(No Model.)

3 Sheets—Sheet 1.

G. W. SCHROEDER.

POULTRY HOUSE.

No. 406,778. Patented July 9, 1889.

Fig. 1.

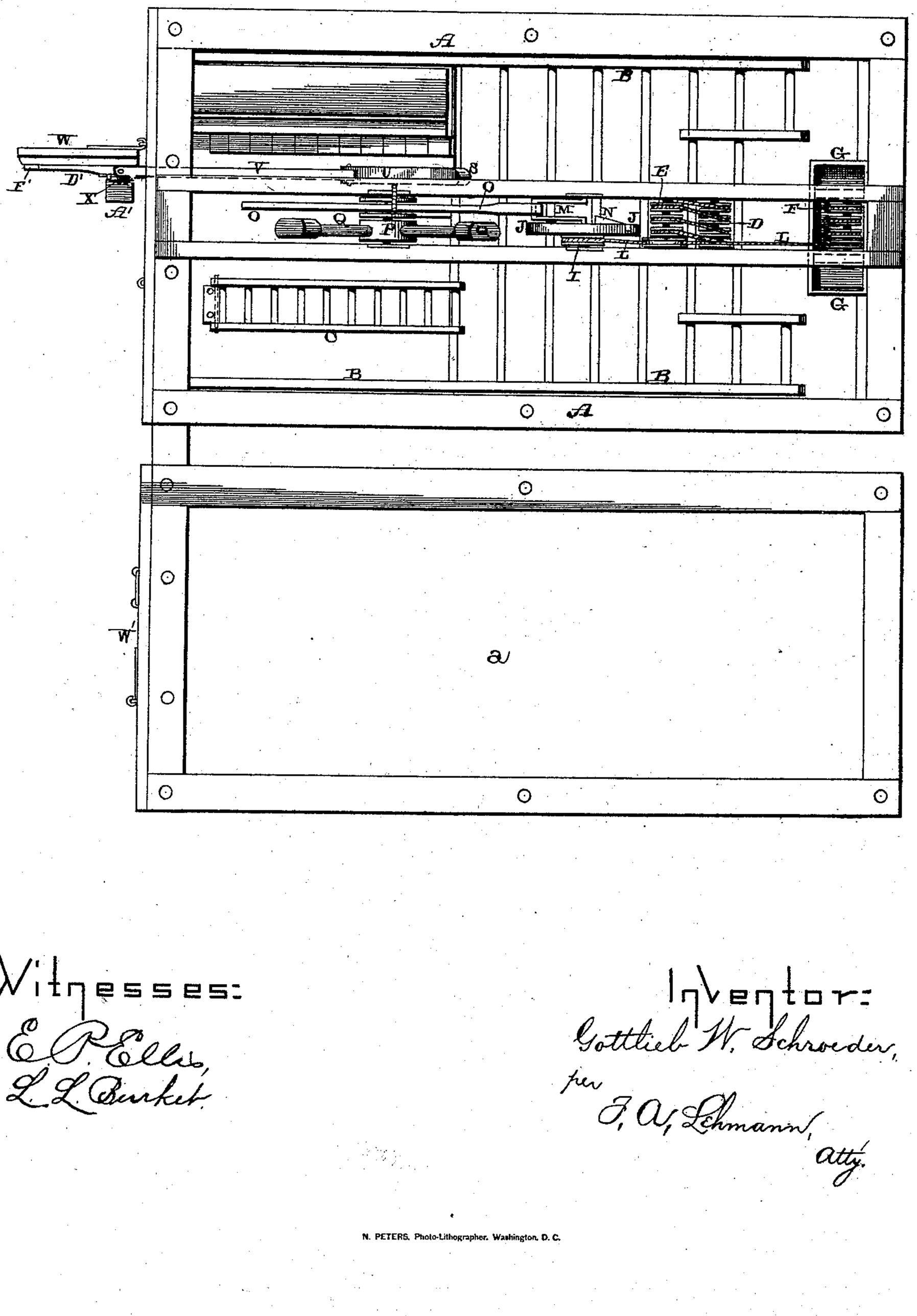

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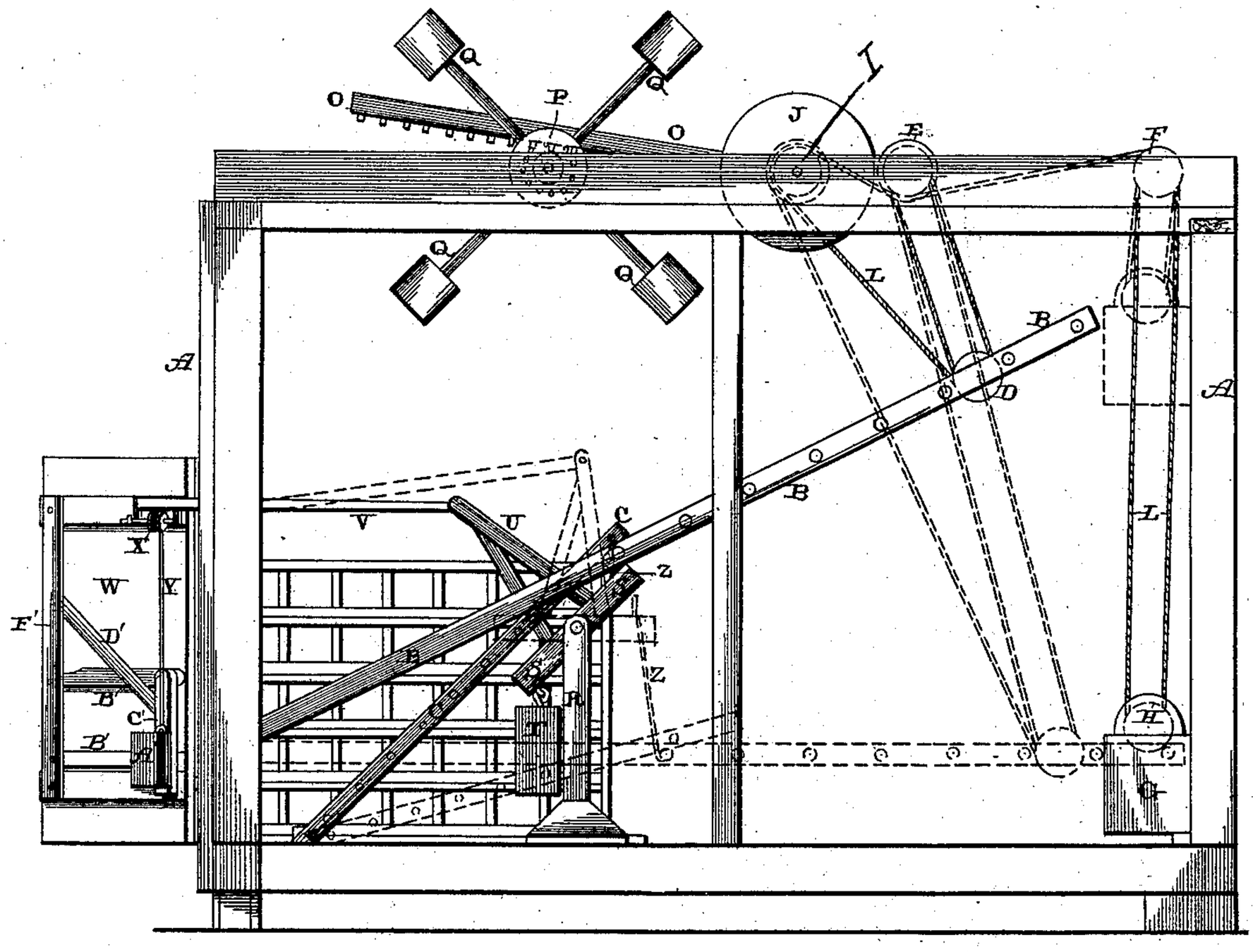
Fig. 2.



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(No Model.) 3 Sheets—Sheet 3.

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Fig. 3.

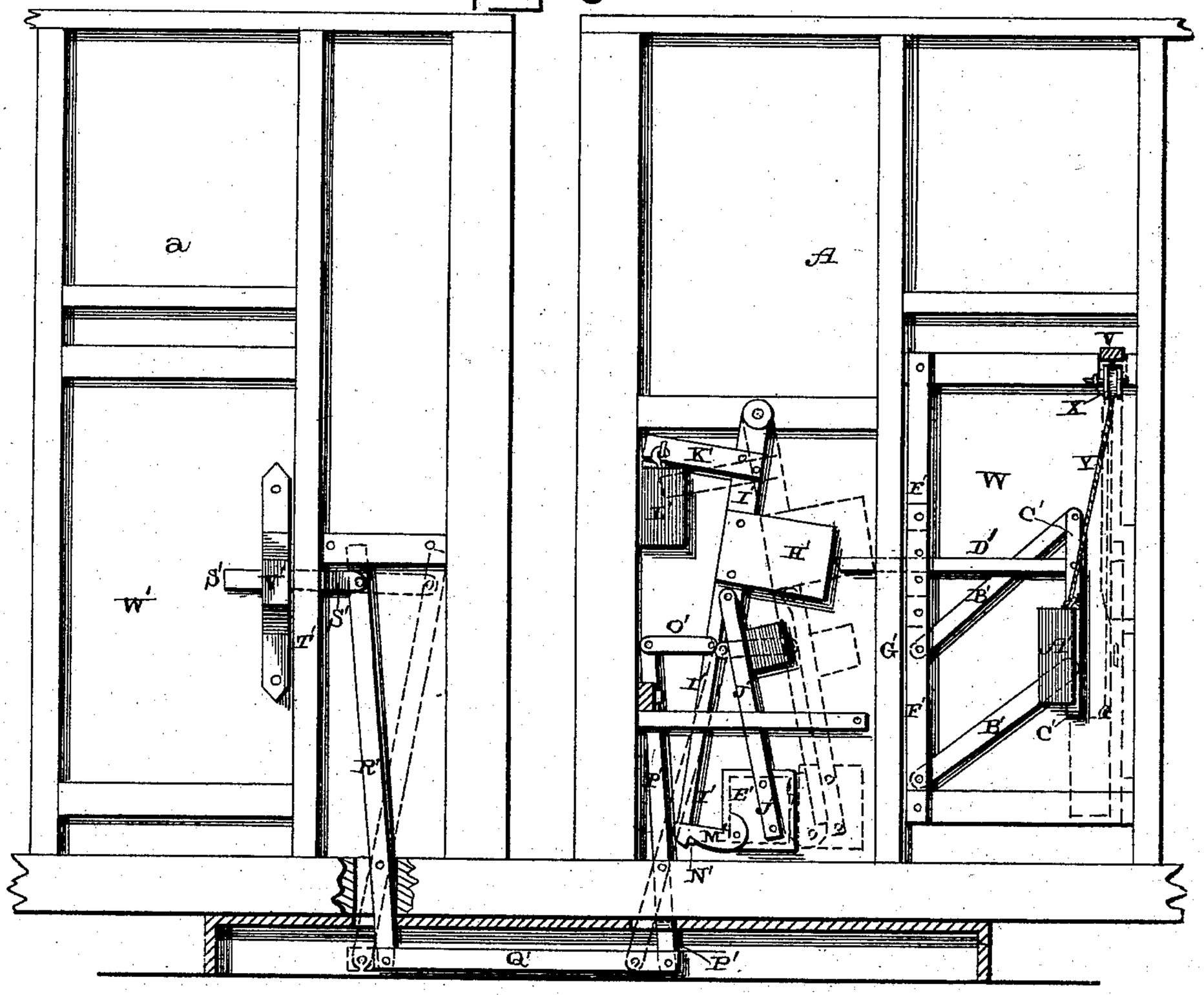
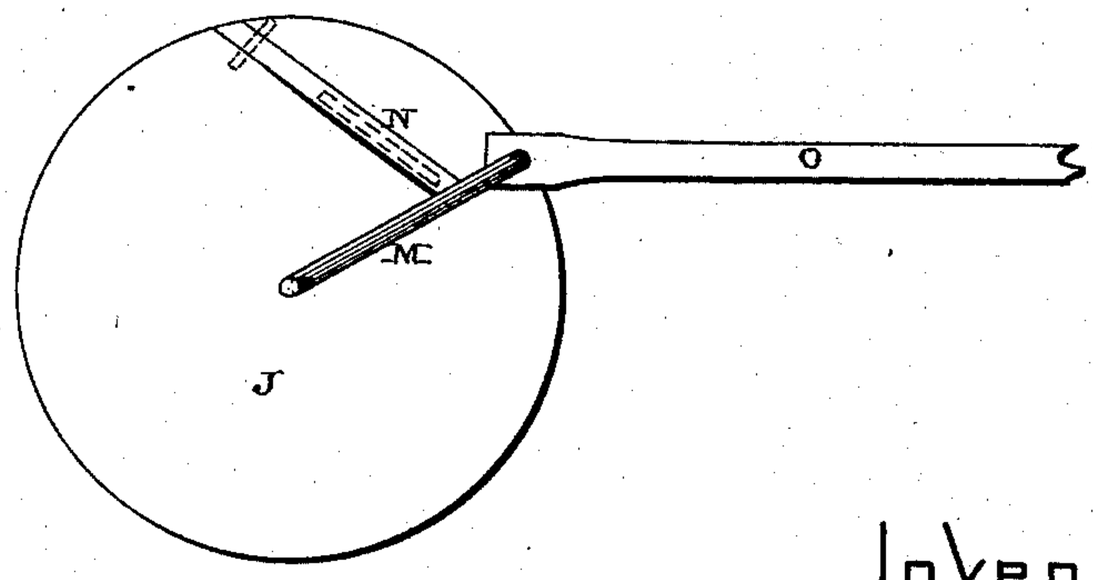


Fig. 4.



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UNITED STATES PATENT OFFICE.

GOTTLIEB W. SCHROEDER, OF HUNTINGTON, INDIANA.

POULTRY-HOUSE.

SPECIFICATION forming part of Letters Patent No. 406,778, dated July 9, 1889.

Application filed February 14, 1889. Serial No. 299,842. (No model.)

To all whom it may concern:

Be it known that I, GOTTLIEB W. SCHROEDER, of Huntington, in the county of Huntington and State of Indiana, have invented certain new and useful Improvements in Poultry-Houses; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in poultry-houses; and the object of my invention is to have the weight of the chickens upon the pivoted roost set in motion a suitable mechanism whereby as the roost descends, carrying the chickens with it, a counter-weight is raised and the door of the chicken-house is gradually closed at the same time that a slide is made to close the opening through which the chickens enter the building, and to have the counter-weight in the morning, after a portion of the chickens have left the roost, set in operation the same mechanism, so as to unbolt the doors and open the slide.

Figure 1 is a plan view of a poultry-house which embodies my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a detached view showing the bolt mechanism. Fig. 4 is an enlarged view of the wheel J, with its spring-dog and crank.

A represents a poultry-house of ordinary construction, and in which the roost B is pivoted at the front of the building and extends back its entire length. This roost is intended to have a rising-and-falling movement, as it is through the weight of the chickens upon the roost that all of the bolting and locking devices of the buildings are actuated. When the chickens are not upon the roost, it is intended to extend backward and upward at any desired angle; but after the chickens have gone to roost it is intended to sink downward into about a horizontal position. For the purpose of enabling the chickens to readily ascend to the roost when in its raised position, a ladder C is used, and which ladder is pivoted at its lower end, so that it can follow the movement of the roost.

Journaled upon the roost is a series of pulleys D, and journaled in a suitable frame-work in the top of the building is a second series of pulleys E. In this same frame-work in the rear of the building is journaled a third series of pulleys F, and journaled in a box G, which serves as a counter-weight to the roost, is a fourth series of pulleys H. A continuous cord passes from the right side of the series of pulleys E down under the pulleys D, then up over the pulley I, formed upon the hub of the wheel J, then back over the pulleys F, and down around the pulleys H in the box G. The weight of the box G should be slightly less than the whole number of chickens which are to roost upon the roost B, so that when all of the chickens are upon the roost the weight of the roost and the chickens thereon will more than counterbalance the box G, and thus cause the roost to sink downward and raise the box G. In the morning when the chickens begin to descend from the roost B the weight of the box becomes operative and descends and the roost rises. This action of the roost and weight is automatic, and after once started in operation the device requires no further care on the part of the operator. As the cord L, which passes over the four sets of pulleys and the hub I upon the wheel J, moves back and forth as the roost and box alternately rise and fall, the wheel J is made to revolve by frictional contact with the cord and to regulate the movement of the mechanism which closes and bolts the doors. The wheel J is placed loosely upon the crank-shaft M, and is provided with a spring-actuated inclined dog N in its side. This dog N slips freely past the crank when the box is descending and the roost B is rising, as no work is to be accomplished by the wheel J; but when the roost is descending and the box is rising the projecting end of the dog catches against the crank and causes the shaft and wheel J to revolve together.

Attached to the crank is the toothed pitman O, which engages with the toothed wheel P, which is provided with the weighted arms Q, which wheel revolves a little more than once around in one direction, and then, as the crank reverses the movement of the pitman, the motion of the wheel P is reversed at the same time. The weighted arms Q give the

wheel P a slow movement, so that a considerable time will elapse after the mechanism is once set in motion by the weight of the chickens upon the roost before the door is closed and locked, thus giving abundance of time for the last chickens out to get into the building before the door is closed upon them.

As above stated, when the roost is descending, caused by the weight of the chickens upon it, the wheels J P are made to operate for the purpose of giving a slow movement to the operating parts, and when the roost is rising in the morning after the chickens have left it the wheel J revolves idly around without causing the toothed connecting-rod O to operate the wheel P.

Pivoted upon the standard R is the lever S, which is provided with a weight T at one end, and which lever is connected to and operated by the descent of the roost B in one direction and by the weight T in the other. Rising from the top of this lever is a suitable arm U, and from the top of this arm U extends the pivoted rod V, which operates the door W of the chicken-house. To the upper inner corner of the door W is journaled a pulley X, over which the cord Y, connected to the outer end of the pivoted rod V, passes. When the upper end of the arm U is drawn inward by the descent of the roost B through the cord, wire, or chain Z, the pivoted rod V first exerts through the cord Y, which passes over the pulley X, a direct pull for the purpose of closing the door, and then exerts a continued pull upon the cord Y for the purpose of moving the bolt mechanism placed upon the door W. To the lower end of the cord Y and to the bolt mechanism is attached a suitable weight A′, for the purpose of causing the bolt mechanism to unbolt the door as soon as the parts of the bolt mechanism are left free to move. This bolt mechanism consists of the two rods B′, which are loosely pivoted at their outer ends, and which are connected together by the vertical rod C′, for the purpose of causing them to move together. Pivoted to this vertical connecting-rod C′ is the bolt D′, which serves both to bolt the door W from the inner side when it is closed and to operate the locking mechanism connected with the slide E′. The bolt D′ passes through the vertical rod or keeper F′, secured to the inner side of the door W, and passes through an opening in the vertical upright G′, so as to strike against the block H′, which is secured to the vertical lever I′. This block H′ is secured to the lever I′, so as to extend over to the upright G′, for the purpose of being operated by the bolt D′. The lever I′ extends downward to the slide E′, but is not connected thereto, and pivoted to this lever F′, below the block H′, is a lever J′, to the lower end of which the slide E′, which closes the opening through which the chickens pass back and forth, is pivoted. Projecting from the upper end of the lever I′ is an arm K′, upon which the weight L′ is hung. This weight serves as a counter-balance, so that as soon as the lever I′ is left free to move this weight L′ instantly forces its lower end backward for the purpose of first releasing the latch and then moving the slide E′ back from over the hole through which the chickens pass. Pivoted to this slide E′ is the latch M′, which is shaped as shown, and which is operated entirely by the lower end of the lever I′. When the bolt D′ forces the lever I′ laterally, so as to cause the slide E′ to close the opening, the lower end of the lever I′ causes the latch M′ to turn upon its pivot and to catch over the pin N′ for the purpose of locking the slide E′ in place. The lower end of the lever I′ remains over the top of the latch M′, so as to prevent it from being operated, and when the lever I′ is released, so that the weight L′ returns it to position, the lower end of the lever strikes against the latch and detaches its hooked end from the pin N′.

Secured to the lever I′ near its center is an arm O′, and to the outer end of this arm O′ is pivoted a lever P′, which has its lower end to extend through an opening in the floor, and pivoted to this lower end of the lever P′ is a connecting-rod Q′, which is connected at one end to the lower end of the lever R′. This connecting-rod Q′ is placed in a box, which is placed under the level of the ground, and which extends from the poultry-house to the adjoining building *a*, which may be a granary or a stable or outbuilding of any kind. To the upper end of the lever R′ is attached a bolt S′, which passes through an upright T′ and through a keeper V′ upon the door W′. At the same time that the door W is closed and bolted by the descent of the roost the hole through which the chickens enter is closed by the slide E′ and latched, and the bolt S′ is made to bolt the door W′ of the building *a*, located any suitable distance from the poultry-house or located alongside, just as may be desired. As the doors W W′ are bolted from the inside at night, both the hen-house and the other building should be provided with doors having locks upon them, so that in case of necessity a person can get into them during the night.

Having thus described my invention, I claim—

1. The combination of the movable roost provided with a series of pulleys, two sets of pulleys overhead, and a counter-weight provided with pulleys, a wheel provided with a spring-dog, a cord which passes around the pulleys and the hub upon the wheel, the crank-shaft upon which the wheel is loosely placed, the toothed rod, and the wheel P, provided with teeth to engage with the toothed connecting-rod, and the weighted arms, substantially as shown.

2. The combination of the movable roost and a counter-weight connected thereto for returning it to position with a connecting-cord, a pivoted and weighted lever mounted upon a standard and provided with an arm

U, the pivoted connecting-rod having a cord Y attached to its outer end, and a bolt mechanism whereby the movement of the lever S, as the roost descends, causes the door to which the bolt mechanism is applied to first close and then operates the bolt so as to lock the door, substantially as described.

3. The combination of the pivoted roost and a counter-weight connected thereto with the pivoted lever S, provided with a counter-weight at one end, the cord which connects the lever to the roost, the arm U, the pivoted connecting-rod V, having a cord Y attached to one end, the door W, the pulley attached to the door, the pivoted rods B′, connected together at their inner end by the rod C′, a weight A′, and the bolt D′, attached to the vertical rod C′, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

GOTTLIEB W. SCHROEDER.

Witnesses:

E. P. ELLIS,

F. A. LEHMANN.