

(No Model.)

2 Sheets—Sheet 1.

L. MAAS.  
LEAF TURNER.

No. 377,569.

Patented Feb. 7, 1888.

FIG. 1.

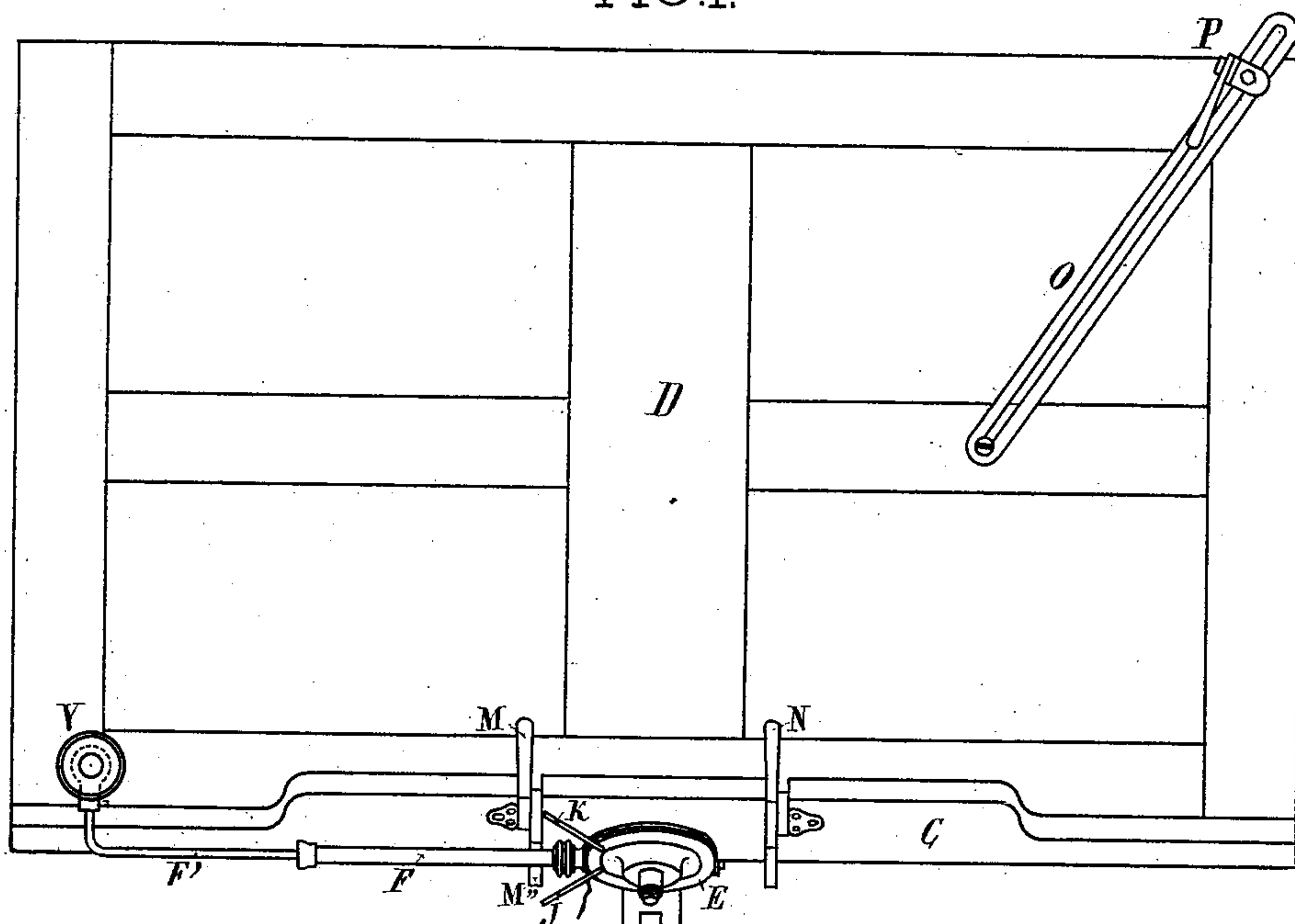


FIG. 7. FIG. 8.

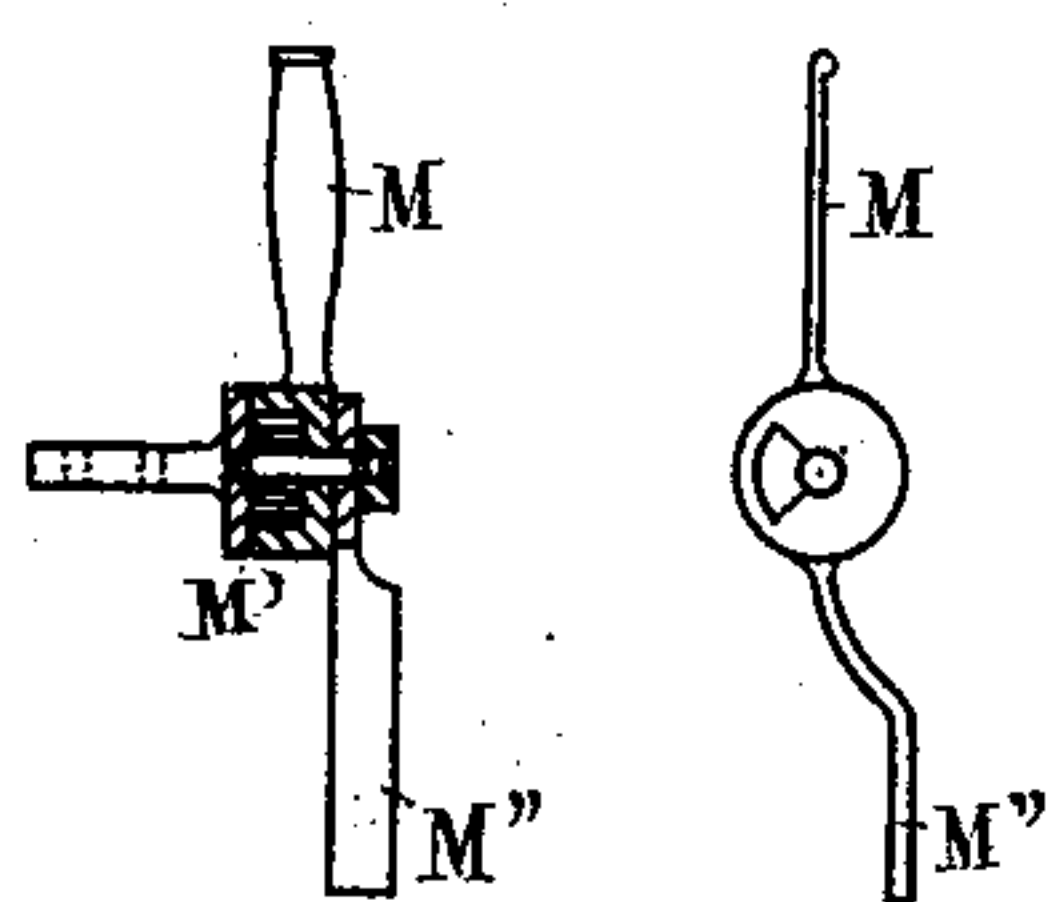


FIG. 9. FIG. 10.

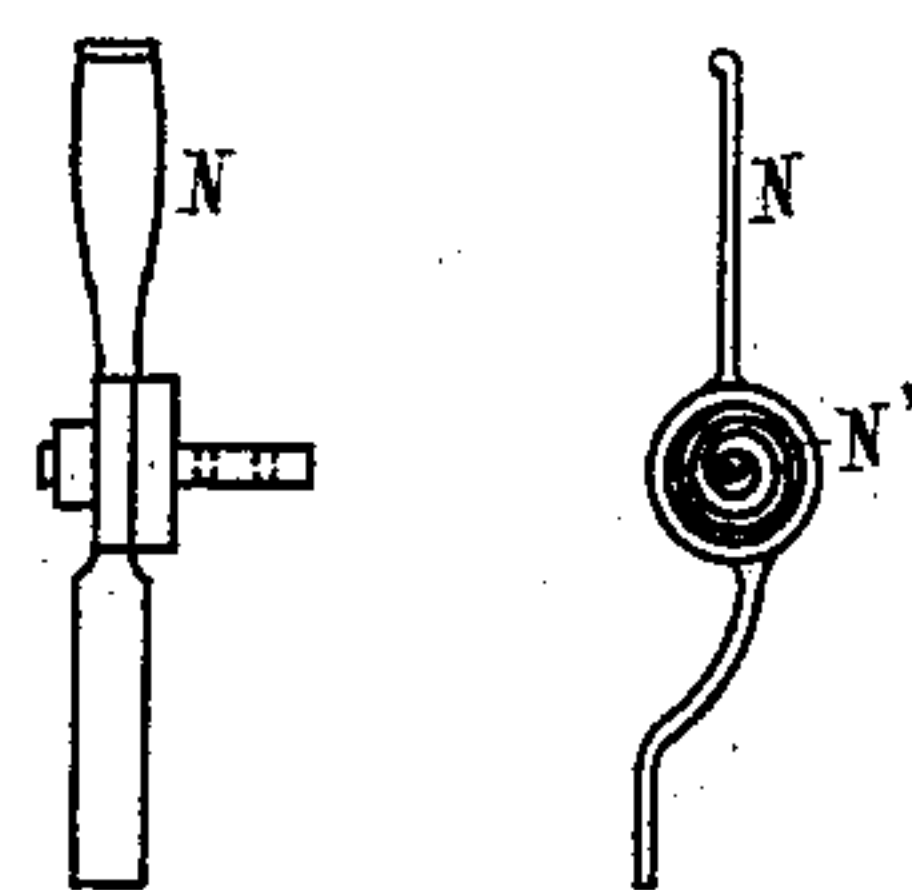
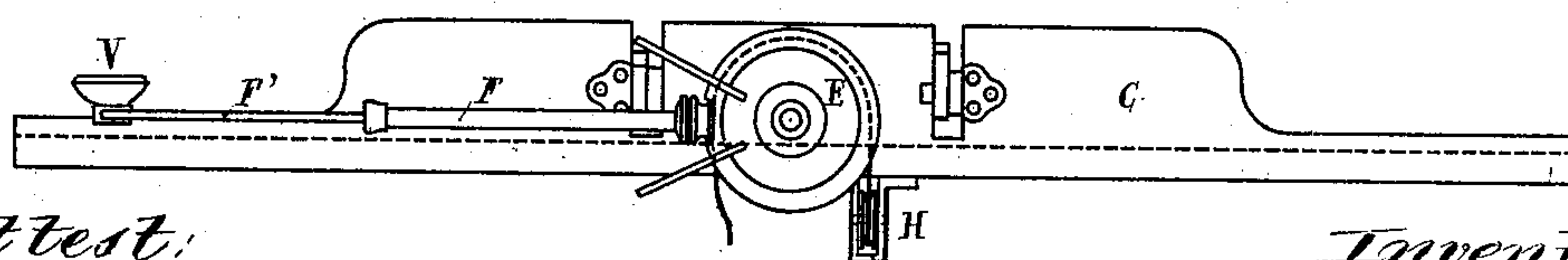


FIG. 3.



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*Louis Maas*  
per *Henry O. B.*  
*his atty.*

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FIG. 2.

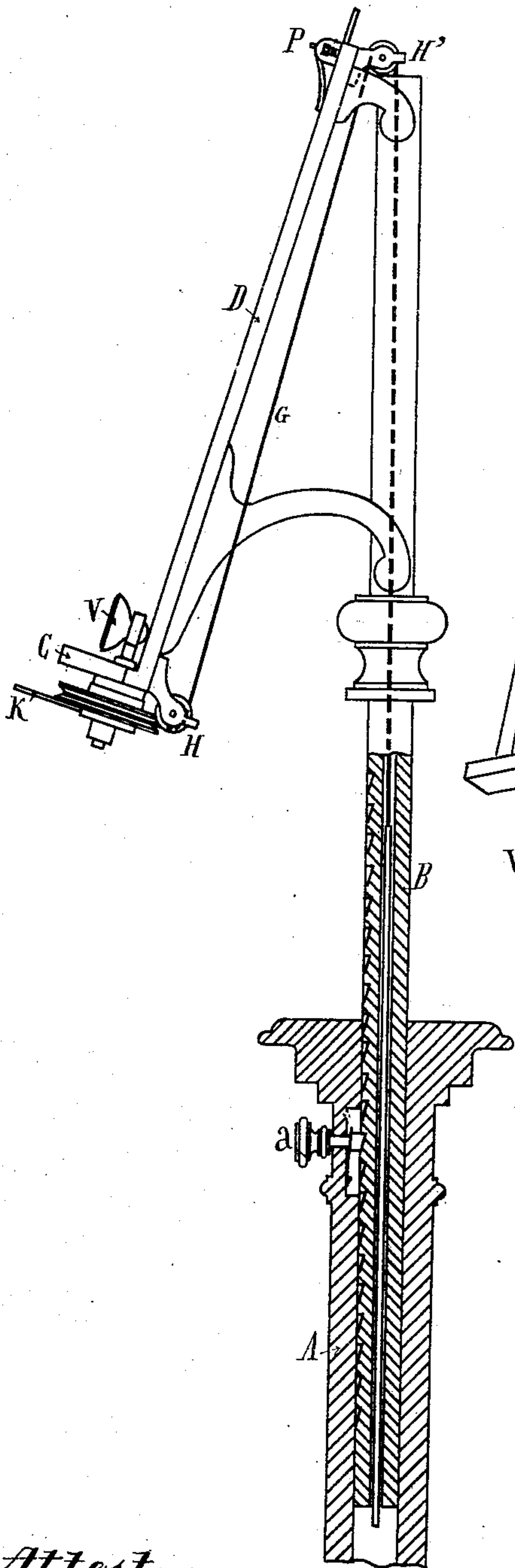


FIG. 4.

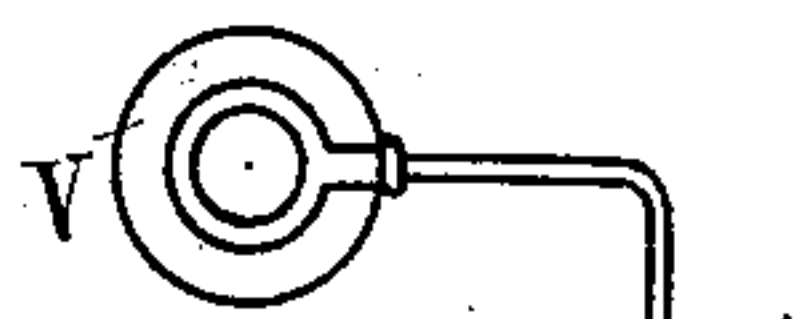
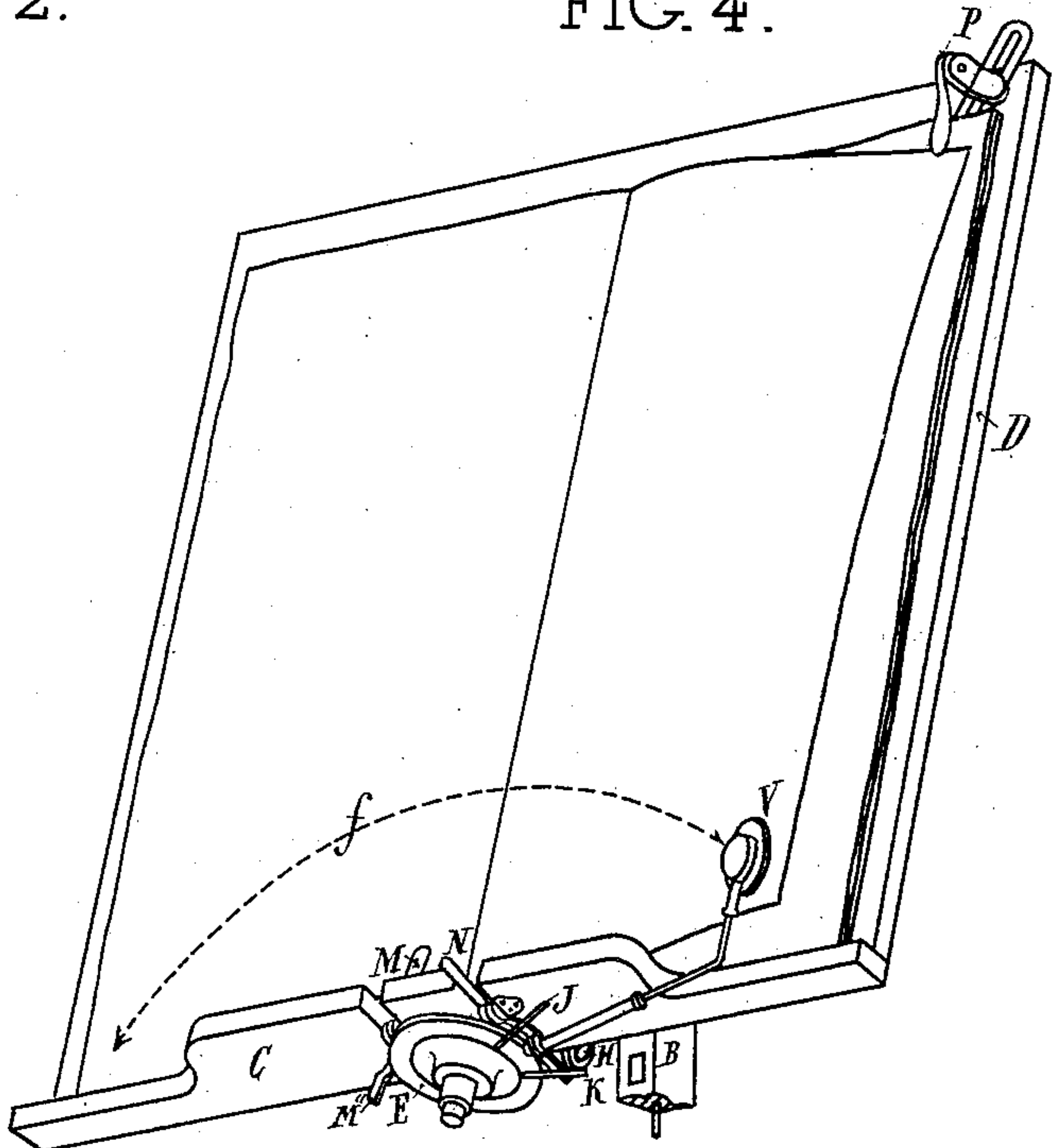
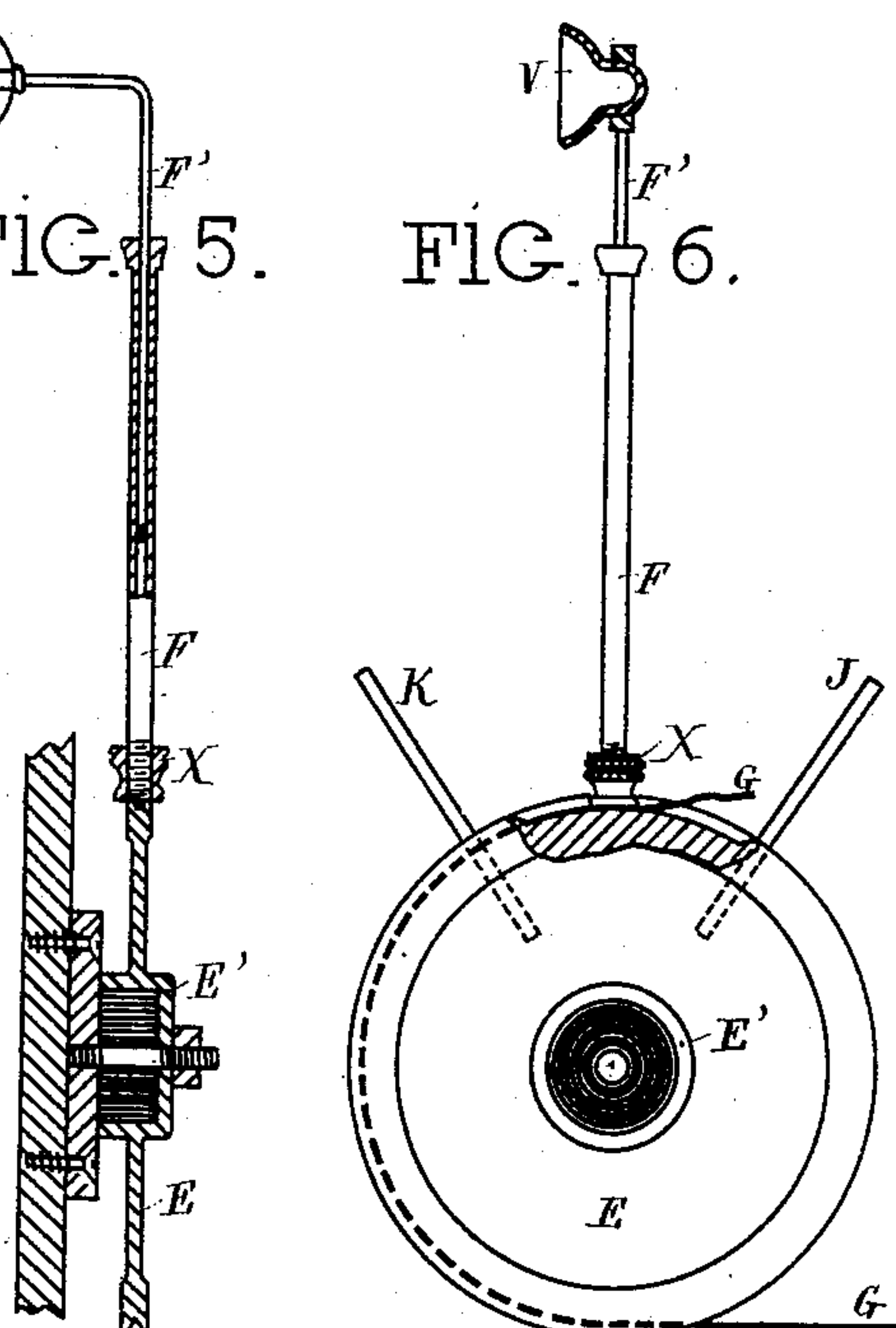


FIG. 5.



FIG. 6.



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# UNITED STATES PATENT OFFICE.

LOUIS MAAS, OF NEUILLY-SUR-SEINE, FRANCE.

## LEAF-TURNER.

SPECIFICATION forming part of Letters Patent No. 377,569, dated February 7, 1888.

Application filed May 27, 1887. Serial No. 239,558. (No model.) Patented in France November 12, 1886, No. 179,617, and in England May 10, 1887, No. 6,867.

*To all whom it may concern:*

Be it known that I, LOUIS MAAS, a citizen of the Empire of Germany, residing at Neuilly-sur-Seine, France, have invented certain new and useful Improvements in or relating to Leaf-Turning Mechanism for Music and other Stands and Instruments, of which the following is a specification.

The apparatus which forms the subject of the present invention has for its object to enable the musician to turn the leaves of the music-book during his performance by a simple movement of the foot without the aid of the hands.

In the accompanying drawings, Figure 1 represents a front view of the upper part of the music-stand. Fig. 2 is a side view of the same. Fig. 3 is a view of the under side of the board to which the mechanism is fixed. Fig. 4 is a perspective view of the stand at the moment in which the movable arm commences to turn a leaf. Fig. 5 is a longitudinal section of the movable arm. Fig. 6 is a plan view of the same. Fig. 7 is a section of the holder for holding the leaves already turned. Fig. 8 is a side view of the same. Fig. 9 represents the holder for holding the leaves that have not yet been turned. Fig. 10 is a side view of the same.

The music-stand consists, as usual, of the pillar with a foot and the rest for the book. The pillar A is hollow, and in it slides a hollow bar, B, provided with a rack, with which engages a spring-catch, *a*, the bar carrying at its upper end the book-rest D. By the rack-and-catch arrangement the book-rest may be adjusted at any desired height.

The mechanism for turning the leaves is fixed underneath the board C, which supports the music-book. This mechanism consists, essentially, in a movable arm, F F', Figs. 5 and 6. The arm F is fixed to a hollow hub or center, E, grooved on its circumference, and provided with a coiled spring, E', in its hollow interior. It is further provided with two radial pins, J and K. The arm F, secured to the hollow hub E, is also hollow, and preferably of square section, and in it moves a square rod, F', so that the arm can be lengthened or shortened at will.

At its outer end, which is bent up, this rod F' is provided with a suction-cup, V, made of india-rubber or any other suitable elastic material.

The movable arm F F', with its hub E, is moved by a cord, G, fixed in the groove of the hub by a screw, I. This cord G passes partly round this hub and over two pulleys, H H', respectively fixed to the bottom and top of the book-rest, and thence through the hollow rack-bar B, which supports the book-rest, and is preferably attached by a rod, I, to a spring-actuated pedal conveniently arranged in the foot of the stand; or the rod may be dispensed with, if desired. When the performer presses this pedal, the rod I, with the cord G, will be drawn down, and the movable arm F F' will describe a half-circle and press the suction-cup V against the corner of the leaf to be turned. When the pedal is released, the coiled spring in the interior of the hub E of the movable arm will return the arm quickly to its original position and take the leaf with it by the action of the suction-cup.

On each side of the grooved hub E the board C, supporting the music-book, is provided with a groove containing a spring-actuated holder. The holder N on the right, Figs. 9 and 10, consists of one piece, the middle part, N', of which is hollow, and contains a coiled spring, which constantly presses the upper end of the holder against the right side of the music-book. The object of this holder is to keep the leaves in their proper position, so that the suction-cup may always apply itself to the desired part of the leaf. The holder M on the left of the hub E, carrying the movable arm F F', has also a hollow center, M', containing a coiled spring, which holds the upper end of the holder against the music-book; but its lower part, M'', forms a pawl rigid in one direction and movable in the other.

When the performer wishes to turn a leaf and presses the pedal down, the movable arm F F' will describe its semicircle, and one of the radial pins, K, will deflect the holder N on the right-hand side to a horizontal position, so as to enable the leaf to pass it. When the pedal is released, this radial pin K will release the holder, which will return to its position under the action of its coiled spring.

During the return of the movable arm the other radial pin, J, will trip the holder M on the left-hand side, the pawl M'' of said holder



being rigid in this direction, so that the leaf may pass. This holder has for its principal object to prevent the suction-cup returning the leaf to the other side when the next leaf is to be turned.

To prevent the suction-cup turning more than one leaf at a time, the book-rest D is provided at its upper right-hand corner with a spring-actuated holder, P, which presses gently on the upper right-hand corner of the music-book. This holder P is adjustable in a slot, O, so as to adjust it according to the size of the music-book. For the same object the outer end, F', of the movable arm slides in the hollow part F, fixed to the hub E.

To facilitate and assure the action of the suction-cup, it is preferable to fix a piece of smooth and air-tight—*i. e.*, non-porous—paper to the corner of the leaves, or to treat them with a suitable varnish to fill the pores of the paper.

It is evident that the same mechanism may be adapted to pianos, organs, and the like without deviating from the spirit of the invention.

I claim—

1. In a leaf-turning mechanism, the combination, with a stand and a leaf-turning device, of a finger or holder adjustable on the stand relatively to the music supported therefrom, as described.

2. In a leaf-turning mechanism, the combination, with a pivoted leaf-turning arm having a hub provided with radial fingers, of pivoted spring-actuated holders adapted to press upon the leaves and operated by said radial fingers during the turning movements of the leaf-turning arm, in the manner and for the purpose specified.

In testimony whereof I have hereto set my hand in the presence of two subscribing witnesses.

LOUIS MAAS.

Witnesses:

AUG. STRAUSS,  
JEAN ROBCHT.