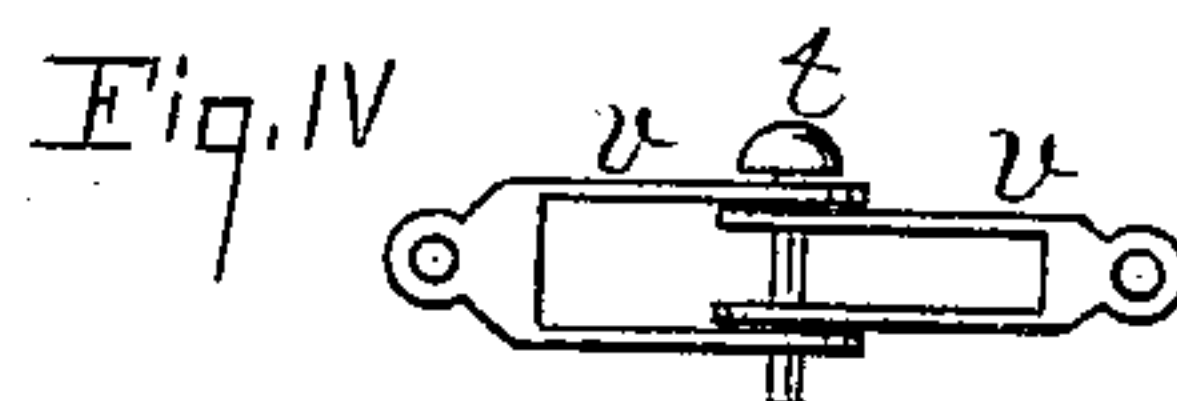
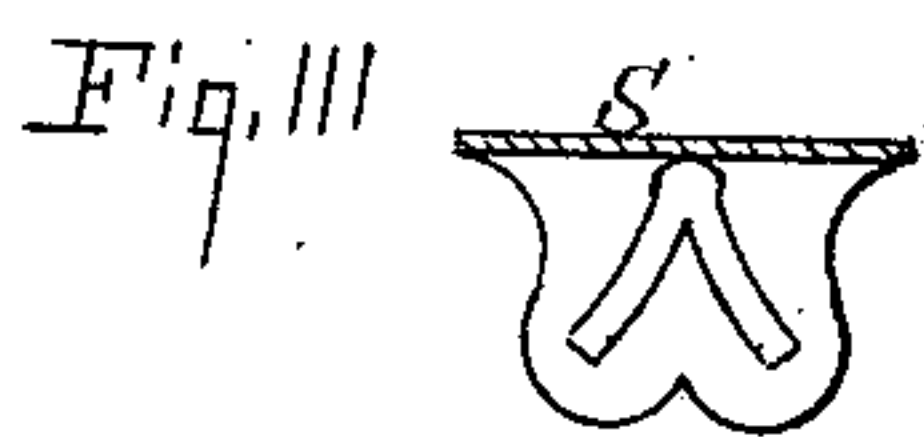
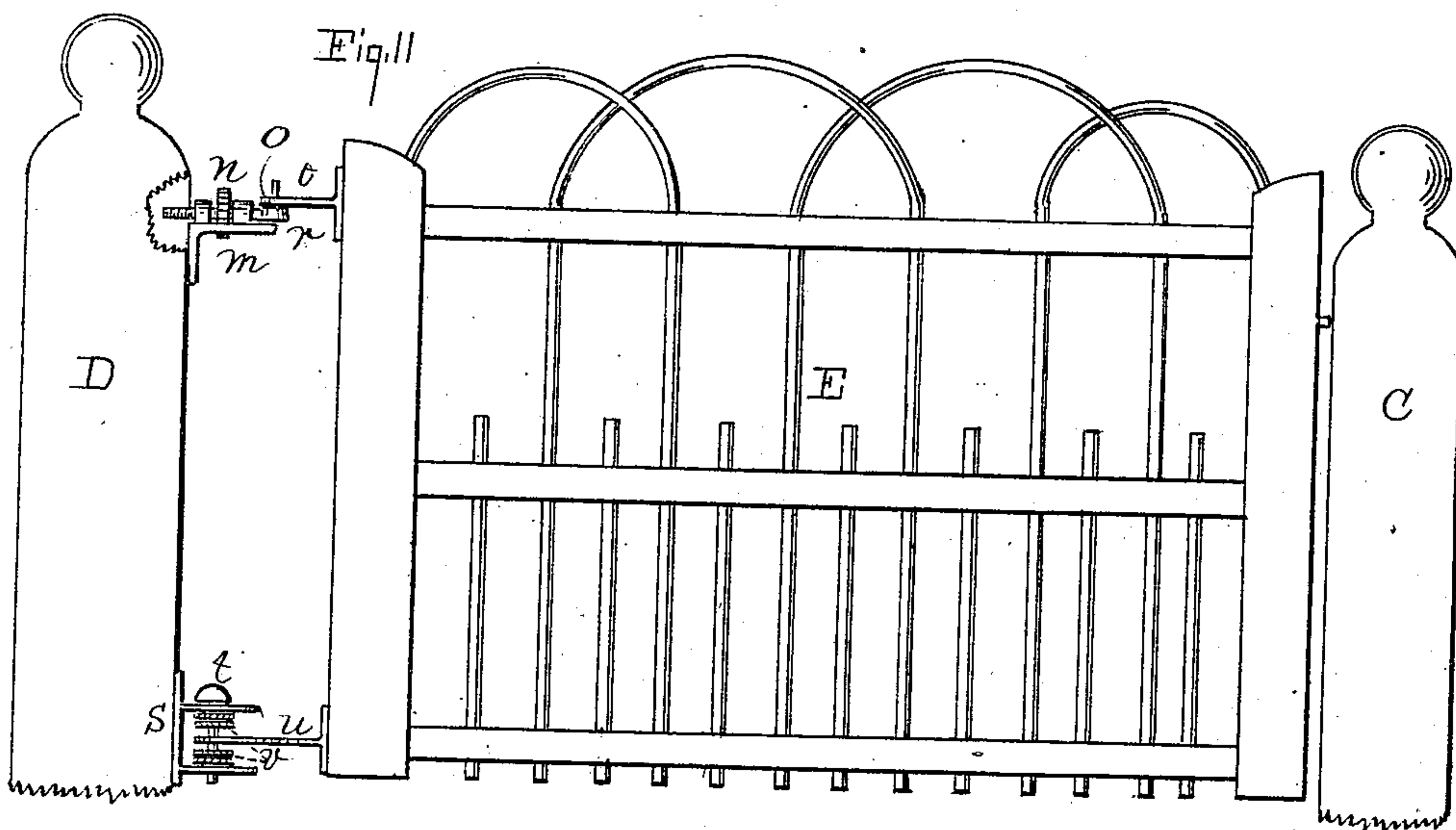
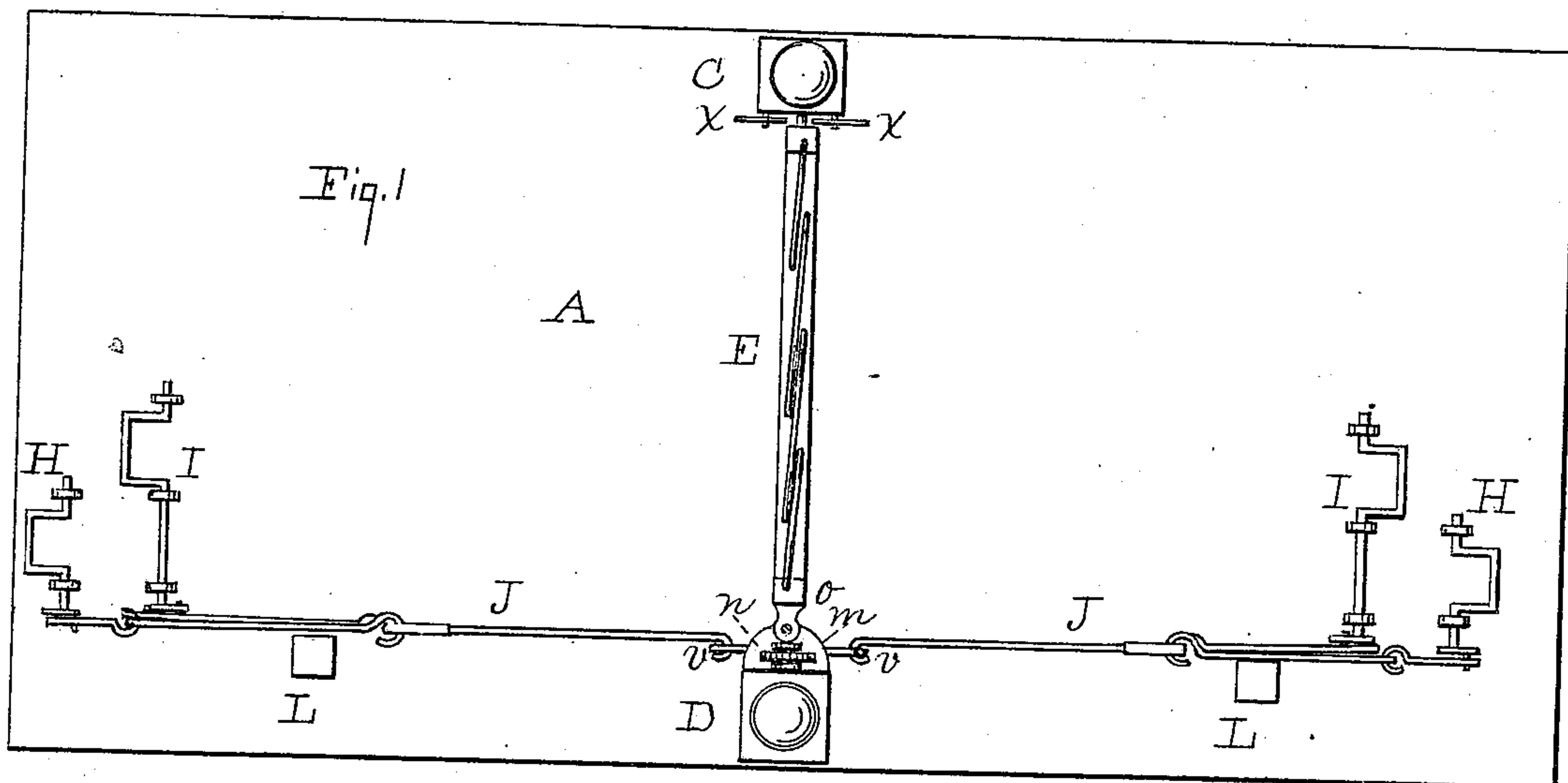


C. W. BARNES.  
Gate.

No. 230,165.

Patented July 20, 1880.



Witnesses,  
A. Peabody  
B. Pickering

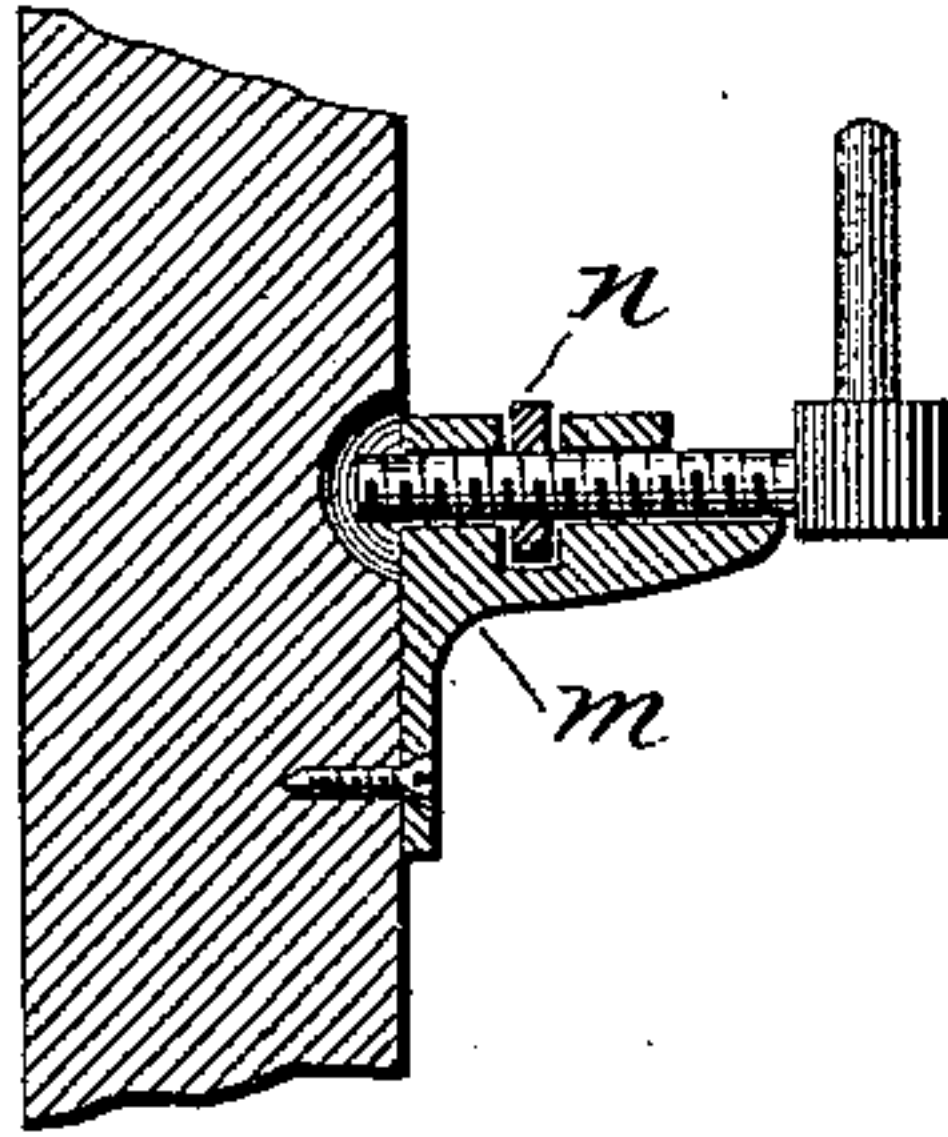
INVENTOR  
Charles W. Barnes.

C. W. BARNES.  
Gate.

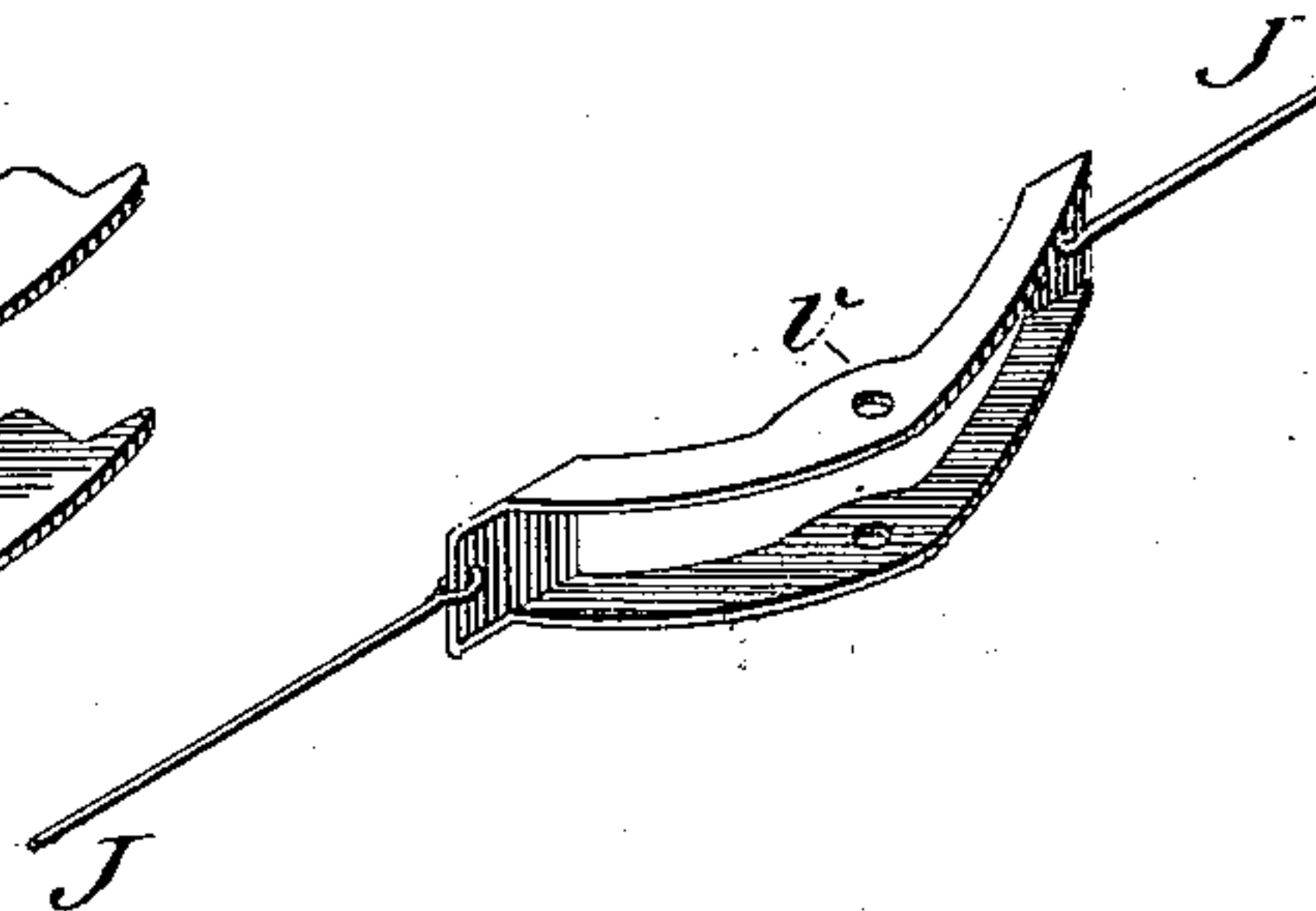
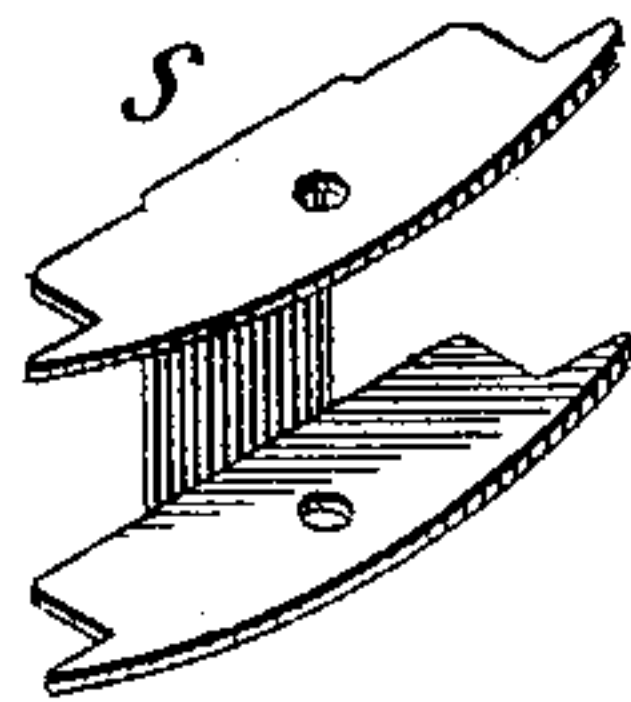
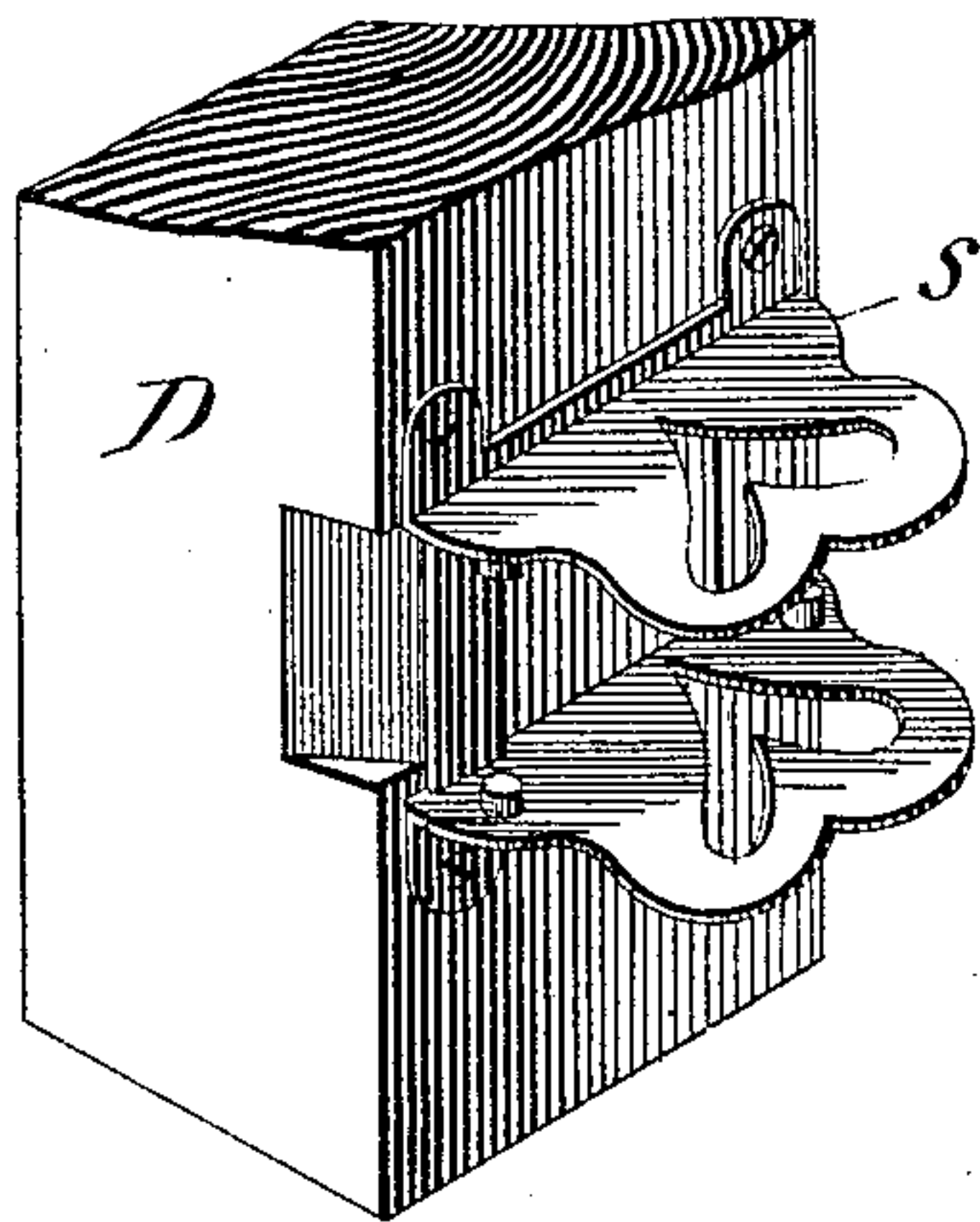
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*Fig. V.*



*Fig. VI.*



*Witnesses:*

*L. S. Jones*  
*W. H. Allen*

*Inventor:*

*Charles W. Barnes*  
*By B. Pickering*  
*His atty.*



# UNITED STATES PATENT OFFICE.

CHARLES W. BARNES, OF RANDOLPH TOWNSHIP, MONTGOMERY COUNTY,  
OHIO.

## GATE.

SPECIFICATION forming part of Letters Patent No. 230,165, dated July 20, 1880.

Application filed February 12, 1880.

*To all whom it may concern:*

Be it known that I, CHARLES W. BARNES, of Randolph township, Montgomery county, and State of Ohio, have invented new and useful Improvements in Gates, of which the following is a specification.

My invention relates to improvements in that class of gates which are operated by the wheel of the passing vehicle; and it consists in the device for shifting the position of the gate and the device to adjust the gate against sagging.

The accompanying drawings serve to illustrate the mechanism, in which Figure I is a top view of the gate and its attachments. Fig. II is a side elevation of the gate. Fig. III is a top view of the support. Fig. IV is a front view of the arms that support the pin. Fig. V is a longitudinal section of the top hinge. Fig. VI is a perspective of the support.

A represents a base, which corresponds to the earth in the setting of the gate. Attached to this base are four posts, set in vertical position, and also the trip-irons.

L L are posts, used simply to arrest the movement of the gate.

To the post D the gate is suspended, and when the gate is closed gravitating latches secured to the post C hold the gate securely closed.

The gate E may be constructed of any suitable material and in any desirable form, as the form of the gate is not involved in the invention.

The gravitating latches *x x* are substantially the same as those in general use.

The trip-irons H and I are constructed much like those in use and secured to the ground in the same manner. Each has but a single bend. The ends to which the rods are attached are either bent, or a crank-like plate is attached, and, the connection being made without the axis of the trip-irons, a movement of the trip-irons causes a retraction of the rods J, which are attached to the arms *v*, carrying the pin upon which the lower part of the gate turns. The trip-irons have each a separate

connection with the rods J, and all of the several rods act by retraction.

The support *m* has two projections on its upper surface and a slot for the nut *n*. It has a flanged projection, by which it is bolted to the post. These top projections have orifices to receive the pivot-iron *r*, which moves freely within these orifices. This pivot-iron has a thread cut on the rear end for the nut, and by this means the gate is adjusted when sagging has taken place from any cause. As the pivot-iron is held in the support only by the action of the nut, consequently the turning of the nut causes the gate to rise or lower at its forward end, as may be desired.

The eye-iron *o* is bolted to the gate, and engages the pivot-iron, thus forming a top hinge for the gate. A similar eye-iron, *u*, is attached near the bottom of the gate, the only difference being that the lower one is the longer.

The lower support, *s*, consists of a vertical portion, which is bolted to the post, and has two horizontal plates, each containing a V-shaped slot. Into these slots are placed the pin *t*, in which it freely moves. A top view of the support *s* is shown at Fig. III.

The arms *v*, that carry the pin and sustain it in a vertical position, are shown in section at Fig. II and a front view at Fig. IV.

The pin supports the lower eye-iron, and consequently as the pin is shifted in position the gate has a corresponding motion, which results from the gravity of the gate.

The operation may be described thus: The wheel of the passing vehicle engages the trip-iron H to the right. The effect is to carry the bottom of the gate forward and outward in the direction of the approaching vehicle, which causes the gate to open in an opposite direction. When the vehicle has passed the gate it engages the trip-iron I, which, shifting the gate again, by the movement of the pin carrying the gate within the slot, the gate is closed, and vice versa.

I am aware that prior to my invention automatic gates have been made that involve a mechanism somewhat alike in the mode of operation, but am not aware that the adjust-

ment against sagging and the manner of shifting the lower pivot have been known; and

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

- 5 1. The support *m*, the pivot-iron *r*, adjusting-nut *n*, and eye-iron *o*, constructed and arranged with reference to a post and gate substantially as set forth.

2. The support *s*, pin *t*, arms *v*, and eye-iron *u*, constructed and arranged with reference to a post and gate in the manner substantially as set forth. 10

CHARLES W. BARNES.

Witnesses:

A. PEABODY,

B. PICKERING.