

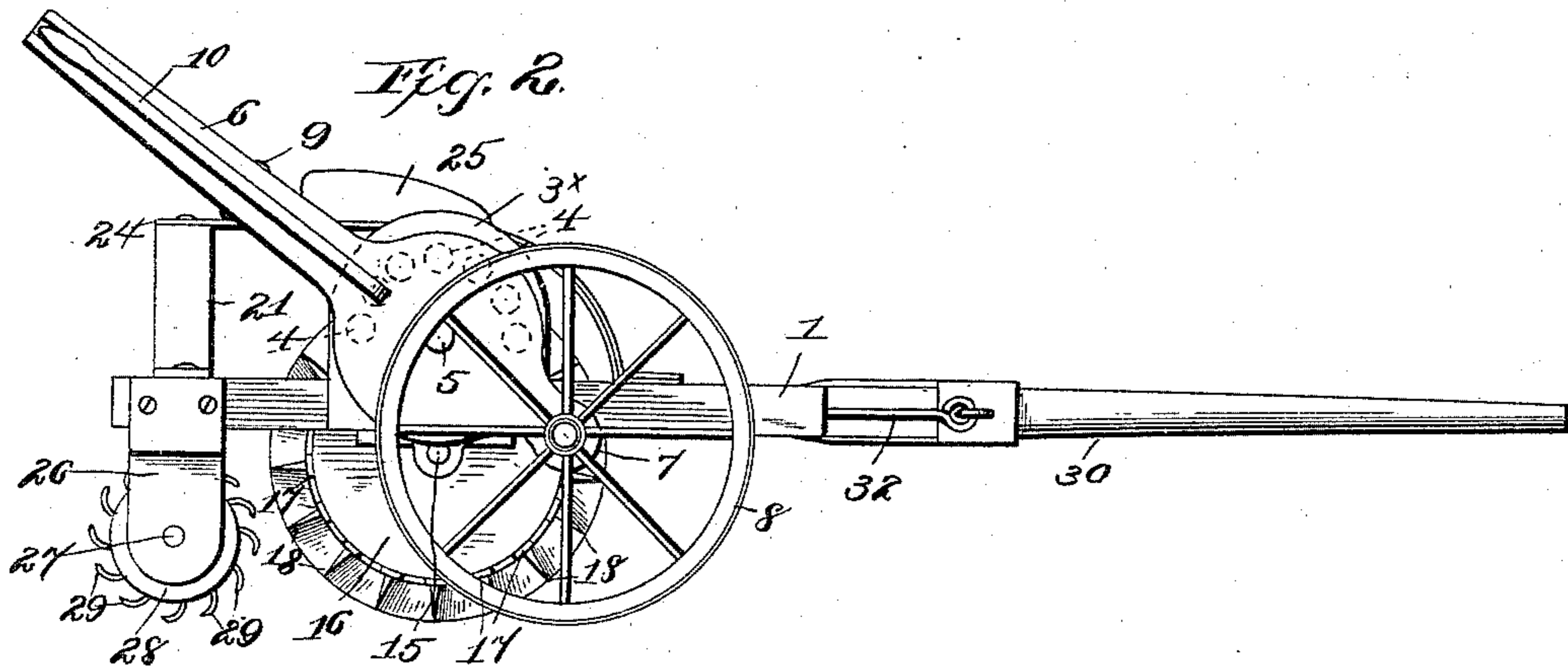
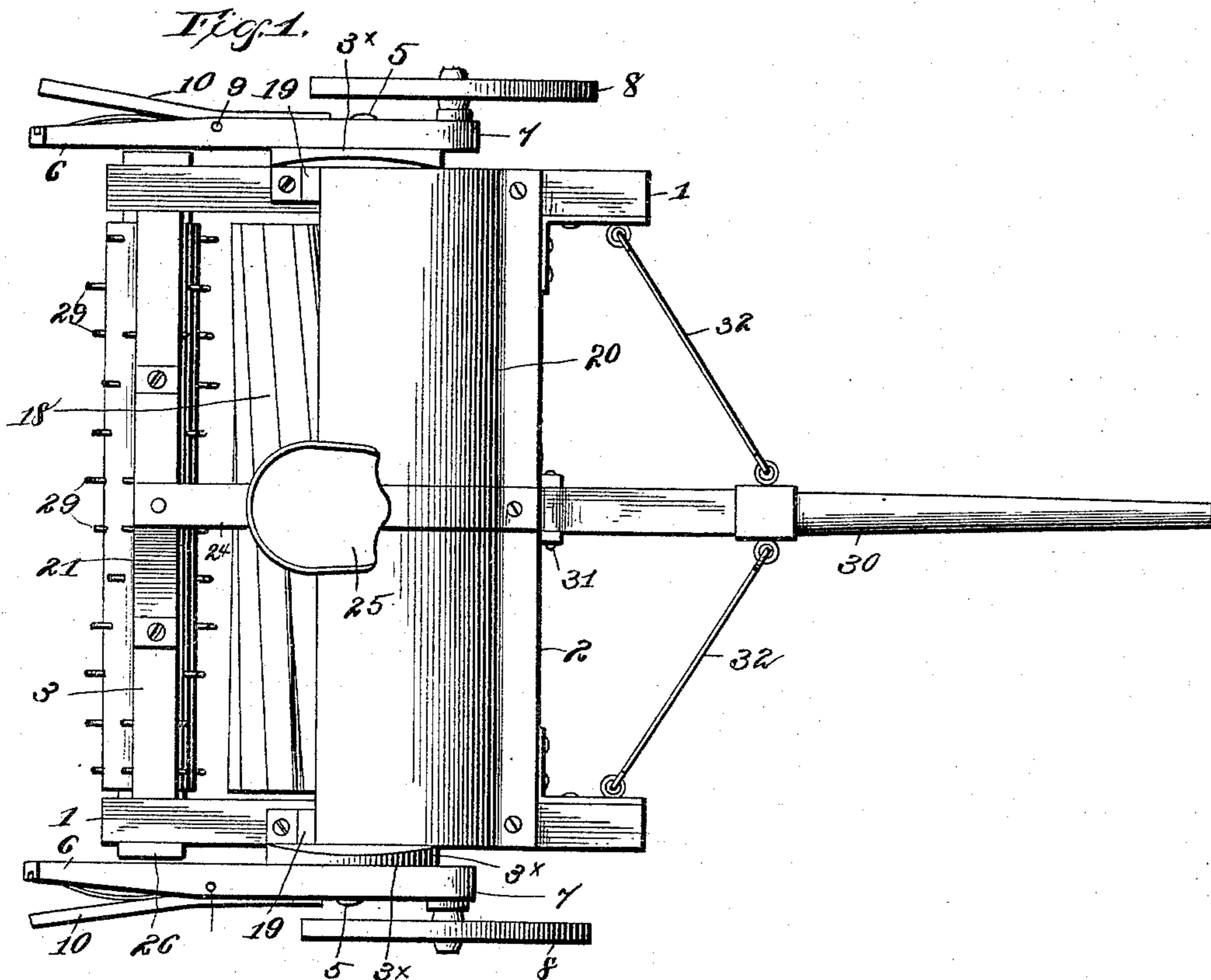
(No Model.)

2 Sheets—Sheet 1.

G. D. HELDEBRANT.
CLOD PULVERIZER.

No. 492,399.

Patented Feb. 28, 1893.



Witnesses

E. F. Lydman
J. H. Diggers,

Inventor

Geo. D. Heldebrant.
By *his* Attorneys,

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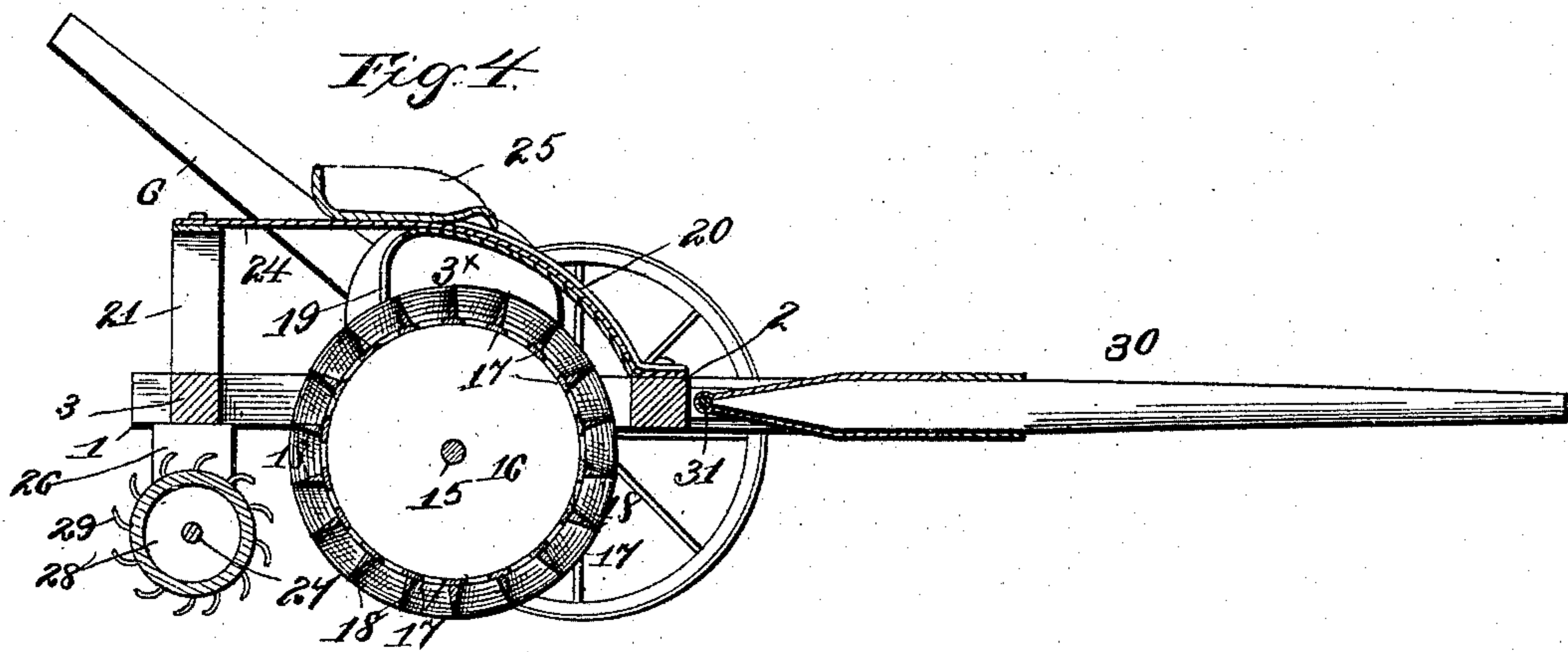
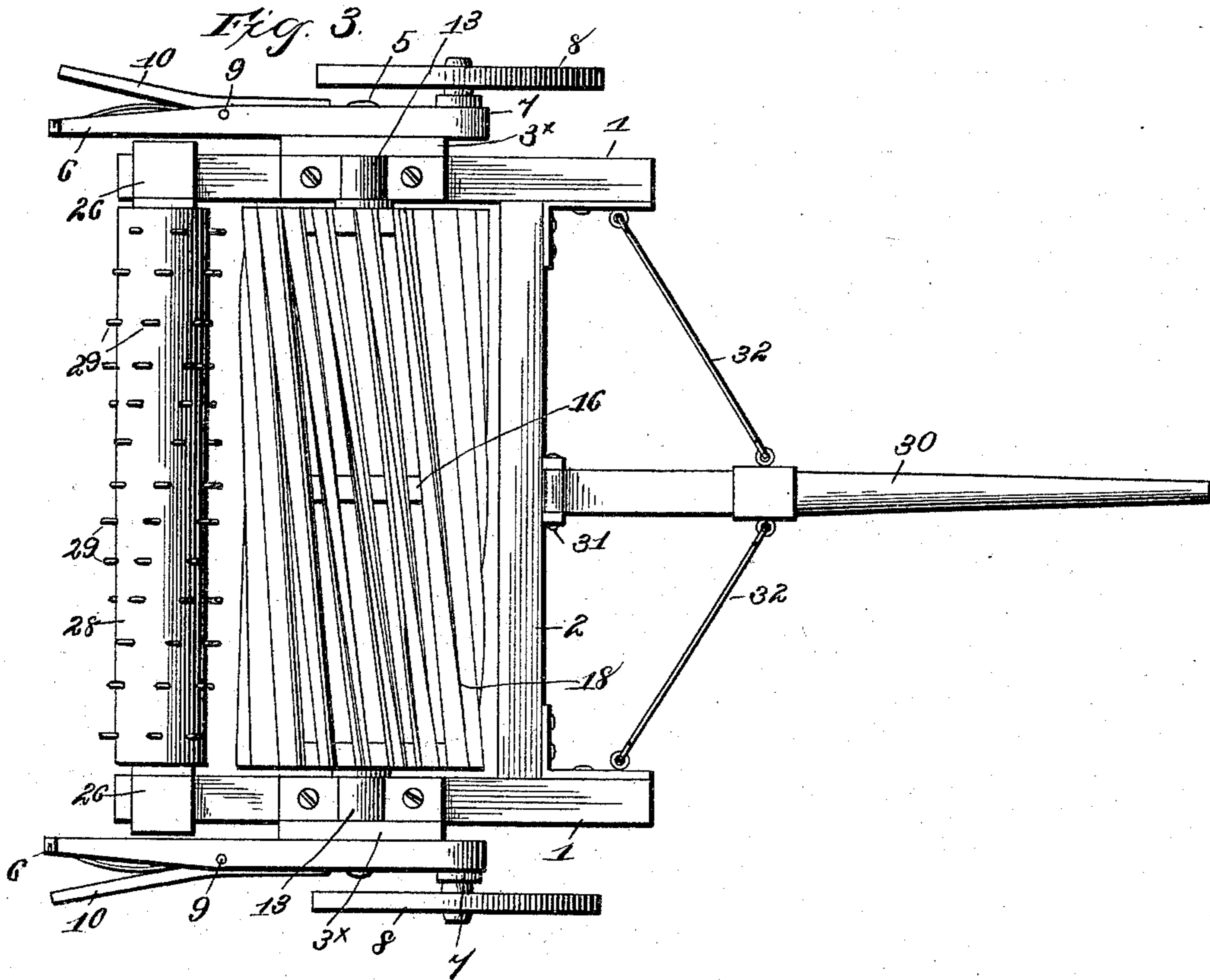
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Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE D. HELDEBRANT, OF PIQUA, KANSAS.

CLOD-PULVERIZER.

SPECIFICATION forming part of Letters Patent No. 492,399, dated February 28, 1893.

Application filed April 28, 1892. Serial No. 430,988. (No model.)

To all whom it may concern:

Be it known that I, GEORGE D. HELDEBRANT, a citizen of the United States, residing at Piqua, in the county of Woodson and State of Kansas, have invented a new and useful Clod-Pulverizer, of which the following is a specification.

My invention relates to machines for pulverizing clods, and the objects in view are to provide a machine of cheap and simple construction adapted to effectually accomplish the purposes in view, and to leave the clods operated upon in a finely pulverized state.

With these and other objects in view, the invention consists in certain features of construction hereinafter specified and particularly pointed out in the claims.

Referring to the drawings: Figure 1 is a top plan view of a machine constructed in accordance with my invention. Fig. 2 is a side elevation. Fig. 3 is a bottom plan view. Fig. 4 is a transverse sectional view.

Like numerals of reference indicate like parts in all the figures of the drawings.

In practicing my invention I employ a rectangular framework, the same consisting of the opposite side bars 1, which, intermediate their ends, are connected by the front and rear transverse bars 2 and 3, respectively.

The side bars 1 have mounted thereon segmentally-shaped locking standards 3^x which are provided each with a curved series of perforations 4, which are concentric with the fulcrums 5 of a pair of opposite levers 6, which levers, at their lower ends, are provided with lateral stub-axles 7, carrying ground-wheels 8. Each of the levers is provided with a slot, and in the same are pivoted at 9 locking-levers 10, the lower ends of which are inwardly bent in order that they may engage the perforations of their respective locking standards, whereby the levers may be locked at any inclination and hence the machine as a whole raised or lowered. In bearing-boxes 13,

formed in the opposite side bars 1, there is journaled a transverse rotatable shaft 15, and the same is provided at its ends and center with circular heads 16. These heads are connected by diagonally-disposed strips 17 and each strip has secured to its outer face a simi-

larly disposed and therefore somewhat spirally disposed clod-cutting blade 18. Brackets 19 rest upon the side bars 1, and a hood 20 covers the front and upper portion of the clod-cutting wheel just described. A stand-ard 21 rests upon the rear cross-bar 3, and is connected to the hood by a supporting-bar 24, upon which rests the seat 25 for the accommodation of the driver. Bearing-brackets 26 depend from the rear ends of the bars 1 and in them is journaled a transverse shaft 27, which carries a hollow roller 28. The roller has its face studded with spirally-disposed teeth 29, all of which are slightly curved to the rear, as shown. A tongue 30 is connected to the front cross-bar 2, by means of a bolt 31, and hounds 32 have their rear ends connected to the front ends of the bars 1, and their front ends loosely connected to the opposite sides of the tongue.

In operation the machine is dragged over the ground in the manner usual to clod-crushers, and the spirally-disposed cutters of the front cutting-wheel sever the clods or slice them in a manner that will be obvious, and this operation is facilitated by the spiral disposition given the blades. Immediately following such slicing of the clods they are acted upon through the medium of the curved teeth of the roller. By reason of these teeth being curved, it will be seen that they do something more than merely puncture holes, but they tear or lacerate the clods and more effectually disintegrate the same and accomplish the desired pulverization. Such a machine is especially effectual in soft loamy or such soils as have clay and are prone to tenaciously adhere and become lumpy.

It will be seen that the entire machine is of cheap and simple construction, it is adapted to most effectually perform its intended functions, and may be conveniently transported to and from the field of operation.

Having described the invention, what I claim is—

1. In a clod pulverizer, the combination with the framework, of a cutting cylinder mounted therein and comprising an axial shaft, perpendicular heads secured centrally to said shaft, strips arranged in inclined or spiral po-

sitions between and secured to the heads, and continuous flat blades secured to said strips, perpendicular to their outer surfaces and extending between the heads spirally, substantially as specified.

5 2. In a clod pulverizer, the combination with a supporting framework, and a cutting-cylinder mounted in the forward end thereof, of a hollow roller, mounted in said framework in
10 rear of the cutting-cylinder, and provided

upon its surface with spirally-arranged teeth which are curved rearwardly toward their outer or free ends, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in 15 the presence of two witnesses.

GEO. D. HELDEBRANT.

Witnesses:

WM. HELDEBRANT,

WM. A. RUPERT.