A. FRANKLIN.

Mowing Machine.

No. 86,523. Patented Feb. 2, 1869.

Fig: 1.

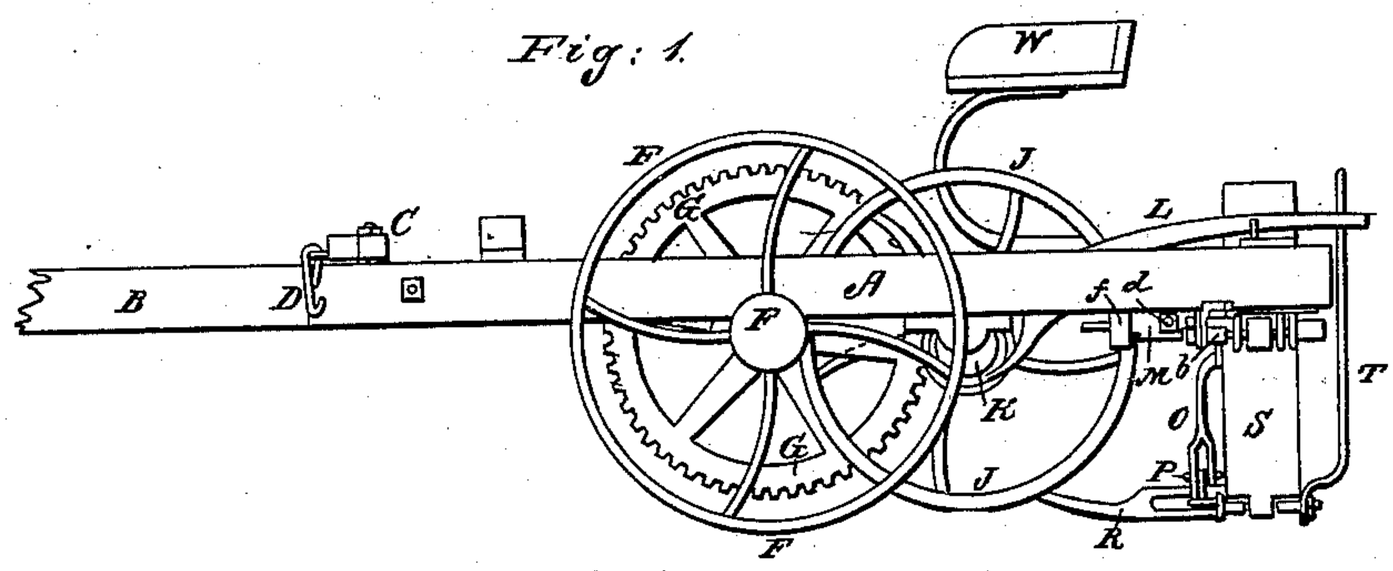

Fig: 2.

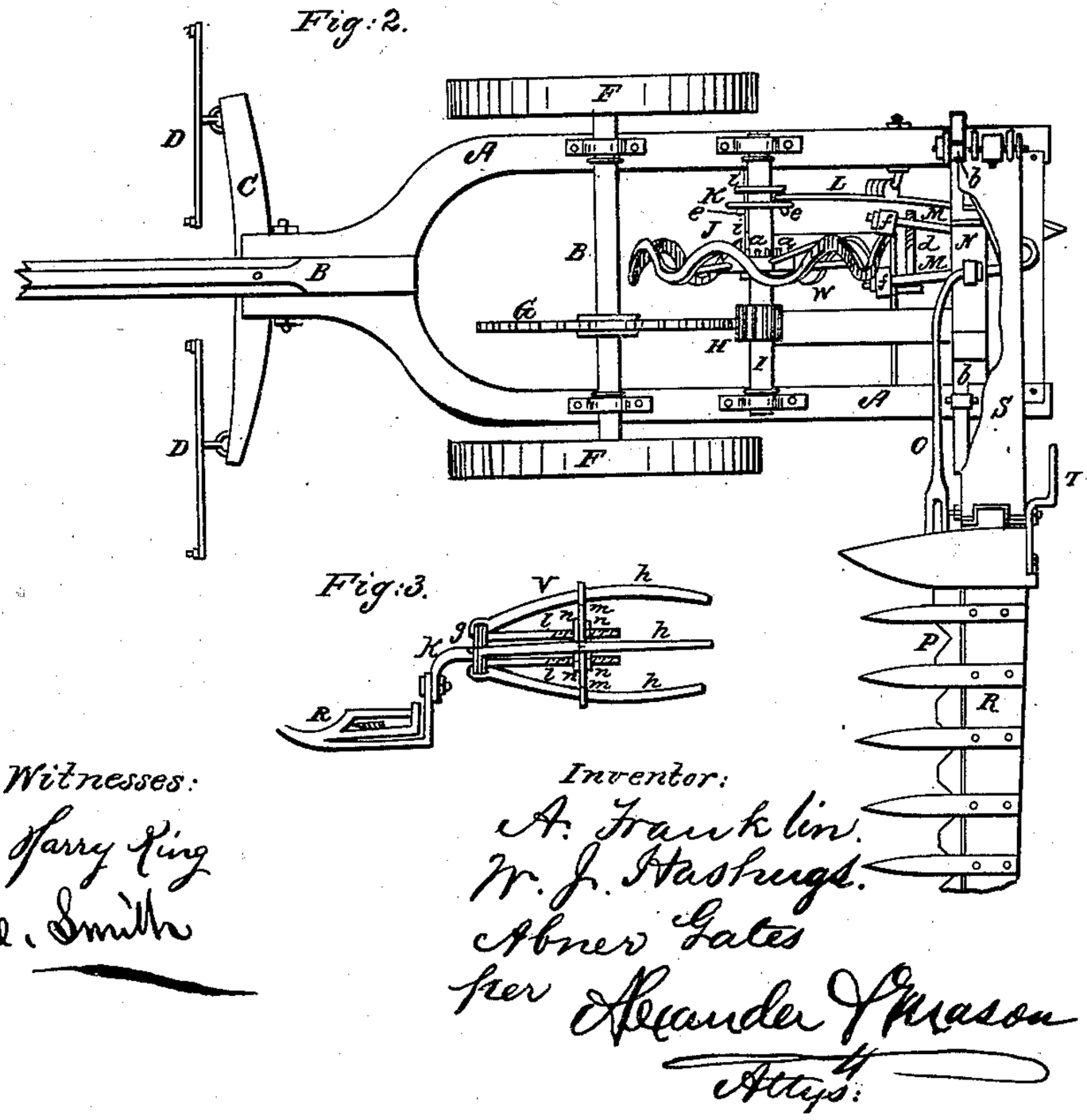

Fig: 3.

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UNITED STATES PATENT OFFICE.

AM. FRANKLIN, W. J. HASTINGS, AND ABNER GATES, OF FLORENCE, IND.

IMPROVEMENT IN MOWING-MACHINES.

Specification forming part of Letters Patent No. **86,523**, dated February 2, 1869.

To all whom it may concern:

Be it known that we, AM. FRANKLIN, W. J. HASTINGS, and ABNER GATES, of Florence, in the county of Switzerland, and in the State of Indiana, have invented certain new and useful Improvements in Mowing-Machines; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Our invention relates to that class of machines used for mowing hay, grain, &c., and relates to the general arrangement of the same, but more especially to the cam motion for the knife, the pitman, the adjustable track-clearer, and the single-trees, all of which will be hereinafter more fully set forth.

In order to enable others skilled in the art to which our invention appertains to make and use the same, we will now proceed to describe its construction and operation, referring to the annexed drawings, which form a part of this specification, and in which—

Figure 1 is a side view; Fig. 2, a bottom view; and Fig. 3, a plan view of the end of the mower with track-clearer attached.

A A represent two beams, which, with a cross-beam at their rear ends, form the frame of the machine. The beams or bars A A are curved at their front ends, so as to be brought closer together, leaving, however, a space between them sufficiently large to admit the tongue B, which is inserted between them, and held by a bolt and nut passing through both beams A A and tongue B.

On the upper side of the tongue the double-tree C is pivoted, and at its ends the single-trees D D are attached. These single-trees consist of metal bars, curved at the ends, so as to form suitable hooks for the traces to be attached to.

On the under or lower side of the beams A A the axle E is placed, in suitable journal-boxes, and to the ends of said axle the wheels F F are secured, so that the axle revolves with the wheels.

On the axle E, between the beams A A, is secured a wheel, G, which is provided with cogs on its outer periphery, and gears with a small pinion, H, on a cross-shaft, I, which has its bearings in suitable journal-boxes on the under side of the beams A A.

On the shaft I is a loose cam-wheel, J, which is prevented from moving sidewise by means of small collars or flanges placed on said shaft, one on each side of the wheel J. The hub of said wheel is on one side provided with a series of pins or teeth, *a a*, which correspond with similar pins or teeth *e e* on the side of a movable collar, K, also placed on the shaft I. That part of the shaft I on which the said collar is placed is provided with a small feather, *i*, which fits into a corresponding notch or groove in the collar K, so that when the machine is in operation the said collar will always revolve. The movable collar K is thrown in and out of gear with the cam-wheel J by means of the lever L, the end of which is forked and fits in a groove on said collar. When in gear with said cam-wheel, the teeth *e e* and *a a* come together, so that the wheel J will be turned.

The cam-wheel J is of a peculiar construction, the outer rim thereof forming a zigzag ring, as will be plainly shown in Fig. 2.

The outer rim of the wheel J fits in between two arms, M M, projecting from a slide, N, which moves on friction-rollers *b b* placed in suitable position on the under side of the beams A A.

The arms M M, which may be adjusted at any distance apart desired by means of the screw *d*, are provided with friction-rollers *f f* at the points where the sides of the wheel J would strike them, and, by means of their adjustment, the throw of the finger-bar may be varied.

It will be seen that when the machine is in motion and the wheel J revolves, it will strike alternately the arms M M, moving them, and with them the slide N, alternately from one side to the other.

From the slide N a pitman, O, connects with the knife P, which is arranged in the finger-bar R, in any of the known and usual ways.

The finger-bar R is hinged to an adjustable curved bar, S, and can be raised up from the ground by means of the lever T.

To the end of the finger-bar R is secured the adjustable track-clearer V. This track-clearer consists of a series of rods, *h h*, hinged or pivoted in some suitable manner at one end to a circular plate, *g*. Through the center of this plate *g* a small rod, *k*, is passed, which is

so arranged that the plate can revolve around it. This rod *k* is the one by which the whole track-clearer is secured to the end of the finger-bar R.

Two screws, *l l*, are secured to the plate *g*, which screws pass through a polygonal plate, *m*, having as many sides as there are rods *h h*, these rods passing through said plate, each one at one of the corners. By now placing nuts *n n* on the screws *l l*, on each side of the plate *m*, it will be seen that the said plate can be raised or lowered at will, thus expanding or contracting the rods *h h*, as the amount of grass cut will require.

The driver's seat, W, is supported on suitable stays from the frame of the machine.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination of the screw *d* and arms M M, with their friction-rollers *f f*, with the cam-wheel J, for the purpose of adjusting the rollers so as to vary the throw of the finger-bar, substantially as herein set forth.

2. The adjustable track-clearer V, constructed, as described, of the rods *h h*, circular plate *g*, polygonal plate *m*, screw-rods *l l*, and nuts *n n*, arranged and operating substantially as herein set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 6th day of October, 1868.

AM. FRANKLIN.
W. J. HASTINGS.
ABNER GATES.

Witnesses:
R. S. DAVIS,
M. F. COLLIER.