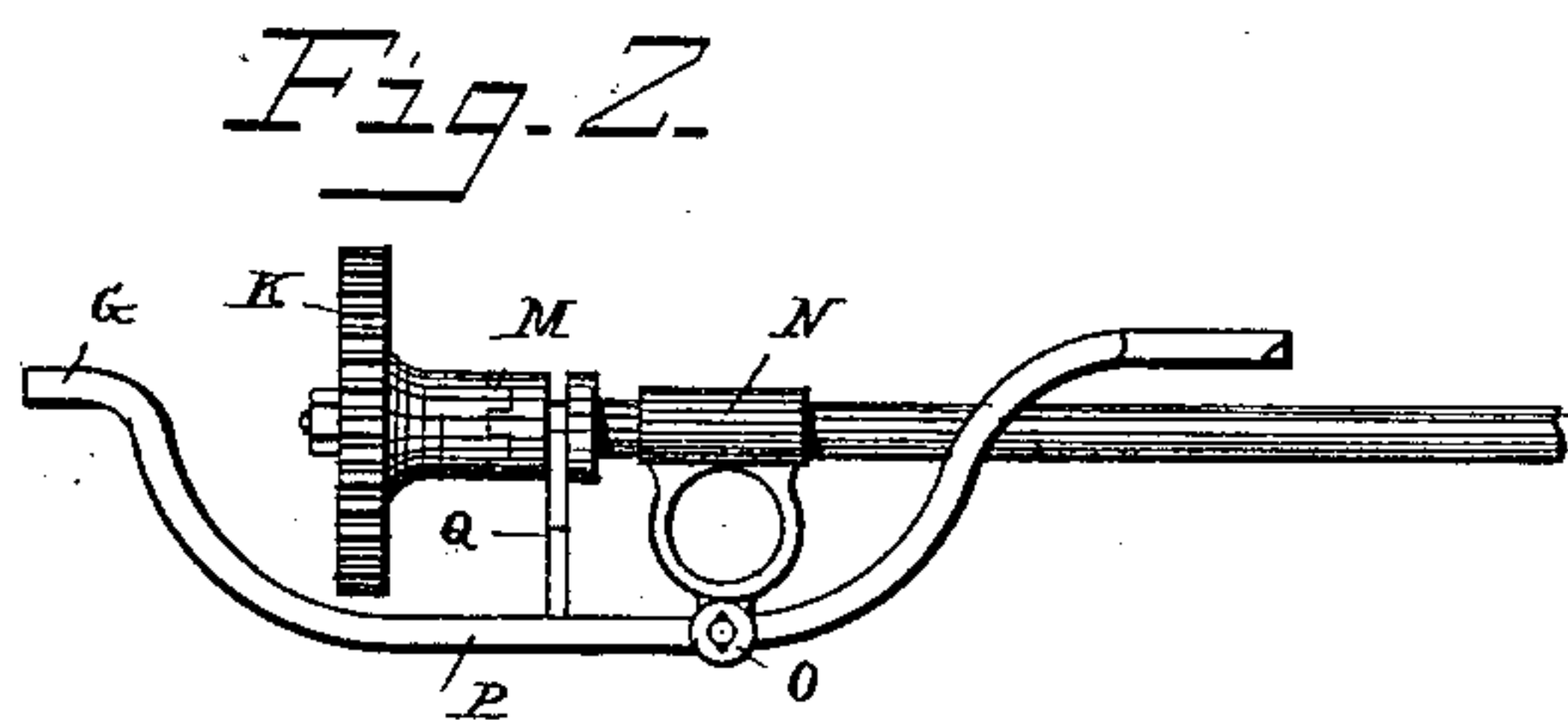
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INVENTOR
Joseph E. Offutt
By *Toussaint & Fournier*
his Attorneys.

UNITED STATES PATENT OFFICE.

JOSEPH E. OFFUTT, OF SPRINGFIELD, OHIO, ASSIGNOR TO JOSEPH W. THOMAS, OF SAME PLACE.

HORSE HAY-RAKE.

SPECIFICATION forming part of Letters Patent No. 329,766, dated November 3, 1885.

Application filed January 19, 1885. Serial No. 153,248. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH E. OFFUTT, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Horse Hay-Rakes, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in hay-rakes; and it has for its objects, first, to provide a main frame and a rake-frame adapted to be detachably connected therewith, whereby it may be removed and tedder mechanism substituted therefor, and, second, to provide in connection with said main frame and rake-frame a dumping mechanism which will, when desired, effect an automatic dump of the rake teeth or tines.

In the accompanying drawings, forming a part of this specification, and on which like letters of reference indicate the same or corresponding features, Figure 1 is a plan view of my improved rake; Fig. 2, a rear elevation of the automatic dumping-clutch; Fig. 3, an end view of the same, and Fig. 4 a side elevation of a portion of the rake-frame, showing the tooth or tine in normal position.

The main frame is preferably constructed of tubing, and consists of the forward cross-piece, A, the tubular side and intermediate pieces, B, connected to the forward cross-piece by the couplings C, and to the tubular axle D through the couplings E. The supporting-axle D is mounted at each end in the wheels F, which are provided with interiorly-cogged rings G, all as more fully described in my Patent No. 319,612, dated June 9, 1885. The inner end of the hub of one of the wheels F is provided with a cog-wheel, H, which meshes with a pinion, I, mounted on one end of the dump-shaft J, the said shaft being mounted in journals secured to the side and intermediate pieces, B, of the main frame. The other end of this shaft J is also provided with a loosely-mounted pinion, K, which intergears with the cog-wheel L, rigidly fitted upon the shaft D, which shaft is loosely mounted in the hubs of the supporting-wheels. The dumping-shaft J is further provided with a clutch, M, which engages the clutch-face of the pinion K, so as to engage that pinion positively with the shaft J. The

bearing N, which serves to connect the shaft K with the intermediate piece, B, of the frame, is provided with an eye, O, in which is pivoted the dumping-lever P, the ends of which extend up and occupy a plane about on a level with or a little above that occupied by the shaft J. On one side of the pivotal point of this lever it is provided with a bifurcated standard, Q, the bifurcations of which embrace the grooved exterior of the clutch M, and as the lever is tilted back and forth, in the manner to be presently described, the said standard moves in the arc of a circle sufficiently to engage and disengage the clutch from the face of the pinion K. The shaft D is provided with a collar, R, having a projection, S, which engages one end of the lever P in the manner and for the purpose to appear hereinafter. The rear ends of the side and intermediate pieces are provided with couplings T, which constitute bearings, into which the rake-shaft T' (which is preferably of tubular form) is placed, a cap, U, being provided to maintain the shaft in position. This shaft T' is provided with a series of tooth-couplings, Z. Any convenient number of these couplings may be placed upon the shaft T', and by means of bolts the two parts of the couplings may be firmly drawn against the shaft, so as to effect a rigid connection. The cap-pieces of these couplings are each provided with upwardly-extending lugs V, to the ends of which are pivotally secured the teeth or tines W. These cap-pieces are further provided with rearwardly-extending plates X, which serve to guide the tines, and which by preference carry spiral springs, to keep the tines down to their work. The shaft T' is also provided with an upwardly-extending arm, A', to which is attached one end of the rod B', the other end being connected with the lower extremity of the lever C' of the main frame. This shaft is further provided with a short arm, D', which connects through a rod, E', with a similar arm, F', secured rigidly to the supporting-axle D.

Through the lever C' and the intermediate devices just described the operator is enabled to raise or lower the tines as occasion may require. Rotary motion being imparted to the dump-shaft J, through the pinion I and the cog-wheel H on one of the supporting-wheels F, it will rotate the supporting-axle D through

the medium of the cog-wheel L and the pinion K, the operator first depressing the end G' of the lever P, so as to effect an engagement of the clutch M with the inner face of the pinion K. When this is done, the said axle begins to rotate, and, through the arm F', the rod E', and the arm G', elevates the rake teeth or tines. When the projection S of the collar R, which is secured to the axle T', strikes the opposite end of the lever P, it will depress the same and break the engagement of the clutch M and the pinion K, whereby further rotation of that axle will be stopped, and the gravity of the tines cause them to drop to the ground. In this manner a self-dump is effected, and an automatic return of the tines to their work brought about.

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

1. In a hay-rake, the combination, with the main frame, the supporting-wheels, and the supporting-axle carrying a cog-wheel and a projection, of the dump-shaft adapted to receive rotary motion from one of the wheels, the pinion loosely mounted thereon, the clutch for engaging the same, and the pivoted lever for actuating the clutch when engaged by said projection.

2. In a hay-rake, the combination, with the main frame, the supporting-axle, the rake-shaft pivotally mounted in said frame, and directly connected with the said axle, and carrying a series of tines, of the dump-shaft provided with pinions, one of which receives motion from one of the supporting-wheels, the cog-wheel mounted on the axle, meshing with the other of said pinions, the projection carried by the axle, and the clutch devices actuated thereby, whereby an automatic dump is effected.

3. In a hay-rake, the combination, with the main frame having side and intermediate pieces provided with bearings, the rake-shaft provided with tine-couplings and tines and mounted in said bearings, the axle carrying a cog-wheel and a projection and connected with the rake-shaft, of a dump-shaft having pinions, one of which receives motion from one of the supporting-wheels and the other of which meshes with said cog-wheel, the clutch, and the pivoted lever for actuating the clutch.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH E. OFFUTT.

Witnesses:

PHILIP S. GOODWIN,
MATT. J. G. DOUGHERTY.