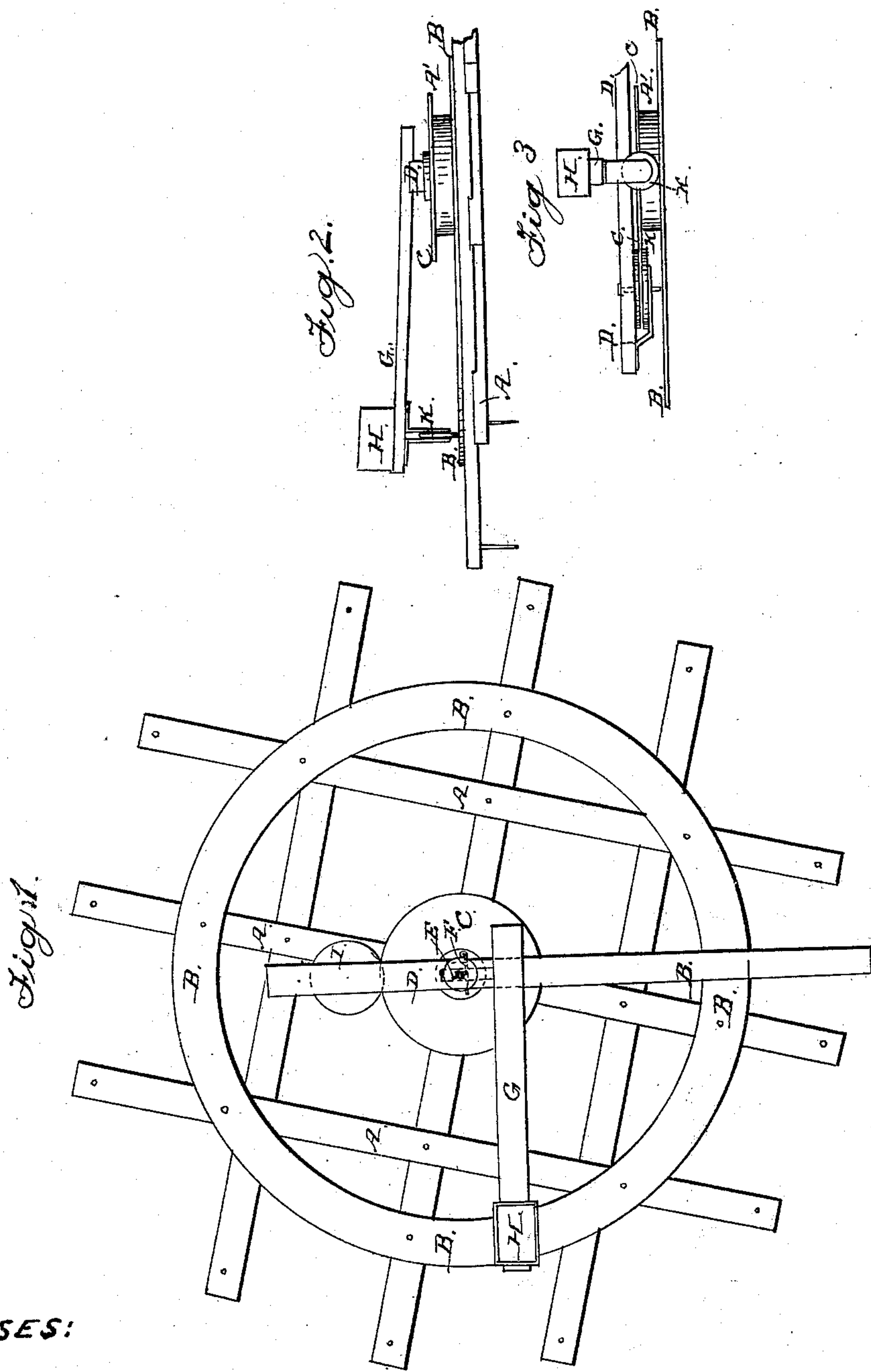


S. GRENELL.
Rotary-Harrow.

No. 58,191.

Patented Sept. 18, 1866.



WITNESSES:

Wm. H. Murphy

INVENTOR
Silas Grenell
Wm. H. Murphy

UNITED STATES PATENT OFFICE.

SILAS GRENELL, OF MOKENA, ILLINOIS.

IMPROVEMENT IN ROTATING HARROWS.

Specification forming part of Letters Patent No. 58,191, dated September 18, 1866.

To all whom it may concern:

Be it known that I, SILAS GRENELL, of Mokena, in the county of Will and State of Illinois, have invented a new and useful Improvement in Revolving Harrows; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view. Fig. 2 is a front elevation, and Fig. 3 is a side elevation.

In the different figures the same letters refer to identical parts.

A is the frame of the harrow, on which is secured a circular track, B, and having at its center a hub, A', on the top of which is fastened the circular plate C, which projects beyond the hub A'. The tongue D is attached by a wrist-pin or axle, E, which passes through a slot in the tongue. A small washer, F, above the tongue covers the slot, and is secured by a pin through the wrist.

G is an arm attached to the tongue, on the end of which is a weight-box, H. Under this is the wheel K, running upon the track B.

The harrow is drawn by the tongue-and-grooved pulley I, attached to the hind part of the tongue, and bearing upon the rim of the plate C; or by omitting the hub and substi-

tuting for the plate C an open ring the pulley I could be placed in front of the wrist E and rest against the inside of the ring.

The operation is as follows: By placing weights upon the end of the lever G in the box H the wheel K is made to bear heavily upon one side of the harrow, and the teeth will be thereby forced more deeply in the ground, and as the harrow can turn freely on the wrist and the weight is stationary, the harrow will be made to revolve as it is drawn along the plowed ground.

What I claim as my invention, and desire to secure by Letters Patent, is—

A revolving harrow, when constructed with a frame, A, and circular plate or ring C, upon which the draft is applied by the wheel I, attached to the tongue, the harrow turning upon a wrist-pin, E, and having an arm, G, carrying a weight-box, H, resting upon the track B on the friction-wheel K, said several parts being, respectively, constructed and arranged for use substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SILAS GRENELL.

Witnesses:

JOS. C. WILDER,
ANDREW MARKERT.