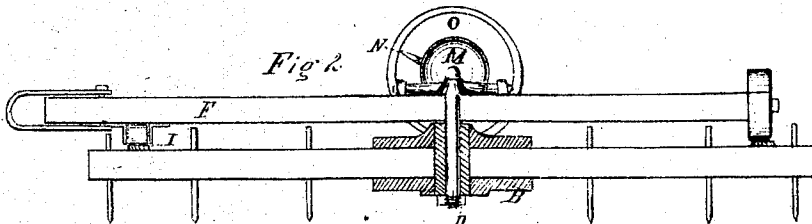
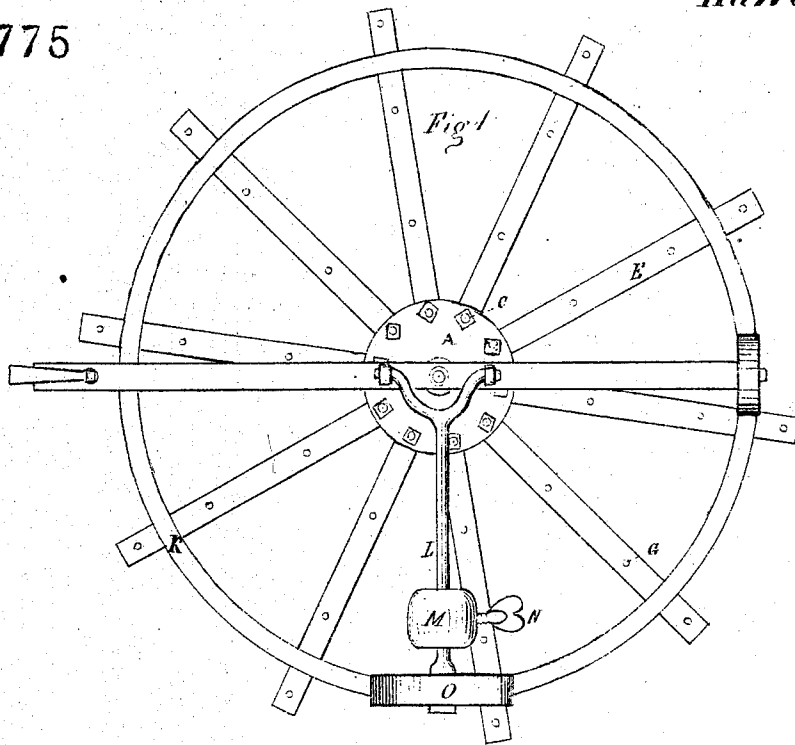


PATENTED JUL 26 1870

Welcome J Burdick Improved Harrow

105775



Witnesses

Wm H. Laman
Daniel Breed

Inventor

Welcome J. Burdick

UNITED STATES PATENT OFFICE.

WELCOME J. BURDICK, OF ALFRED, NEW YORK, ASSIGNOR TO HIMSELF
AND JOEL F. MOURHESS.

IMPROVEMENT IN HARROWS.

Specification forming part of Letters Patent No. **105,775**, dated July 26, 1870.

To all whom it may concern:

Be it known that I, WELCOME J. BURDICK, of Alfred, in the county of Allegany and State of New York, have invented a new and useful Improvement in Rotary Harrows; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

In the accompanying drawing, Figure 1 is a top view of my improved rotary harrow. Fig. 2 is an elevation of the same.

My improvement in rotary harrows consists, first, in a peculiar novel construction of hub for holding the radial arms which carry the teeth; second, in a reversible arm provided with an adjustable weight and a revolving wheel traveling on the rim or circular track of the harrow; and, third, in the use of two rollers under the beam.

In the construction of my improved rotary harrow the hub is cast in two parts, A and B, fastened together by bolts C, which pass through the ends of the radial arms E, and also held more rigidly in place by means of the tube D, which is cast with the upper plate, A, and extends down through the lower plate, B. The central portion of the hub projects up-

ward to give a bearing for the revolving draft-beam F, which is thus raised high enough to allow the teeth G to extend some distance above the radial arms E. By this arrangement long teeth may be used and driven down as they wear away below.

The beam F is provided with two rollers, H and I, which travel upon the ring or rim K, thus holding the beam steady, and yet allowing a free rotary motion.

A reversible arm, L, is hinged to the beam, and provided with an adjustable weight, M, which is set by a thumb-screw, N. This arm also has a rolling weight or wheel, O.

Having described my invention, I claim—

1. The above-described construction and arrangement of hub, the same being made in two parts connected by bolts, substantially as set forth.

2. The reversible arm, when provided with the adjustable weight and revolving weight or wheel, substantially as set forth.

3. The two rollers I and K, in combination with the beam, substantially as described.

WELCOME J. BURDICK.

Witnesses:

DANIEL BREED,
EDM. F. BROWN.