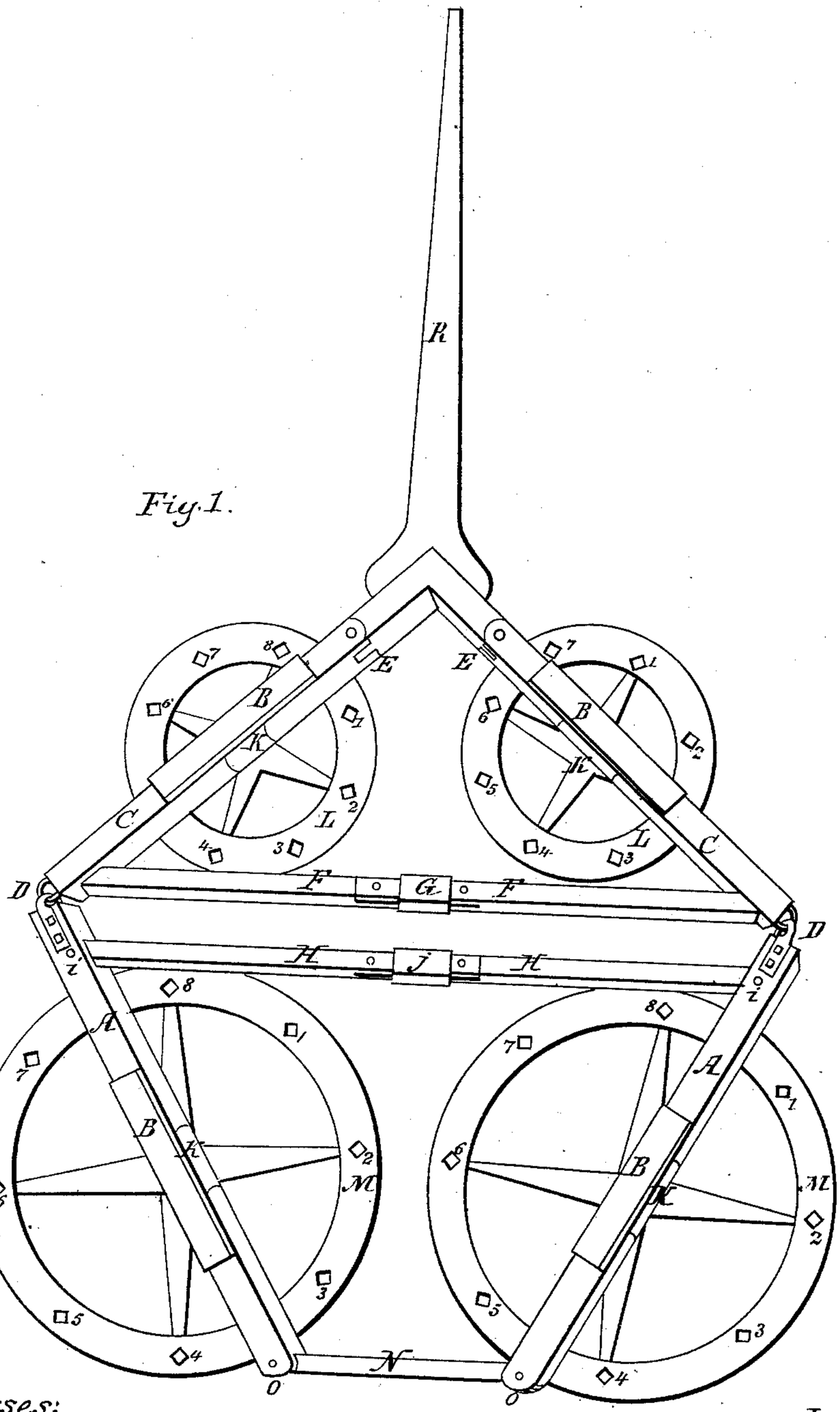
2 Sheets—Sheet 1

GEVIN & FOREMAN.

Rotary-Harrow.

No. 30,728. Patented Nov. 27, 1860.

Fig. 1.



Witnesses:
A. B. Richmond
W. H. Hinden.

Inventors.
Peter Gevin
Eli Foreman.

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

2 Sheets—Sheet 2.

GEVIN & FOREMAN

Rotary-Harrow.

No. 30,728. Patented Nov. 27, 1860.

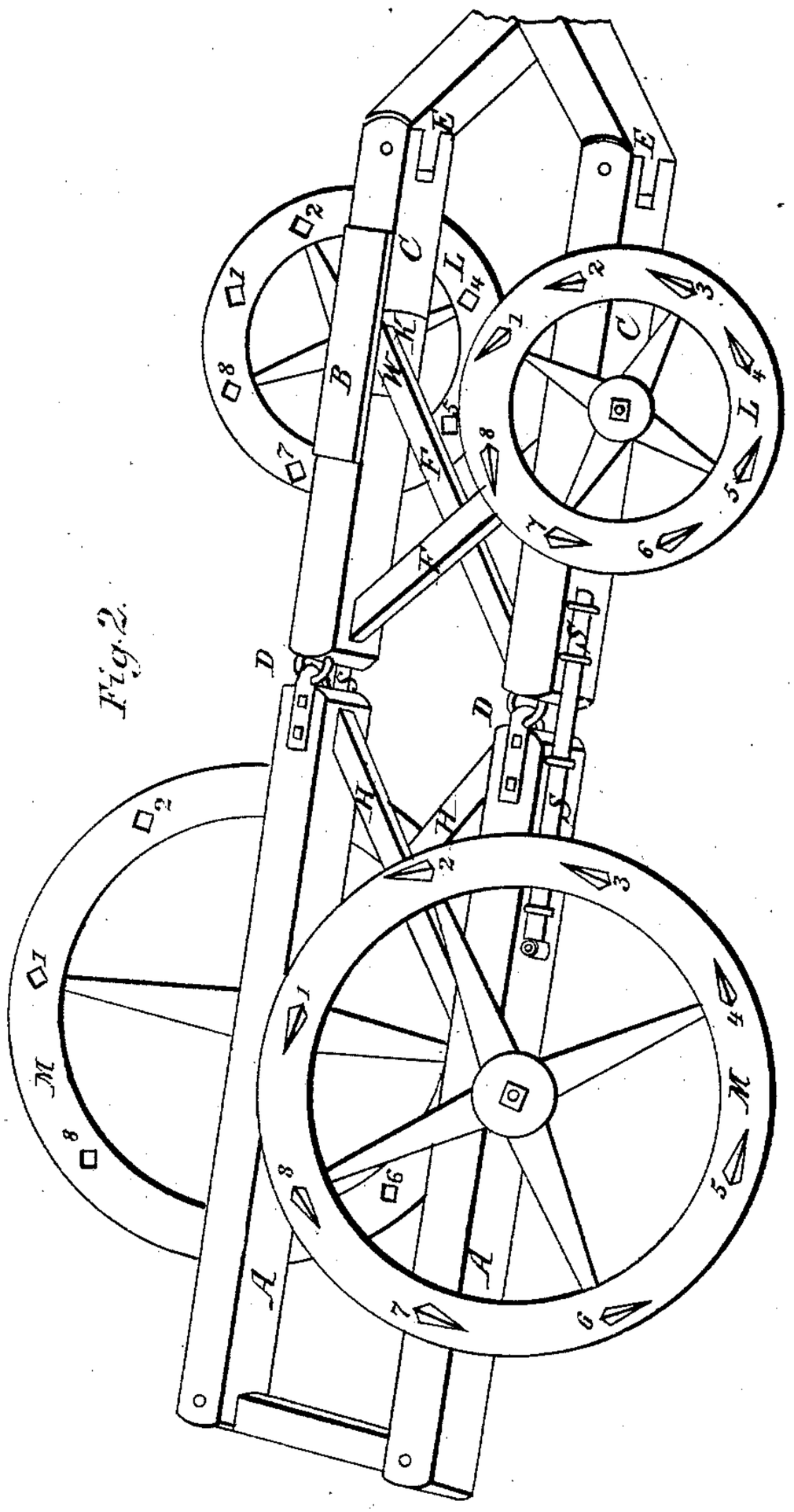


Fig. 2.

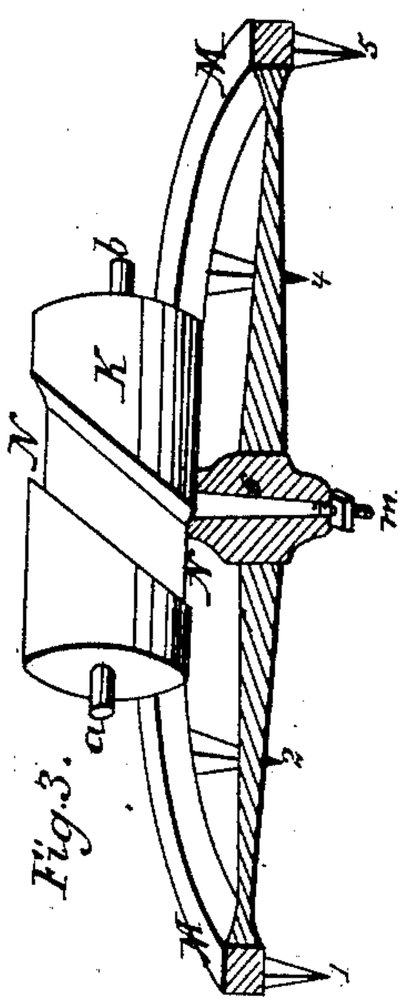


Fig. 3.

Witnesses.
A. B Richmond
W. H. Amison.

Inventors.
Peter Gevin.
Eli Foreman.

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

UNITED STATES PATENT OFFICE.

P. GEVIN AND ELI FOREMAN, OF SUMMERHILL, PENNSYLVANIA.

IMPROVEMENT IN ROTARY HARROWS.

Specification forming part of Letters Patent No. **30,728**, dated November 27, 1860.

To all whom it may concern:

Be it known that we, PETER GEVIN and ELI FOREMAN, of Summerhill, in the county of Crawford, State of Pennsylvania, have invented a new and Improved Harrow; and we do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings and the letters of reference marked thereon.

Figure 1 represents and is a top view of my harrow with all its parts adjusted in working order.

A A and C C are the frame, attached together by a hook and staple at D D. C C are also jointed at E E.

L L are two revolving harrow-wheels, with teeth 1 2 3 4 5 6 7 8. These wheels are hung on an axle, *m*, Fig. 3, which is placed in a roller, K K. This roller is better shown at Fig. 3. *a b* are the "gudgeons" on which it is hung in the frame C C. By this arrangement the wheels will turn at any angle to suit the inequalities of the ground. The frame A A C C is kept spread in the form shown in the drawings by means of the cross-pieces F F H H, Fig. 1. H H are attached to A A by joints and pins *i i*. F F, however, are simply tenoned into C C. Both F F and H H overlap each other at G J, and are kept together by the sliding bands G J.

M M are two harrow-wheels, constructed exactly like L L, only larger, and are both hung on the rollers K K, (like L L,) and have also teeth 1 2 3 4 5 6 7 8. These teeth are not set straight, but at an angle, as shown at 1 2 3 4 5 6 7 8, Fig. 2. A A are also connected together by the cross-piece N by joint and pin *o o*.

B B B B are caps on A A C C over the rollers K K K K.

R is a tongue by which it is drawn.

Now, when it is desired to take the harrow for some distance along a road or through fields, with several bags of grain for sowing, we convert our harrow into a wagon as follows, to wit: The sliding bands G J are slid to the right or left and the joints D D brought together, the pieces F F and H H crossing each other, as shown in Fig. 2. Now, in the rollers K K K K is a groove, as shown at N N, Fig. 3, and when the wheels are turned in a perpendicular position, as shown at Fig. 2, these grooves N N are in such a position that the cross-pieces F F H H will enter them, as shown at *w k*, Fig. 2. These cross-pieces then act as braces and also form a bottom of the wagon, on which sacks of grain may be laid. On the frame-pieces A A is a bolt with staples, as shown at S S, Fig. 2, which is slid from A A to C C, as shown, Fig. 2, thus rendering the joints D D immovable.

Fig. 3 represents a section of the harrow-wheels with the roller, and showing how the wheels are attached to the rollers. M is the rim of the wheel; C, the hub; *m*, the axle; 1 2 3 4 5, the teeth.

What we claim as our invention, and desire to secure by Letters Patent of the United States, is as follows, to wit:

The construction of the frame with the cross-pieces H H F F, in combination with the sliding bands G J and the grooved rollers K K K K, constructed as described.

PETER GEVIN.
ELI FOREMAN.

Witnesses:
A. B. RICHMOND,
W. H. AMIDON.