

(No Model.)

2 Sheets—Sheet 1.

E. G. THORÉN.  
SOWING MACHINE.

No. 483,623.

Patented Oct. 4, 1892.

FIG 1

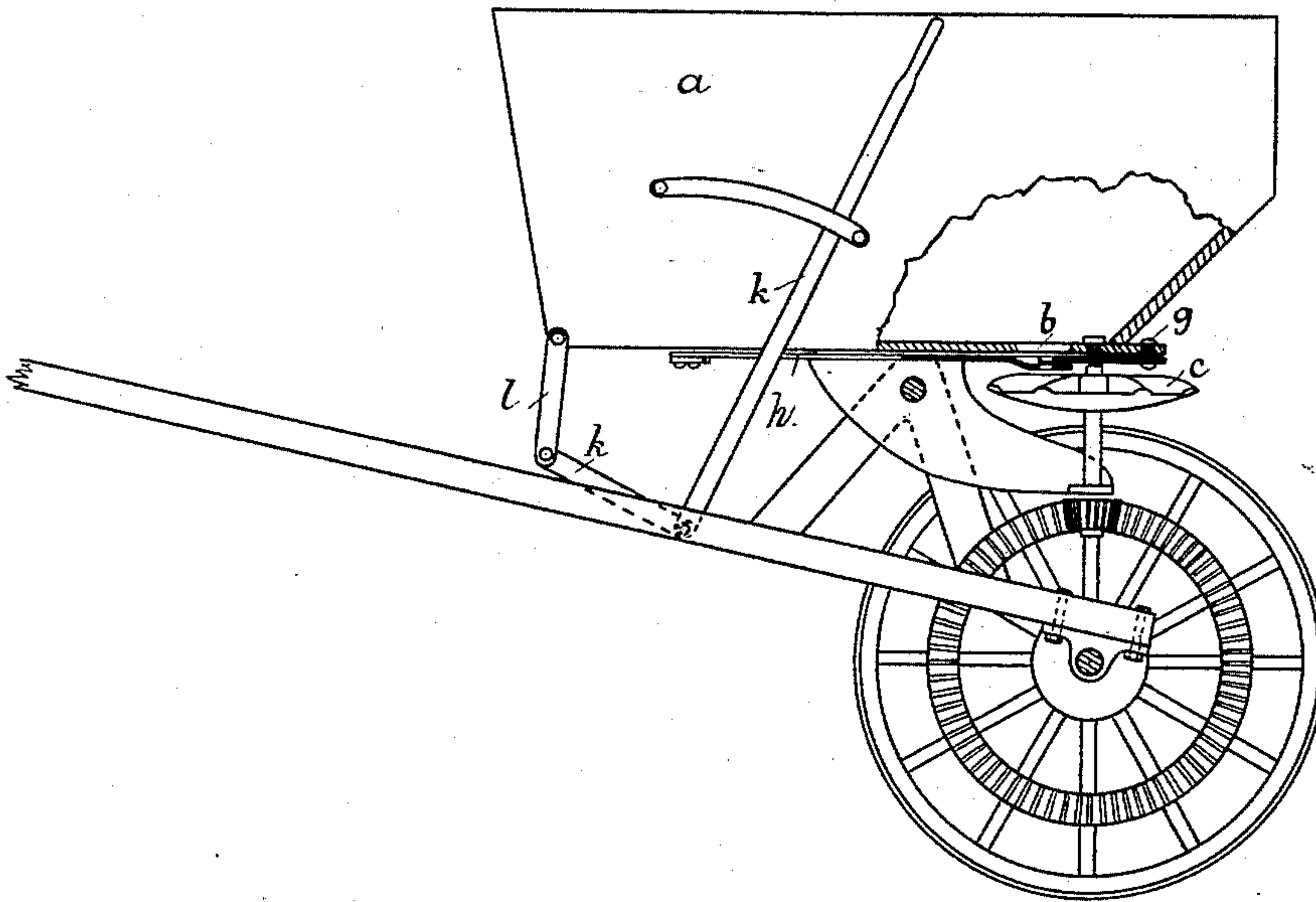
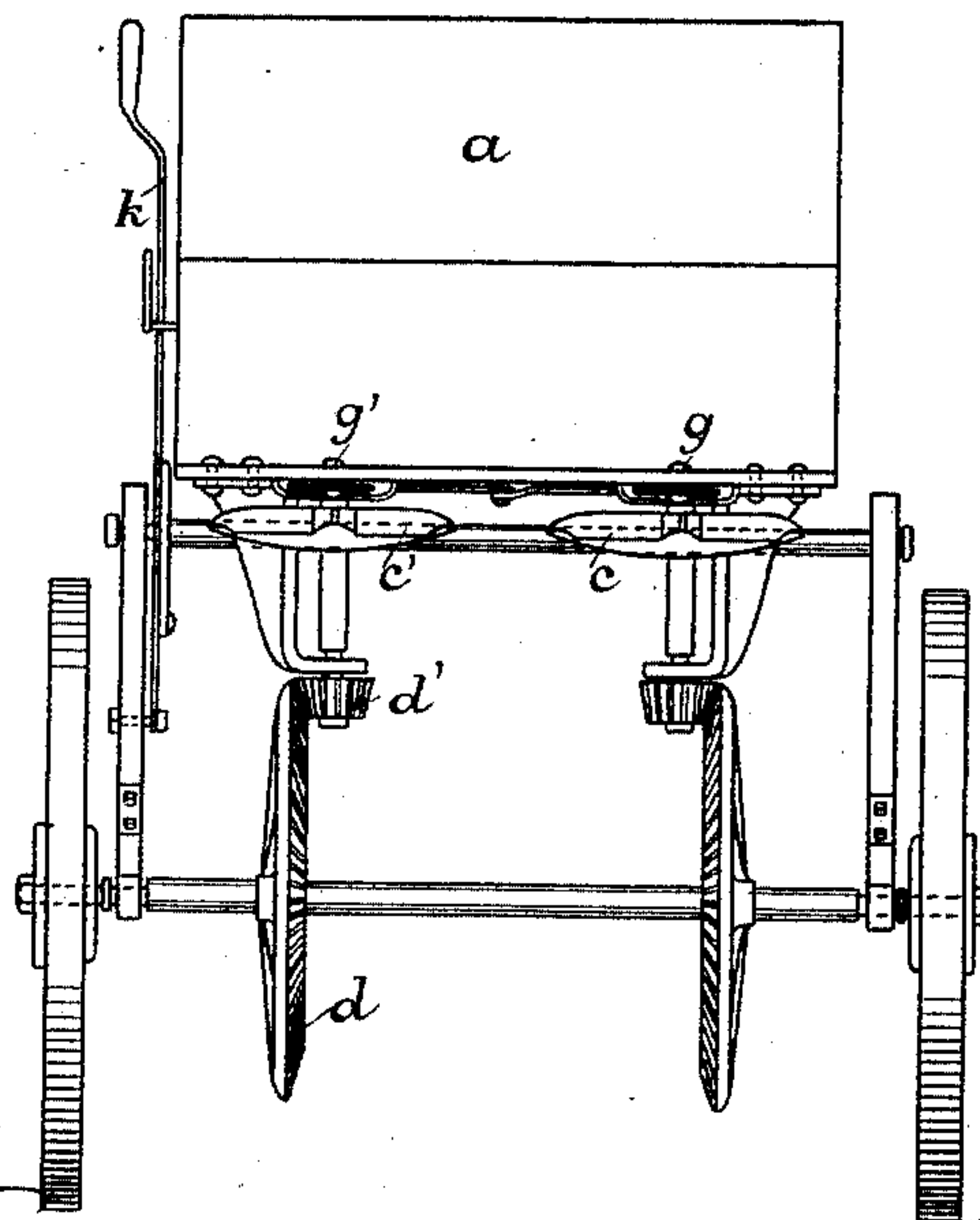


FIG. 2.



Witnesses,  
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By John J. Halsted & Son,  
his Attys

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FIG. 3.

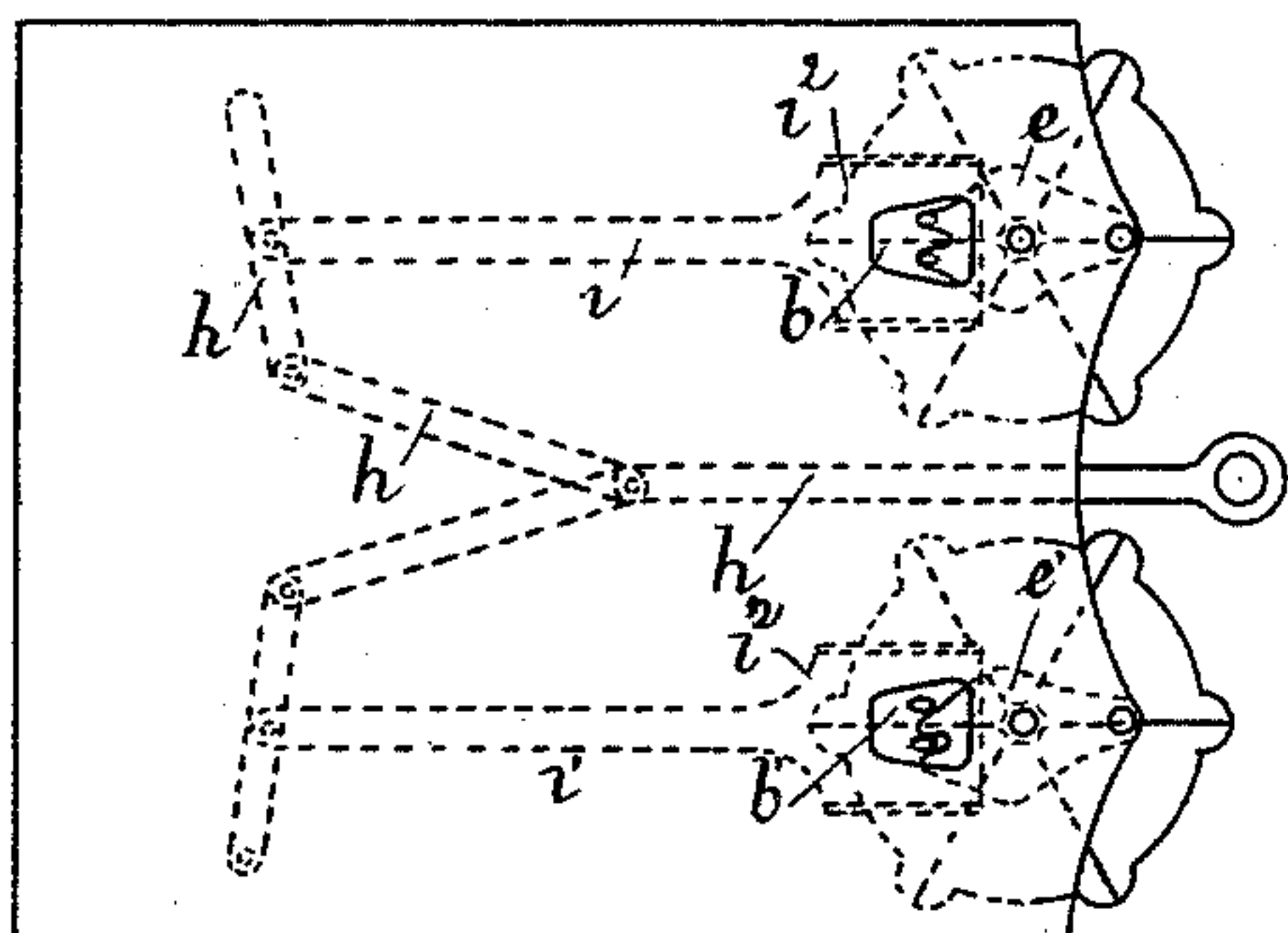


FIG. 4.

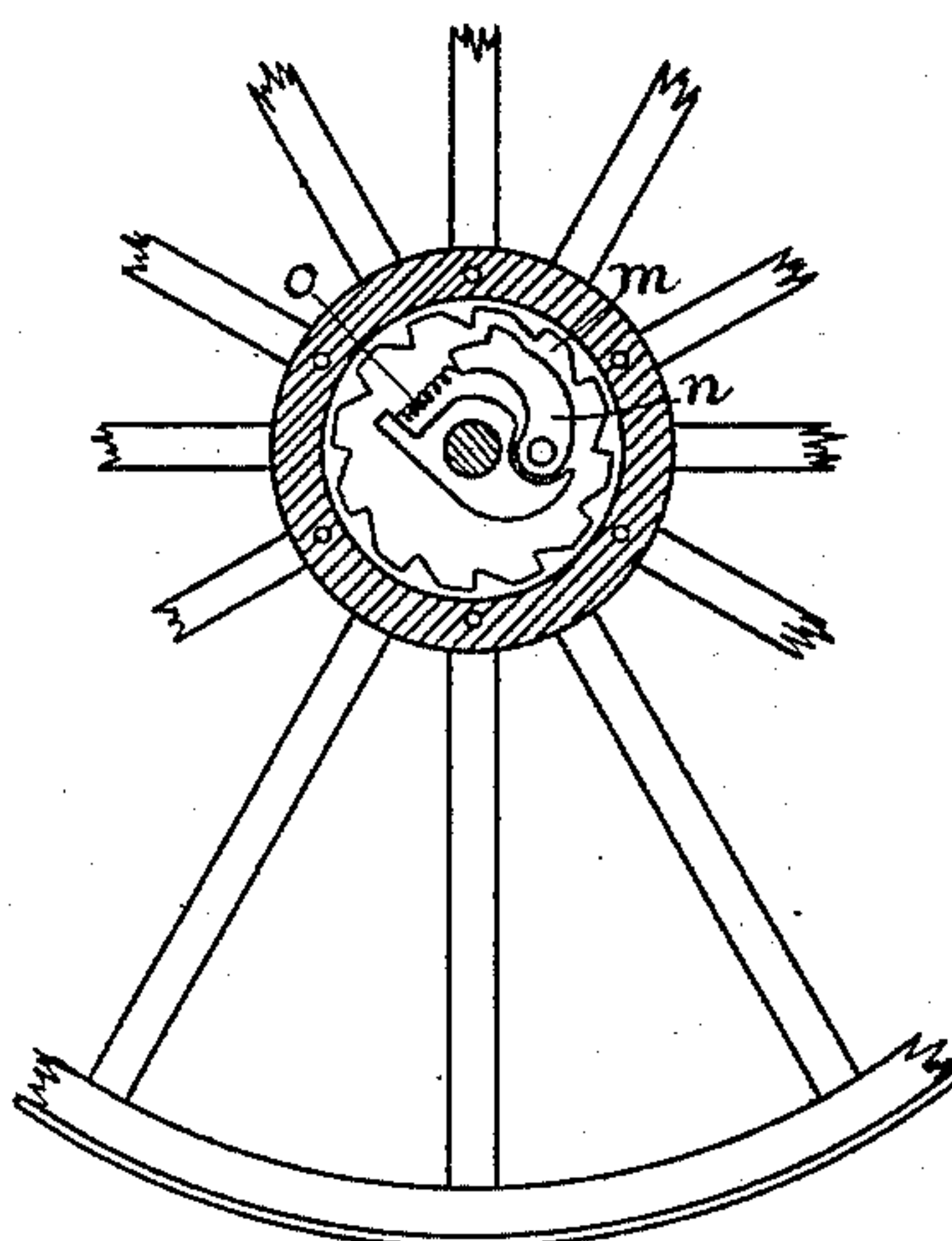


FIG. 5.

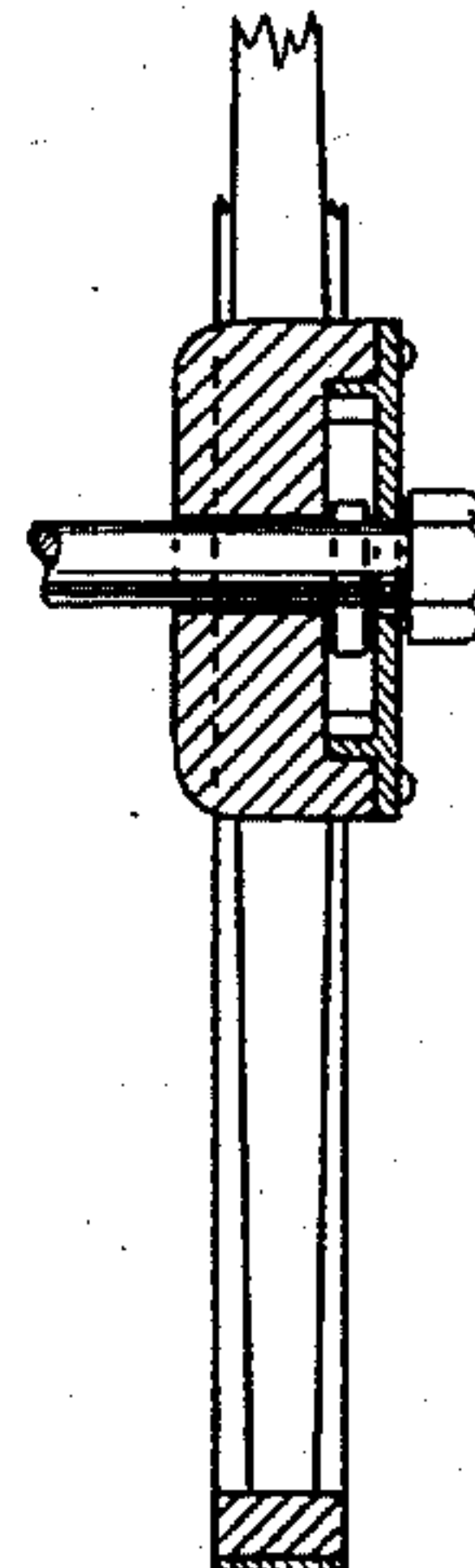


FIG. 6.

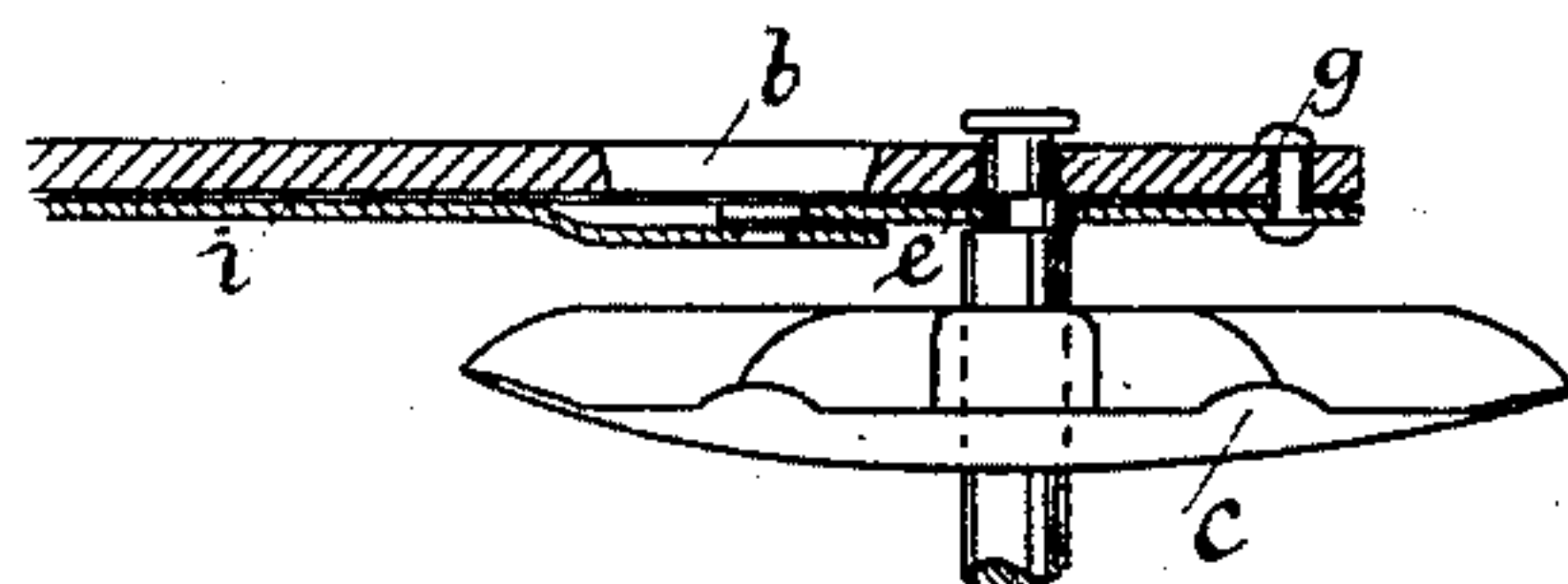


FIG. 7.

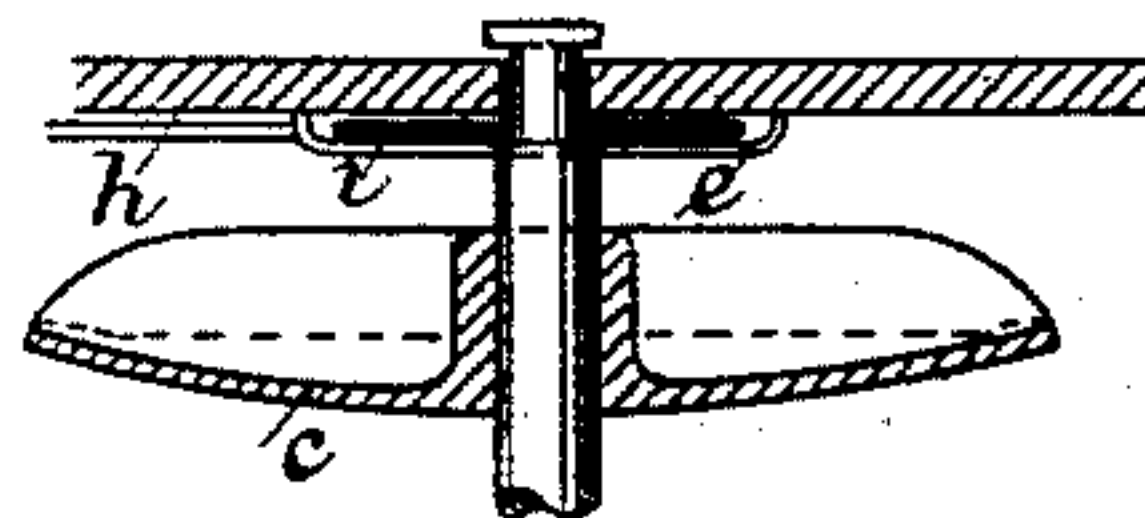
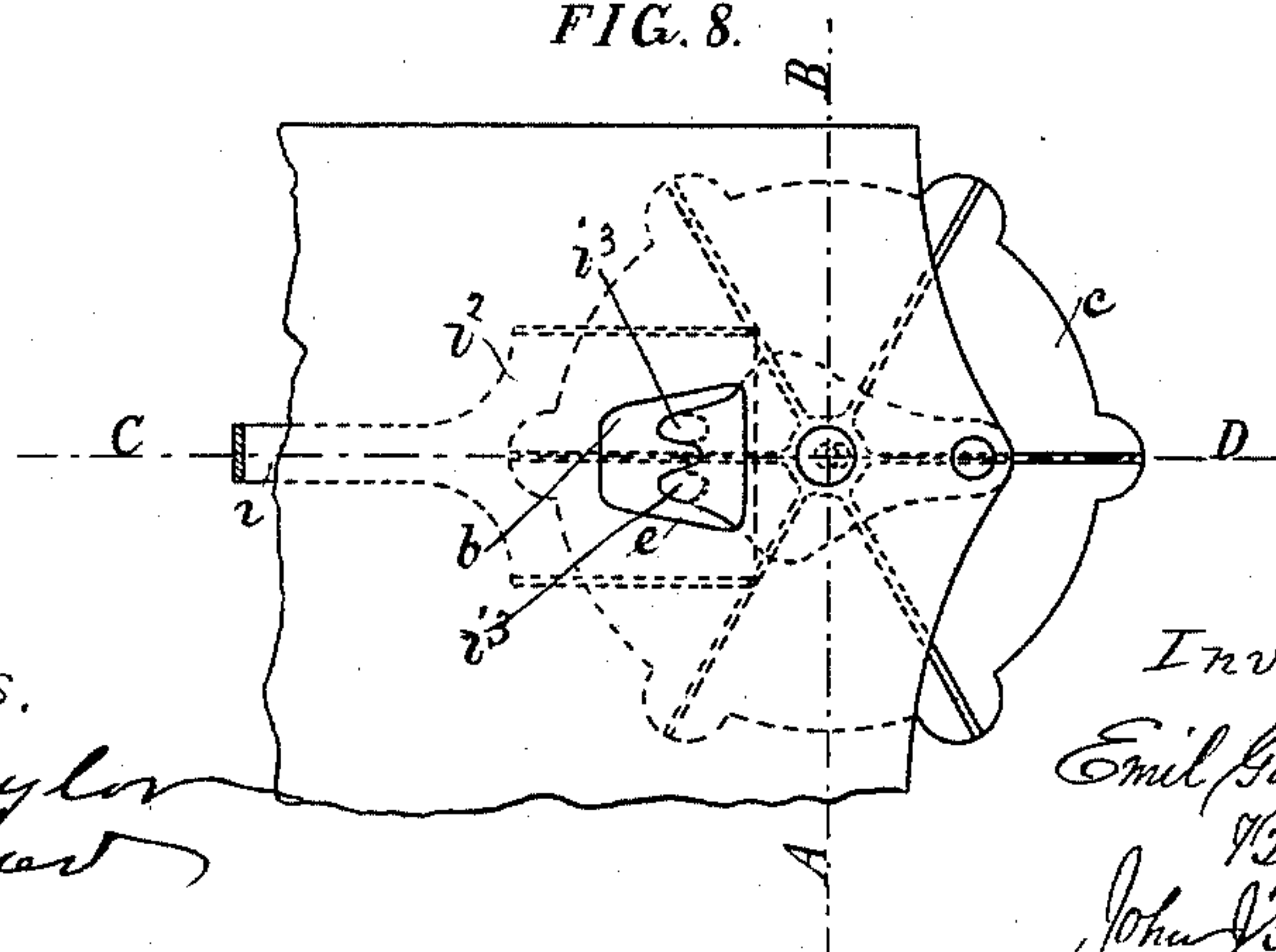


FIG. 8.



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# UNITED STATES PATENT OFFICE.

EMIL GOTTFRIED THORÉN, OF KRISTIANSTAD, SWEDEN.

## SOWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 483,623, dated October 4, 1892.

Application filed November 19, 1891. Serial No. 412,396. (No model.)

*To all whom it may concern:*

Be it known that I, EMIL GOTTFRIED THORÉN, of Kristianstad, in the Kingdom of Sweden, have invented certain new and useful  
5 Improvements in Sowing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same,  
10 reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to sowing-machines adapted for distributing different kinds of  
15 corn, grass-seed, and the like.

In the drawings, Figure 1 illustrates an elevation partly broken away, and Fig. 2 a rear view, of a machine embodying my invention; and Figs. 3, 4, 5, 6, 7, and 8, detail views en-  
20 larged.

The machine consists of a hopper or vessel *a*, on wheels, for the seed, which through openings in the bottom are fed down on two concaved horizontal strewing-wheels or centrifugal wheels *c c'*, provided with upright flanges, these centrifugal scattering-wheels being by the advancing movement of the machine set in rapid rotation, whereby the seed, owing to the effect of the centrifugal force, is thrown  
30 out in every direction. The rotation of these centrifugal wheels is brought about by means of the toothed wheelwork or gears *d d'*, (the driving-gears *d* being on the shaft of the carriage or vehicle.)

35 In order to regulate the quantity of the seed, a feeding apparatus consisting of plates *e e'*, provided with points, is applied to the bottom of the vessel and fastened by means of bolts *g g'* in such a manner that they are  
40 able to turn round about the same. In the middle of each plate there is an oblong hole for the centrifugal axle, that at this place is made eccentric or in crank form for the purpose of causing the plates to have an oscillating movement by the advancing movement  
45 of the machine. To the lower side of the bottom of the hopper *d* two plates *i i'*, movable along the bottom by means of the system of levers *h h h*, are applied, in the broader shovel-formed part *i<sup>2</sup>* of which there are two  
50 holes *i<sup>3</sup>*, corresponding to the points of the feeding apparatus. Because of the oscilla-

tion of the feeders, the seed will be shaken out through these holes, which are alternately opened and shut by the aforesaid points. In  
55 the same proportion as the plates *i i'* are caused to approach to or to recede from the centrifugal axles will the width of the openings for the seed-outlet be varied, respectively, and the quantity of seed dropped be  
60 diminished or increased accordingly.

For the conveyance of the machine to and from the ground where the seed is to be sown, a disengaging-coupling is employed, which consists of an angle-lever *k*, secured to one of  
65 the vehicle-shafts by a bolt going through the same, and the shorter arm of which is joined with the fore part of the hopper *a* by the link *l*. The ascending longer arm, on the other hand, is free and is provided with a handle.  
70 By moving this handle in the forward direction the fore part of the hopper *a* will consequently be lowered, while the hind part will be raised. By these means the gears *d d'* are  
75 thrown out of engagement with each other, and the rotation of the centrifugal wheels is thus stopped.

In order to prevent the rotation of the axles of the centrifugal wheels *c c'* when carrying the machine backward, I apply to each of the  
80 wheel-naves an arrangement by which the wheels by backward movement may revolve, while their axles do not. The devices for effecting this are illustrated in Figs. 4 and 5, and consist of a cover lodged in the wheel-  
85 nave and provided with an inside toothed ring *m*, and with a pawl *n*, attached to the wheel-axle. When moving the wheel forward, this pawl catches in the teeth of the ring and the axle turns round. If, on the  
90 other hand, the wheel be moved backward, the spiral spring *o* becomes compressed and the teeth are caused to slip past the pawl, thus preventing the axle turning round.

Having now particularly described and as-  
95 certain the nature of the said invention and in what manner the same is to be performed, I declare that what I claim is—

In a seed-sowing machine having a pair of centrifugal seed-distributing wheels, the com-  
100 bination therewith of perforated and movable adjustable plates for controlling the quantity of seed being sown, an angle-lever, link, and handle for stopping the movement, as desired,

of said wheels, even when the carriage is moved forward, and a toothed ring on the naves of the wheels, and a spring-actuated pawl on the wheel-axles for preventing the movement  
5 of said wheels when the carriage is moved backward, the combination being and operating substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

EMIL GOTTFRIED THORÉN.

Witnesses:

C. F. DE LA MOTTE,  
AXEL RIVVER.