

R. BRYSON

Hay Tedder.

No. 99,833.

Patented Feb. 15, 1870.

Fig.1.

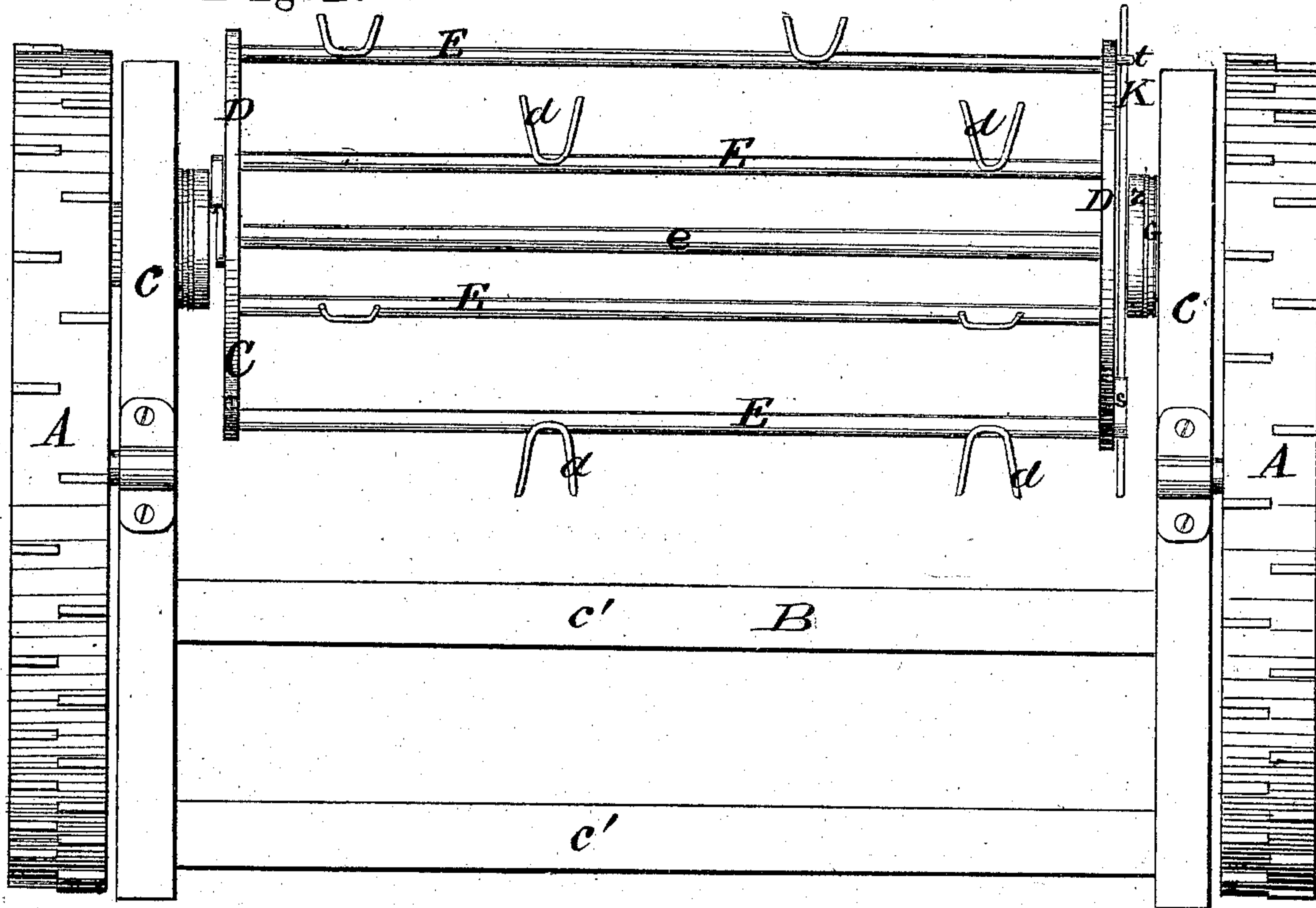


Fig.2.

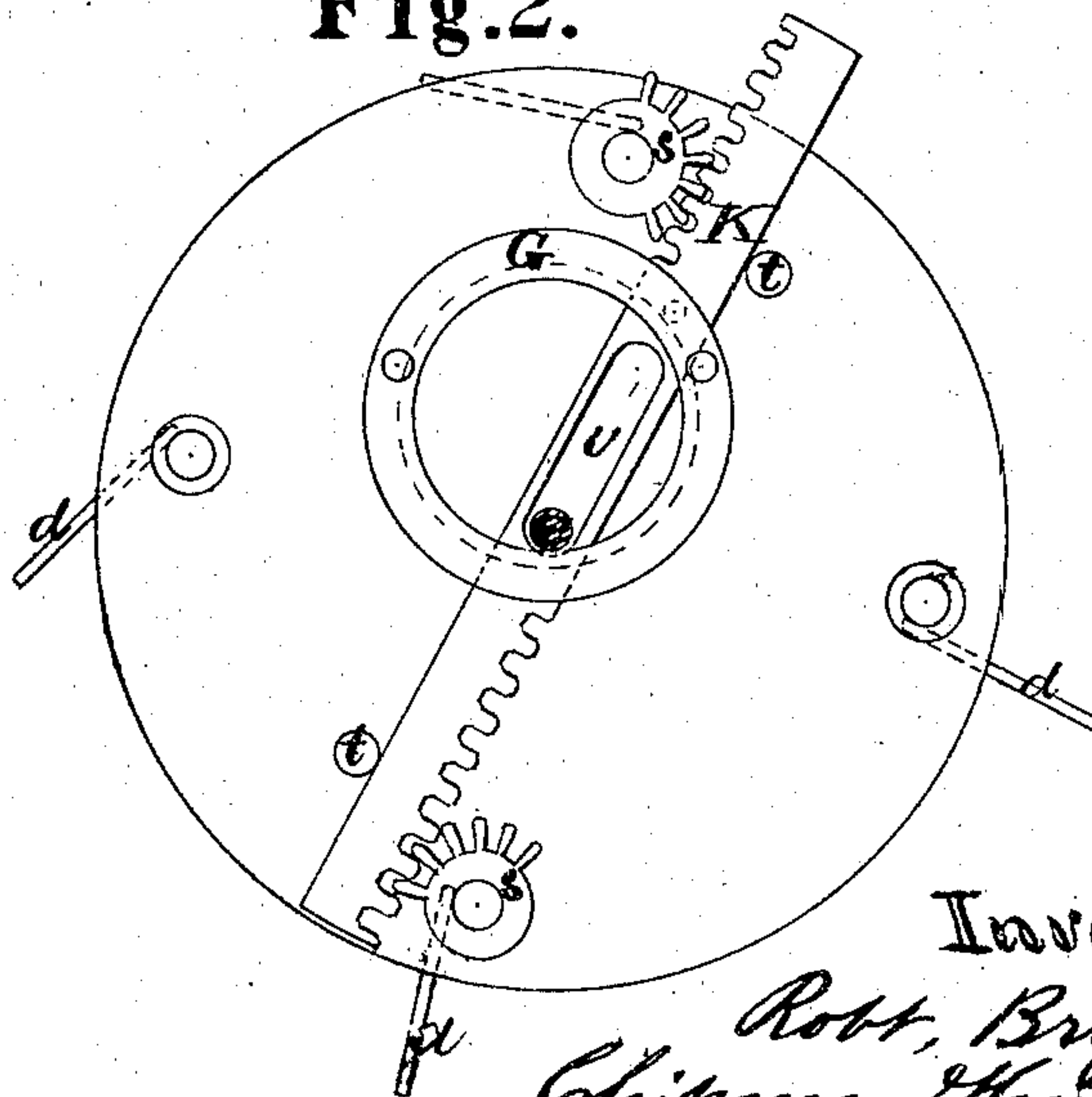
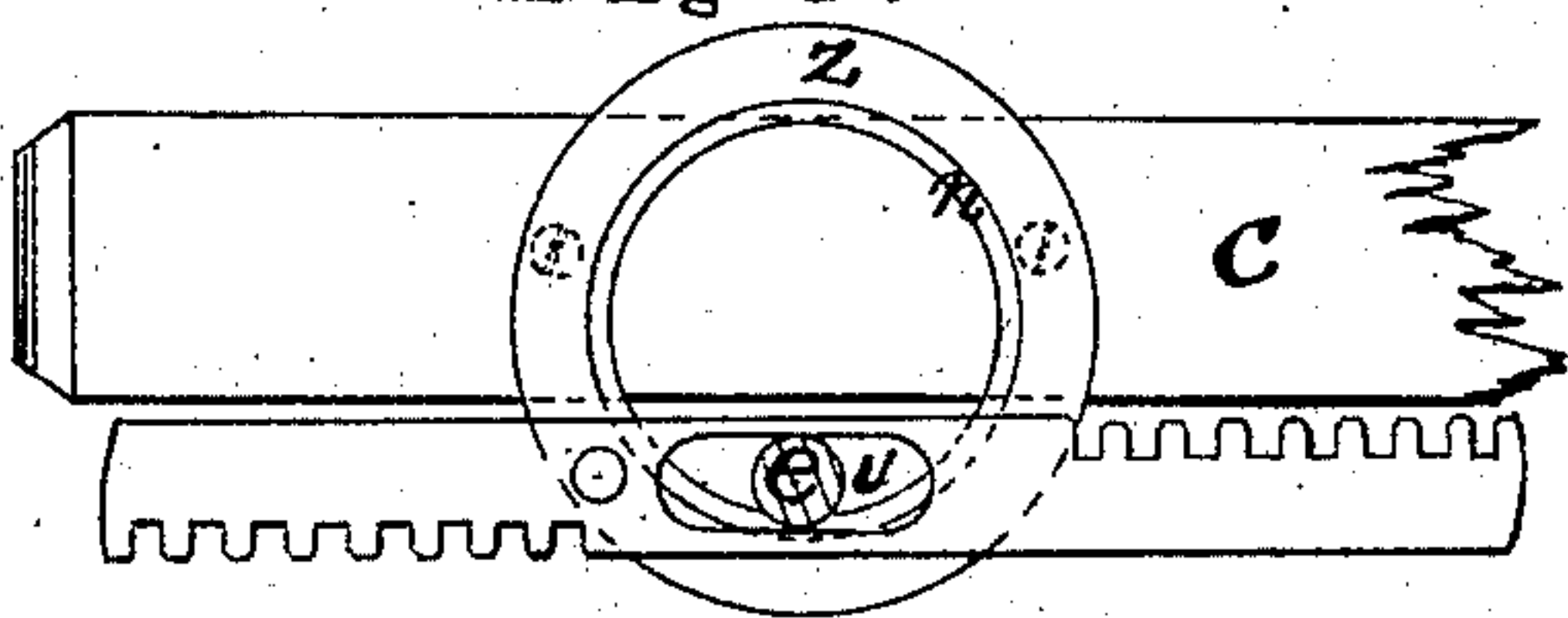


Fig.3.



Witnesses.

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B. B. Kane

Inventor.

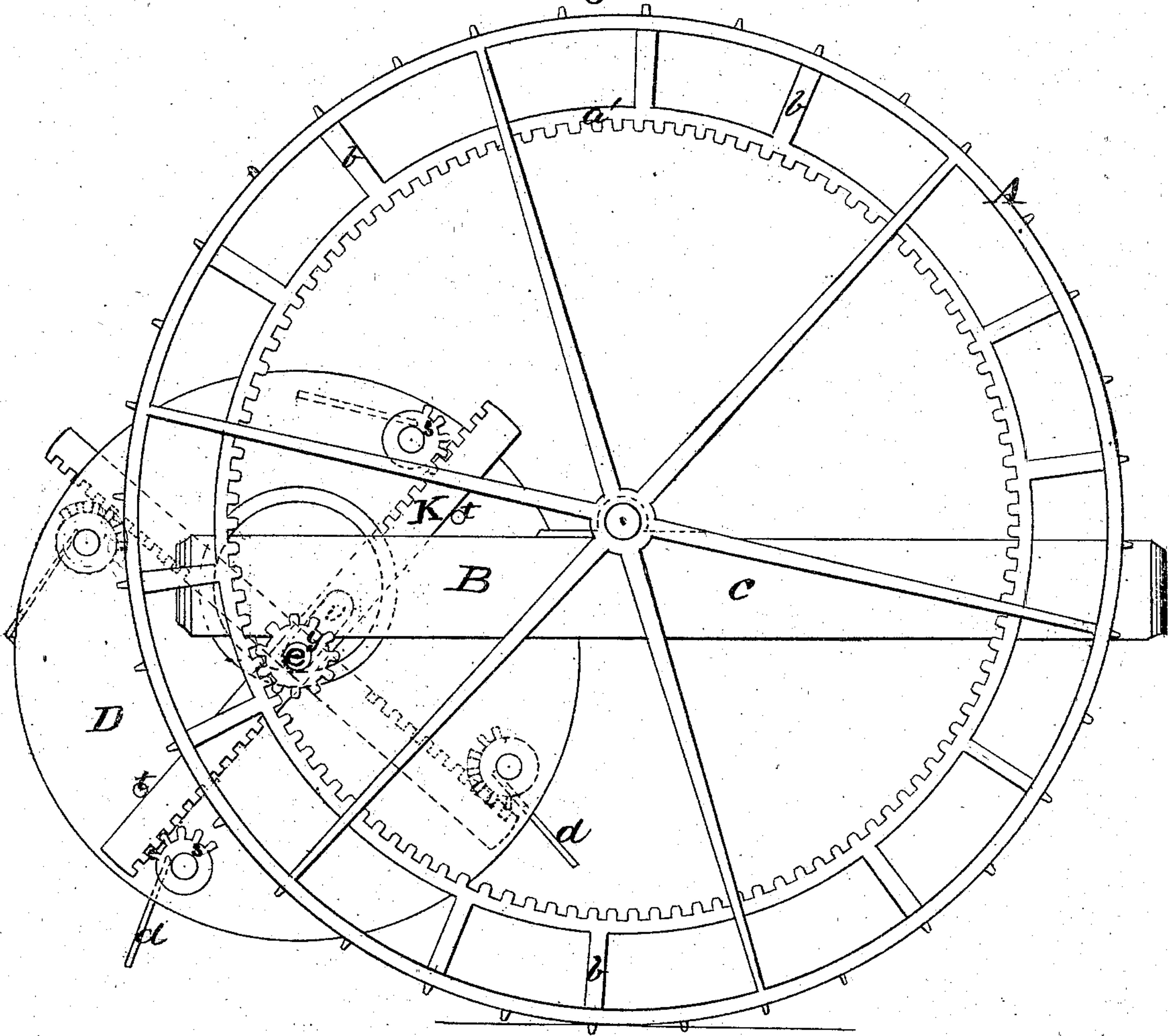
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Fig. 4.



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# United States Patent Office.

ROBERT BRYSON, OF SCHENECTADY, NEW YORK.

Letters Patent No. 99,833, dated February 15, 1870.

## IMPROVEMENT IN HAY-TEDDERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, ROBERT BRYSON, of Schenectady, in the county of Schenectady, and State of New York, have invented a new and valuable Improvement in Hay-Tedders; 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, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a top view of my invention.

Figure 2 is an end view of the revolving frame which carries the forks.

Figure 3 is a view of the rack-bar and eccentric.

Figure 4 is a side view of the hay-tedder.

My invention relates to hay-tedders, and consists mainly in the construction and novel arrangement of devices connected with and operating the teeth or forks, whereby, after throwing the hay, they are automatically turned downward, in such a manner that the hay cannot remain thereon and clog them.

The letter A of the drawings designates the wheels of the tedder toothed on the perimeter, and formed with an internal gear-wheel, *a'*, of smaller diameter, which is separated from the outer rim by the short spokes *b b*.

B represents the wooden frame of the tedder, consisting of the two side beams *c c*, which support the revolving frame C and the transverse beams *c' c'*. The wheels A are attached to the beams *c*, each by a separate short axle.

To the after part of the side beams *c c* is attached the revolving frame C, carrying the forks or prongs *d d*. This frame consists of two circular plates or disks D D, secured rigidly to the shaft *e*, which is attached at each end to the under side of the beams *c c* by the journal plates and caps *f f*. To each end of the shaft *e* is secured a pinion, *y*, the teeth of which, engaging with those of the annular wheel *a'* of the same side, operate to produce a swift revolution of the frame C, in the same direction with that of the large wheel A.

The forks or prongs are secured to the shafts E E, which have bearings near the rim of each disk D, which is perforated for this purpose. Four shafts E E are usually employed, equidistant from the central shaft *e*, and so arranged that, through the small spur-wheels on their ends, two will be operated by the rack-bar K at one end of the frame C, while the other and alternating two fork-carrying shafts will be operated by a similar rack-bar arranged at the other end of the revolving frame.

To the inner side of each beam *c* is secured a circular casting, G, provided with a circular flanch, *n*, which forms a bearing for the revolving ring *z*. As the shaft *e* of the frame C pierces the circular casting G below its center, and distant therefrom about half the length of its radius, it is apparent that the ring *z* revolves eccentrically with reference to the shaft *e*, and, consequently, that the rack-bar K, which is pivoted to the revolving ring *z*, and slotted at *v* to slide on the shaft *e*, must have a reciprocal motion in the direction of its length, at the same time that it has a motion of revolution about the shaft *e*.

The rack-bar K is toothed at each end, but on opposite edges, and is arranged to engage with the teeth of the partial spur-wheels *s s* at the same time that it slides on the shaft *e*, and is revolved by the ring *z*, to which it is pivoted.

The guard-pins *t t* are fixed to the disks D D, and prevent the rack-bar from becoming disengaged from the partial spur-wheels *s s*.

The reciprocating rack-bar operating on the spur-wheel *s* of either shaft E, produces an independent rotary movement of the forks thereon; and while it enhances their effect in throwing the hay, by giving them a swifter motion rearward than they would have if fixed radially on the revolving frame *c*, yet, after this action, a greater practical advantage is obtained by the reverse movement of the rack-bar, now commenced, which causes the tines or forks to droop and shed the hay, thus effectually preventing the clogging thereof and consequent damage to the parts.

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

1. The toothed and slotted rack-bar K, arranged to impart, through the spur-wheel *s*, reciprocating motion to the tines *d d*, as specified.
2. In combination with the slotted rack-bar K, the shaft *e*, eccentric *z*, and guard-pins *t t*, constructed and arranged to operate as specified.
3. In combination with the internal wheel *a'*, the revolving frame C provided with pinion, and the fork shafts E E provided with spur-wheels *s s*, and operated automatically by the slotted toothed rack K, eccentric *z*, and guard-pins *t t*, as specified.

In testimony that I claim the above, I have hereunto subscribed my name in the presence of two witnesses.

ROBERT BRYSON.

Witnesses:

D. C. MORTIMER,  
CHAS. FULLER.