(No Model.)

D. MAXWELL.

Friction Dump for Horse Rakes.

No. 240,321. **Patented April 19, 1881.**

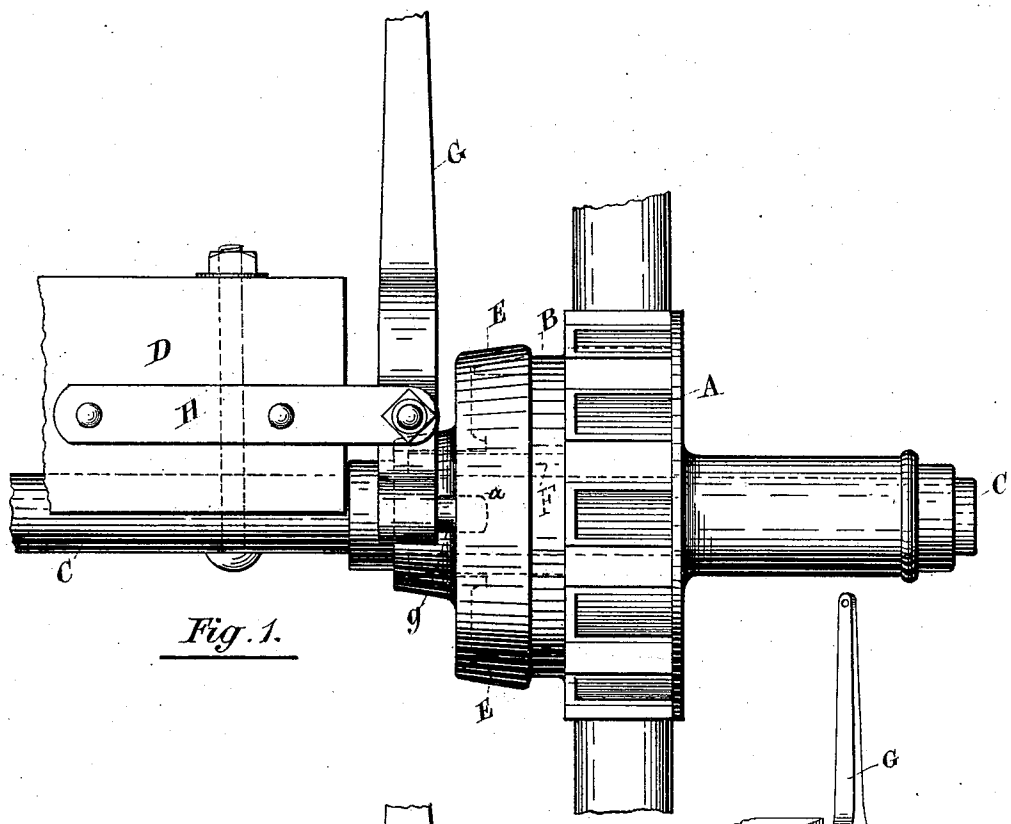


Fig. 1.

Fig. 3.

Fig. 2.

Witnesses.

Lewis Tomlinson

Chas. W. Baldwin

Inventor:

David Maxwell

by Ridout & Ridout

Attys.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

DAVID MAXWELL, OF PARIS, ONTARIO, CANADA.

FRICTION-DUMP FOR HORSE-RAKES.

SPECIFICATION forming part of Letters Patent No. 240,321, dated April 19, 1881.

Application filed September 10, 1880. (No model.)

To all whom it may concern:

Be it known that I, DAVID MAXWELL, of the town of Paris, in the county of Brant, in the Province of Ontario, Canada, manufacturer of agricultural implements, have invented certain new and useful Improvements in Friction-Dumps for Horse-Rakes, of which the following is a specification.

My invention relates to that class of horse hay-rakes in which friction-clutches are employed to engage with clutching-plates on the hubs of the wheels to dump the load; and it consists in certain improvements in the construction and arrangement of the parts, as hereinafter more fully set forth, and pointed out in the claim.

Figure 1 is a side view of my improvement, shown applied to one wheel of a horse-rake; Fig. 2, a vertical section of the same, and Fig. 3 a detail of the clutch-lever.

As the general construction of horse-rakes is now well understood, it is not necessary, for the purpose of this specification, to illustrate more of the machine than that part to which the friction-dump is attached, nor will it be necessary to explain the ordinary operation of the machine. Suffice it to say that A is the metallic hub of one of the wheels of the machine; B, a cone-shaped projection cast upon the inside of the hub, as shown. C is the steel axle, and D the wooden axle, to which the rake-teeth are attached. The conically-dished disk E has a large center hole, through which the axle C passes. This hole fits loosely over a boss, F, on the hub A. The forked lever G is suitably pivoted upon the axle D, either directly or to iron straps H, bolted to the said axle, as shown. This lever G is provided with pins *g*, one at the end of each fork, to fit into holes or sockets *a*, made in the disk E, as shown. The upper end of the lever G is connected by a rod, in the usual way, to the foot or hand lever, situated, as usual, within reach of the driver.

When the forked ends of the lever G are pressed against the disk E its conical face is forced against the face of the cone-shaped projection B, which action causes the axle D to revolve, thereby raising the rake-teeth till the pressure is removed from the lever G, when they immediately fall back, the friction caused by the contact of the two conical faces being insufficient to hold the rake-teeth up without the pressure mentioned.

It will be perceived that the metallic hub A, with its projection B, beveled at its outer end, and boss F, are all cast in one piece, and that the boss F serves the double purpose of supporting and guiding the dished disk E, forming one half of the clutch in its movements over the other half, B, of the clutch, and also preserves the concentric relation of the half-clutch E with the other half, B, of the clutch.

I am aware that cone-shaped clutches sliding loosely on the axle of a horse-rake, and operated by the driver, by means of a system of levers, to engage with the inner ends of the hubs of the wheels of a horse-rake, in order to raise the teeth and dump the load, have heretofore been employed, and I therefore lay no claim, broadly, to such construction, my invention being confined to the details of construction whereby the half-clutch is supported and guided in its movements by a metallic boss or sleeve cast in one piece with the hub and the concentric relation of the half-clutches preserved thereby.

What I claim as my invention is—

The combination, with the metallic hub A, provided with the projection B, beveled at its outer end, and boss F, all cast in one piece, of the lever G, bifurcated at its lower end and provided with the pins *g*, and conically-dished disk E, having sockets *a*, and adapted to be supported and guided in its movements by the boss, substantially as described, and for the purpose set forth.

DAVID MAXWELL.

In presence of—

DONALD C. RIDOUT,

CHAS. W. BALDWIN.