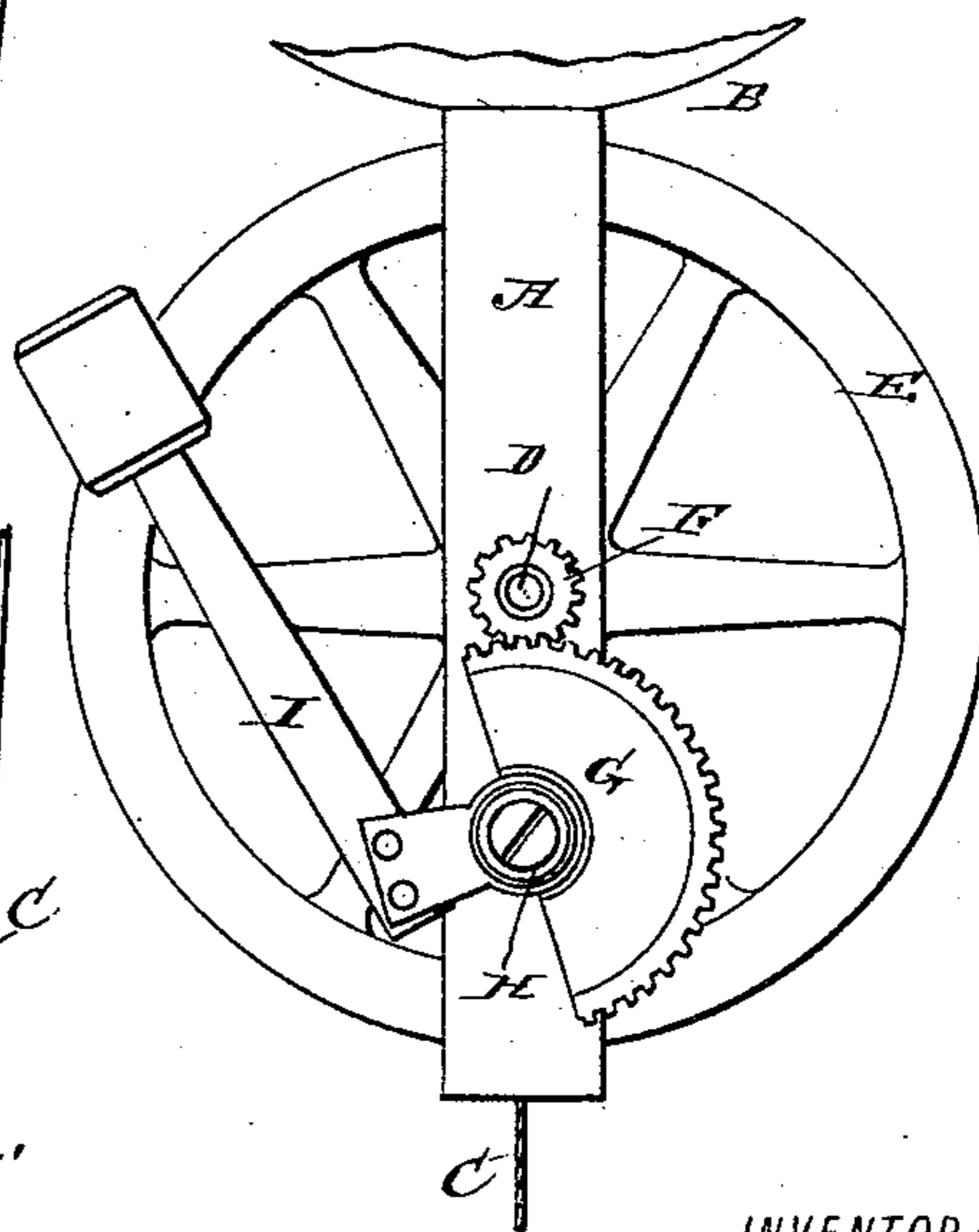
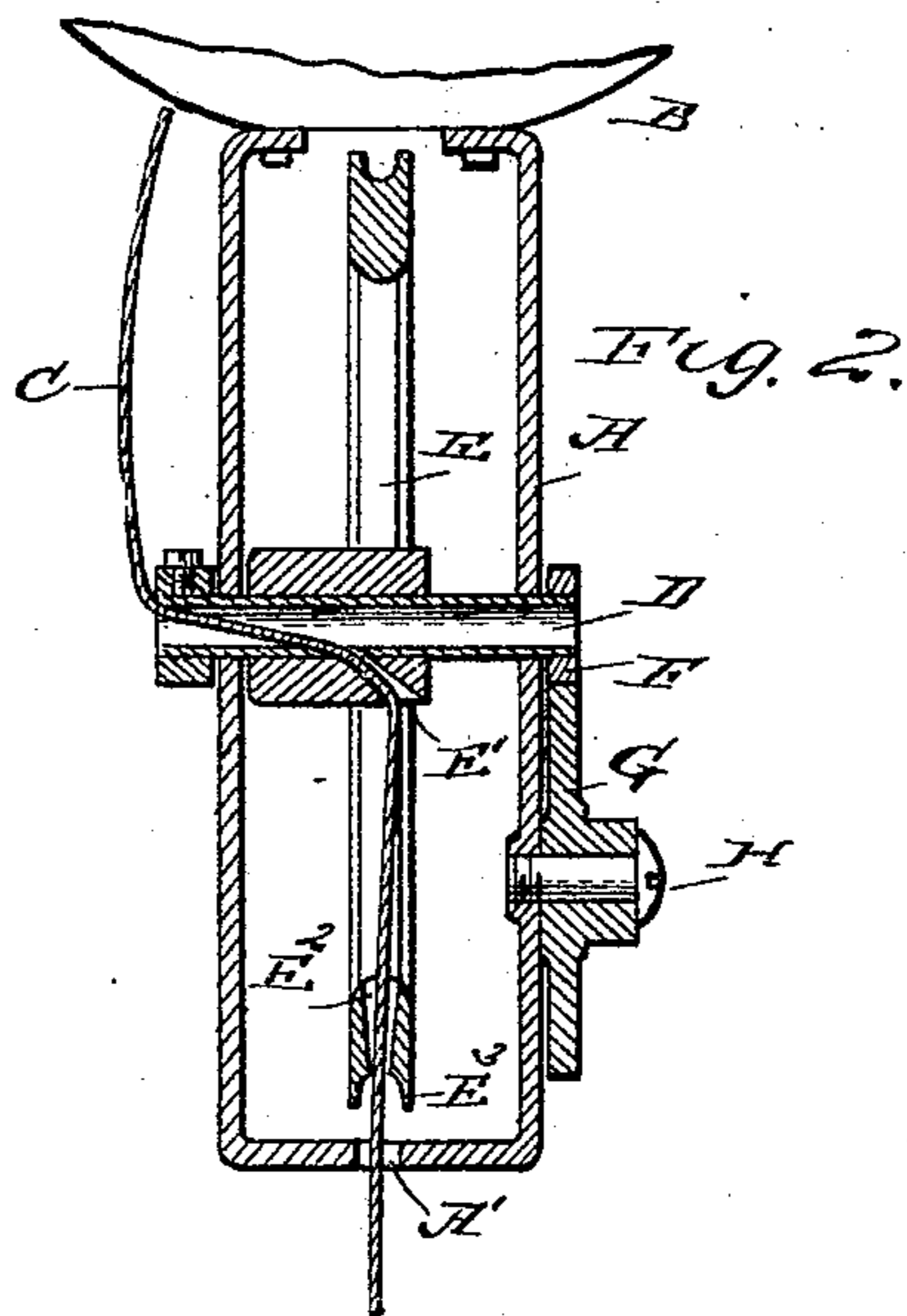
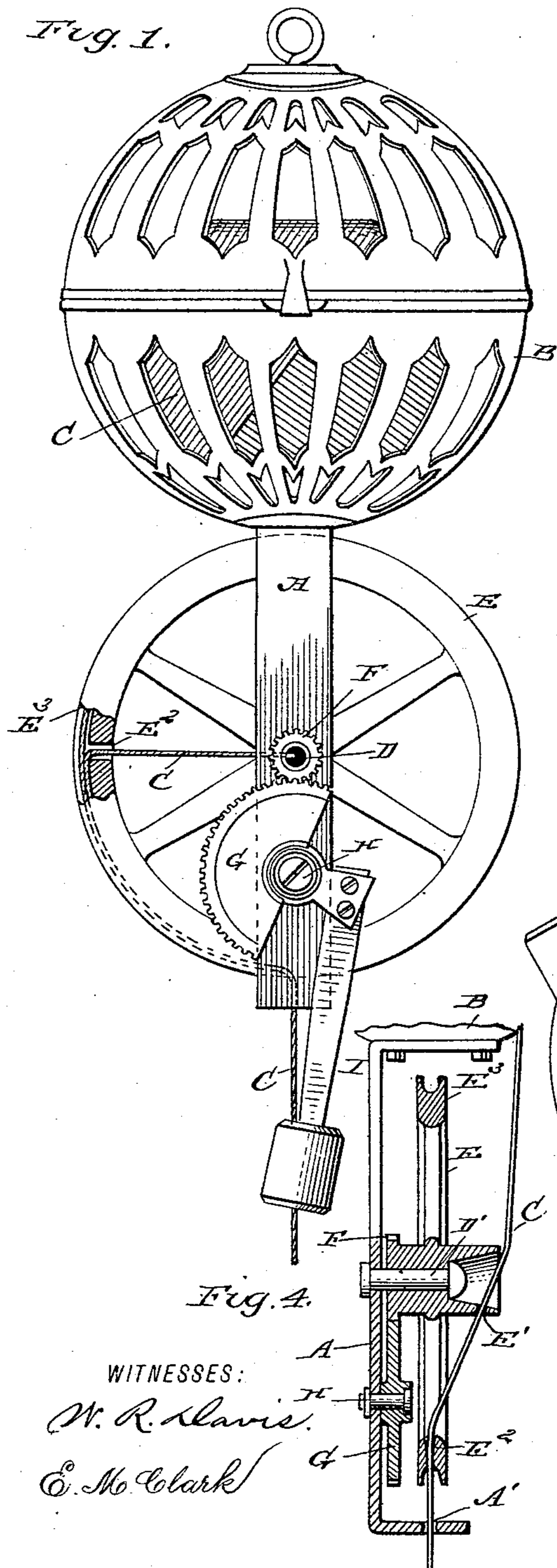


(No Model.)

C. F. WALTERS.
TWINE HOLDER ATTACHMENT.

No. 454,784.

Patented June 23, 1891.



WITNESSES:

W. R. Davis.

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CHARLES F. WALTERS, OF PROSPECT, NEW YORK.

TWINE-HOLDER ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 454,784, dated June 23, 1891.

Application filed September 3, 1890. Serial No. 363,968. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. WALTERS, of Prospect, in the county of Oneida and State of New York, have invented a new and Improved Twine-Holder Attachment, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved attachment especially designed for use on twine-holders, which is simple and durable in construction and automatically winds up the end of the twine after using it for tying packages, &c.

The invention consists in certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement as applied and with parts in section. Fig. 2 is a transverse section of the same. Fig. 3 is a side elevation of the same in a different position, and Fig. 4 is a transverse section of a modified form of the improvement.

The improved attachment is provided with a suitably-constructed frame A, secured on the twine-holder B, of any approved construction and containing the twine C. In the frame A is mounted to turn a hollow shaft D, carrying a pulley E, arranged between the sides of the main frame A and provided in its hub with an opening E' in communication with the hollow shaft D. Instead of using a hollow shaft, the pulley E may be mounted to turn on a stud D', the opening E' then being formed in the hub near its end, as shown in Fig. 4. In the rim of the wheel opposite the opening E' is arranged an opening E², leading to the annular groove E³, formed in the periphery of the wheel. In the cross-piece of the frame A is arranged an opening A', adapted to register with the opening E² when the wheel is in the position shown in Figs. 2 and 3, the twine passing from the holder B into the hollow shaft D, from the latter through the opening E' to the opening E², and from the latter to the opening A' in the frame A. At one end of the shaft D is secured a pinion F in mesh with a segmental gear-wheel G,

mounted to turn loosely on a stud H, held on the main frame A. The segmental gear-wheel G carries a weighted arm I for returning the said segmental gear-wheel to its normal position, (shown in Fig. 1,) in which position of the parts the twine from the opening E² is wound several times in the annular groove E³ before passing to the opening A', as hereinafter more fully described.

The operation is as follows: When the weighted arm I is in the position shown in Fig. 1, the pulley E is held in such a position that its opening E² stands at right angles to the weighted arm I. Now when the operator desires to use the twine he pulls at the end extending from the opening A' of the main frame A, thus causing the pulley E to turn, whereby the pinion F turns the segmental wheel D and swings the weighted arm I from its normal position, as shown in Fig. 3. The pulley E turns until the twine is all unwound from the annular groove E³ and the opening E² registers with the opening A' in the main frame A. When the operator now further pulls on the twine, more twine will be unwound from the ball of twine and will pass through the hollow shaft D, the openings E', E², and A', to be used for tying up the package in the usual manner. After this has been accomplished and the twine is cut off and the operator lets go of the end of the said twine, then the weighted arm I will swing downward by its own gravity, thus rotating the segmental gear-wheel G, which rotates the pinion F, so that the pulley E is turned and the end of the twine is wound up in the annular groove E³ of the pulley E until the parts stand in the normal position shown in Fig. 1. Thus it will be seen that the end of the twine which hangs down is wound upon the pulley E, a sufficient length of the twine extending downward from the opening A' of the frame A to be taken hold of by the operator whenever he desires to use the twine again for tying a package. It will thus be seen that the end of the twine is always in the same position near the twine-holder, and can be conveniently taken hold of by the operator for tying up a package, and when this has been done the end returns to the normal position, as stated. The frame A may hang downward vertically from the holder B or extend horizontally from the

same, as desired, the operation of the attachment being in all cases the same.

Having thus described my invention, I claim as new and desire to secure by Letters
5 Patent—

1. A twine-holder attachment comprising a frame adapted to be secured to the twine-holder, a grooved pulley mounted to turn in the said frame and provided in its hub and
10 rim with openings located opposite each other, a pinion connected to said pulley, a segmental gear-wheel in mesh with the said pinion, and a weighted arm connected with the said segmental gear-wheel, substantially as shown
15 and described.

2. A twine-holder attachment consisting of

the frame A, adapted to be secured to the holder, the hollow shaft D, mounted in the frame, the grooved pulley E, mounted on the shaft and provided with the opening E' in its
20 hub communicating with the hollow shaft and with the opening E² in its rim, the pinion F on the shaft D, the segmental gear-wheel mounted on the frame and meshing with the said pinion, and the weighted arm
25 secured to the segmental gear-wheel, substantially as herein shown and described.

CHARLES F. WALTERS.

Witnesses:

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