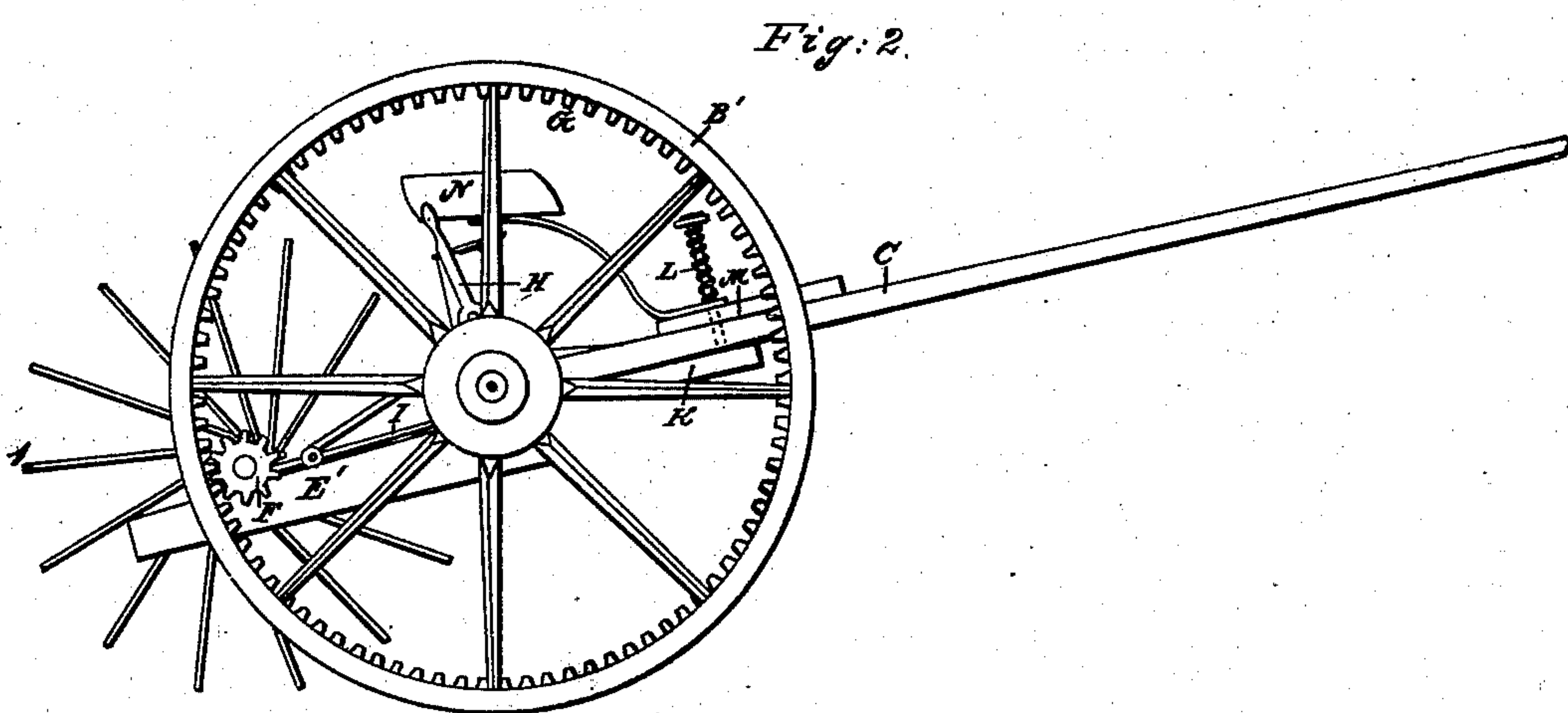
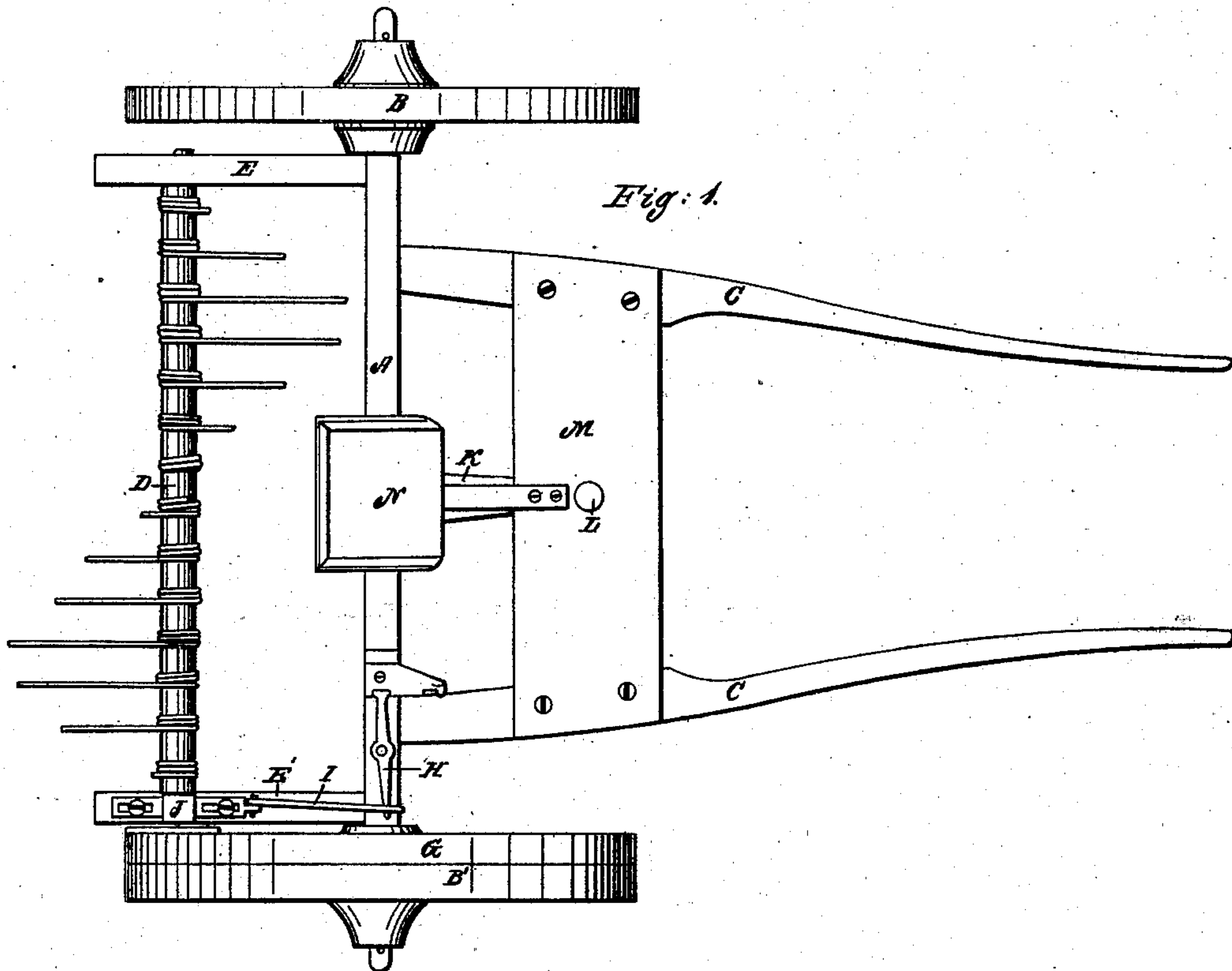


H. BEERS.  
Hay Spreader.

No. 47,919.

Patented May 30, 1865.



Witnesses: *Charles Morris*  
*Robert Schnapp.*

Inventor:  
*Horace Beers.*

# UNITED STATES PATENT OFFICE.

HORACE BEERS, OF BROOKFIELD, ASSIGNOR TO HIMSELF AND SMITH & BURNHAM, OF NEW PRESCOTT, CONNECTICUT.

## IMPROVEMENT IN HAY-SPREADERS.

Specification forming part of Letters Patent No. 47,919, dated May 30, 1865.

*To all whom it may concern:*

Be it known that I, HORACE BEERS, of Brookfield, in the county of Fairfield, State of Connecticut, have invented a new and useful machine called a "hay-turner," for turning hay, and thus exposing its different parts to the action of the sun and air while the same is being made or dried; 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 accompanying drawings, making a part of the specification, wherein—

Figure 1 is a perspective view of the machine, and Fig. 2 a longitudinal section thereof, similar letters referring to the same parts in both figures.

A represents the axle of the machine; B and B', the wheels; C C, the thills; D, the revolving head-piece or shaft; E E', the supports of the head-piece; F, a small pinion secured to the shaft; G, a cog-wheel attached to the wheel B'; H H, the different parts of a jointed lever; I, the connecting-rod; J, the movable journal-box; K, the arm of lever for raising or lowering the head-piece; L, a spiral spring acting upon the lever; M, the platform; N, the driver's seat.

The head-piece D is furnished with flexible wire teeth placed spirally or otherwise around it, so that some of them are at all times acting upon the hay while the machine is in motion, thus requiring a uniform motive power.

The head-piece is geared to the wheel B' by means of the pinion F, working in the cog-wheel G, which is attached to the inner side of the wheel B'. The end of the head-piece D on which the pinion F is fixed is made to run in the movable slotted journal-box J, made to slide on the support E', to throw the pinion out of or in gear, as may be required. This journal-box J is attached by the connecting-rod I to the jointed lever, the parts of which are marked H H, each of which works on a pivot, and are so arranged that the operator may at his pleasure throw the machine out of or into gear. The arm of the lever K is intended to raise or lower the head-piece, and is held in its proper working position by

the spiral spring L, which allows the head-piece to rise or fall, according to the unevenness of the surface of the ground, and makes the machine self-adjusting. The part K, with the supports E E', forms a lever, with the axle A for its fulcrum, by means of which the head-piece is elevated or depressed, as required.

As shown in the drawings submitted, the head-piece D is kept in its proper working position by means of the spiral spring L acting upon the part K. The same result may be accomplished by means of a horizontal spring placed over or under the platform; or the head-piece may be so nearly balanced by the arm of the lever K that its own gravity will be sufficient to retain it in working position. When the head-piece is to be raised entirely clear of the ground, the operator effects it by depressing the arm of the lever K with his foot.

The driver's seat N is placed on the platform M, and that again is placed on the thills C C, and serves to brace and strengthen them.

In operating the machine the great disparity between the diameter of the pinion and cog-wheel gives the head-piece a revolving motion sufficiently rapid to take up and throw into the air with its flexible teeth all the hay over which it passes. It is sufficiently self-adjusting to need no attention, otherwise than to guide the horse, on all ordinarily smooth ground.

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

1. The employment of the revolving head-piece D, provided with spirally-arranged teeth, in combination with the supporting-pieces E E' and with the movable journal-box J, all arranged in the manner and for the purposes substantially as herein described and set forth.

2. The arrangement and combination of the coil-spring L, platform M, and lever K, in the manner and for the purposes substantially as herein described and set forth.

HORACE BEERS.

Witnesses:

DANIEL G. BEERS,  
CURTIS MORRIS.