

No. 636,308.

Patented Nov. 7, 1899.

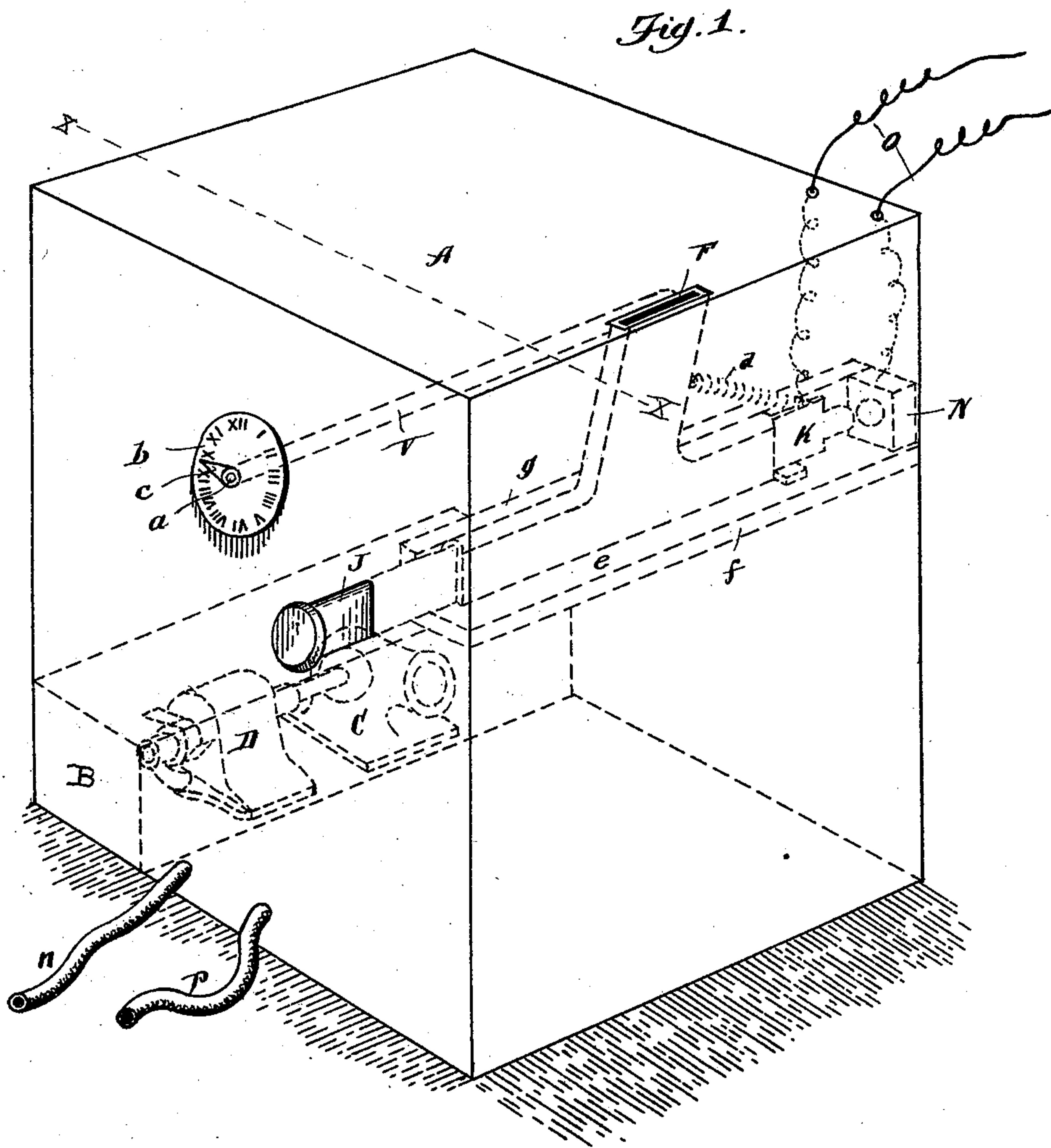
J. F. WILSON.

DEVICE FOR INFLATING PNEUMATIC TIRES.

(Application filed Dec. 5, 1898.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES.

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Fig. 2.

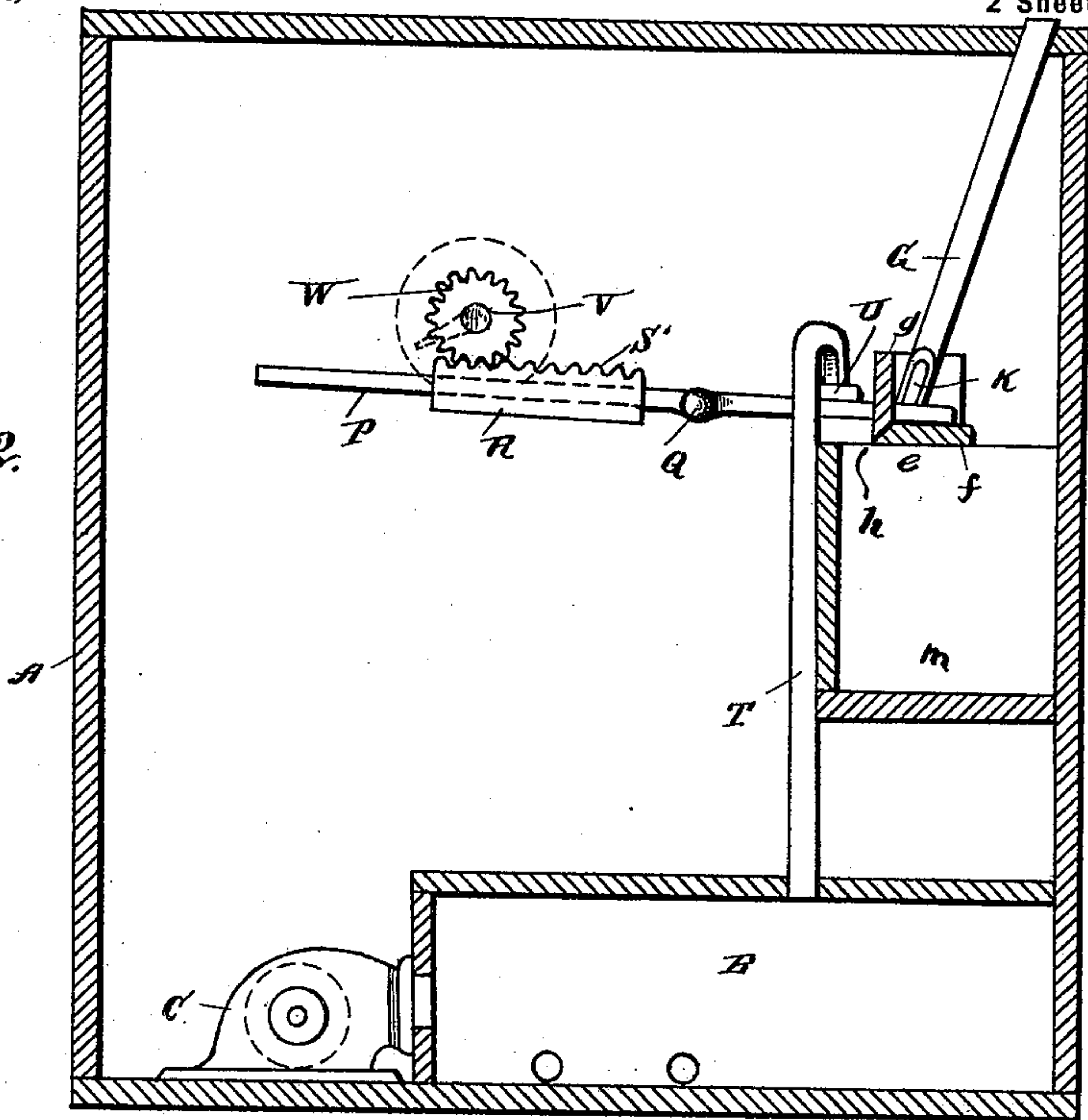
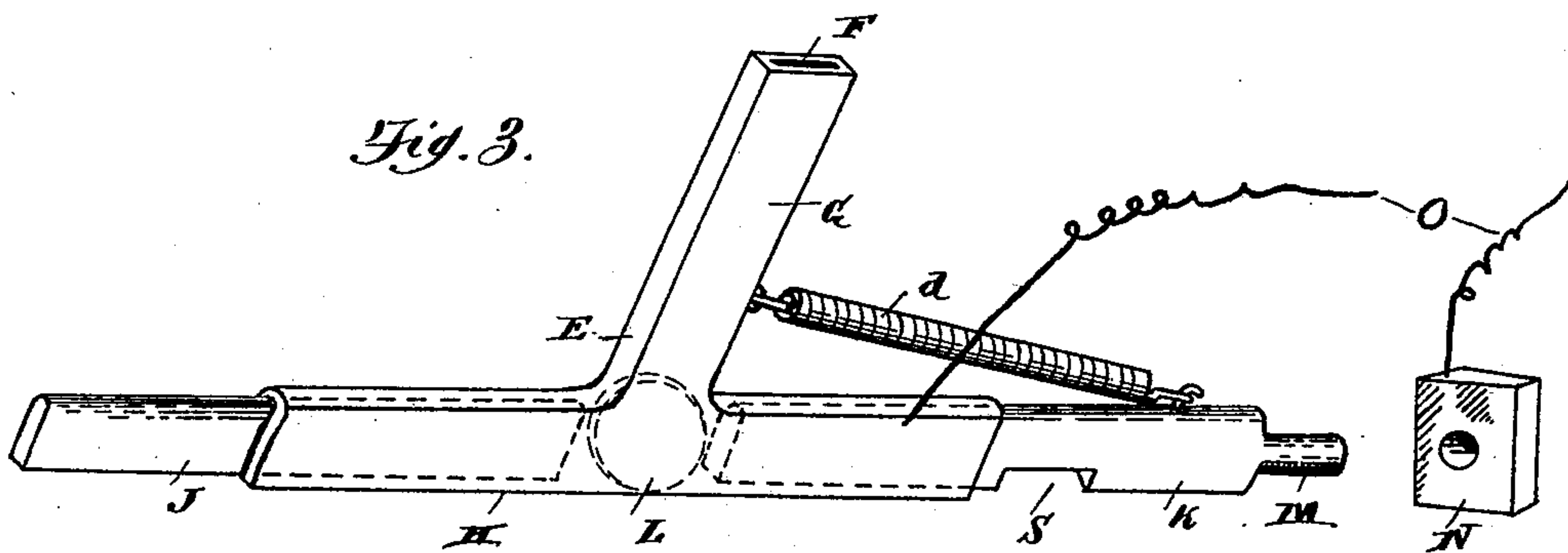


Fig. 3.



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# UNITED STATES PATENT OFFICE.

JOHN FAY WILSON, OF JETMORE, KANSAS.

## DEVICE FOR INFLATING PNEUMATIC TIRES.

SPECIFICATION forming part of Letters Patent No. 636,308, dated November 7, 1899.

Application filed December 5, 1898. Serial No. 698,259. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN FAY WILSON, a citizen of the United States, residing at Jetmore, in the county of Hodgeman and State of Kansas, have invented certain new and useful Improvements in Devices for Inflating Pneumatic Tires; 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 appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

This invention relates to improvements in devices for inflating pneumatic tires, and has for its object to provide a simple, durable, and efficient means that will act automatically by the dropping of a coin through a slot in the machine and actuating a simple sliding bar.

The invention consists in the general construction and arrangement of the several parts to be hereinafter described and claimed.

Referring to the accompanying drawings, Figure 1 is a general perspective of the apparatus, showing an external view with some of the interior portions illustrated in dotted lines. Fig. 2 is a vertical section taken at line *xx* of Fig. 1, and Fig. 3 is a perspective view of the coin-chute and operating-bar by which the mechanism is set in motion.

Like letters of reference refer to corresponding parts.

A represents the inclosing case and may be made of any suitable material or structure to provide strength and durability.

B represents an air-chamber preferably situated at the bottom forward end of the case, and communicating with it is a suitable air-pump C, adapted to be actuated by an electric motor. The construction and mode of operation of this air-pump and motor are so common and well known that I do not deem it necessary to enter into detail therewith. I further desire to have it understood that this portion of the device forms no part of my invention and may be of any suitable design and located at any desired position within or without the inclosing case.

As a means of setting in motion the motor (indicated at D in dotted lines) I provide the apparatus shown in Fig. 3, which con-

sists of a coin-case E, constructed somewhat in the form of an inverted letter T and having the coin-chute F leading down through the stem G thereof. Cross-bar H is slotted to receive the sliding bars J K, which are held with their inner ends a sufficient distance apart to permit the coin L to drop therebetween. At the outer end of the bar K there is formed a contact-point M, which is arranged to connect with the opening in the block N and to make electric connection therewith. The wires O, (seen in Fig. 1,) which lead from the source of power, lead to the block N and coin-case E through the motor. Thus it will be seen that the motor will be set in motion by the engagement of the point M and block N, which closes the circuit, and likewise stopped by their disengagement.

In order that the person who desires to inflate the pneumatic tires of his bicycle may regulate the amount of pressure without danger of bursting them, I arrange the lever P, fulcrumed upon the bar Q, with a sliding weight R upon its rear end and its forward end adapted to extend beneath the bar K, within which the notch S is formed. When the bar K is slid forward to close the circuit, the notch S lies immediately above the forward end of the lever P, into which the said lever is forced by the action of the weight R upon the opposite side of the fulcrum. It will be seen that while the parts occupy this relation the motor and pump will be set in operation and will continue to work until the connection is broken. To regulate this pressure, the pipe T is run from the air-chamber B to a point immediately above the forward end of the lever, where the plunger U is arranged to exert a downward pressure upon that point of the lever in proportion to the air-pressure within the chamber. At the rear end of this lever, immediately above the weight R, is a shaft V, carrying the pinion W, which is arranged to engage with the rack S' upon the upper surface of the weight. At the outer end *a* of the shaft V there are provided a dial *b* and a pointer *c*. The dial is made stationary with the case and the pointer is secured to the shaft and furnishes means by which said shaft may be rotated. With this arrangement it will be observed that by rotating the pointer any desired number of de-



grees the weight R will be caused to move along the lever, thereby increasing or decreasing its advantage over the opposite end, so that when the pressure within the air-chamber B is sufficient to overcome the weight R the forward end of the lever will be forced down out of engagement with the notch S, whereupon the said bar will be withdrawn by the action of a spring *d*, arranged to break the electric contact between the point M and block N. At the forward end of the lever P there is also secured a frame *e*, having a right-angle cross-section. The vertical portion *g* is made fast to the lever, while the lower portion *f* forms a framework for the support of the coin-case E. When the forward end of the lever is elevated and engages with the notch S, it carries with it the portion *g* of the frame, which separates from the portion *f* at *h* immediately beneath the coin, thus allowing the said coin to drop into the receptacle *m*. *n p* represent tubes communicating from the outside with the air-chamber. These tubes are fitted with suitable valves to prevent the escape of air until they are connected with the pneumatic tire or tires to be inflated.

From the foregoing it will be obvious that in the operation of my invention the tires are connected to the tubes *n p*, the pointer *c* adjusted on the dial to the proper position to secure the desired pressure, the coin dropped through the chute F, and the plunger or sliding bar J forced inward until the notch S and forward end of the lever P engage. The electric contact is then made and the air-pump set in motion, causing the chamber B to be rapidly filled, whence the air is forced through the pipes *n* and *p* into the tires and also through the tube T to the plunger above the lever. The moment the air-pressure rises to a point slightly greater than the weight R the forward end of the lever is forced downward, disengaging the bar K, which is immediately withdrawn to break the electric contact between the point M and block N.

From the foregoing it will be obvious that

some slight modifications may be made in the general construction and arrangement of the parts as I have herein shown and described them without materially affecting the results, and I desire to have it understood that although I prefer the form shown equivalent means may be adopted without departing from the spirit and scope of my invention.

Having thus described my invention, what I claim is—

1. In a pneumatic-tire inflater, the combination of an inclosing case, an air-chamber therein, means to supply air in said chamber, means for connecting said tires with said chamber, a sliding bar having an electric contact-point at one end thereof, a coin-case provided with a chute to receive a coin, a block arranged to form electric connection with said contact-point, a lever adapted to register with a notch formed in said sliding bar, an adjustable weight mounted upon the opposite end of said lever, and an air-actuating pressure above said lever, and communicating with said air-chamber, substantially as described.

2. In a pneumatic-tire inflater, the combination of a case having an air-chamber therein, means for inflating said air-chamber, means communicating with said air-chamber adapted to be connected to said tires, a coin-case having a chute therein, sliding bars at the lower end of said case having their inner ends separated a sufficient distance to permit said coins to pass therebetween, means whereby the operation of said bars causes said inflating means to be set in motion, a lever provided with a weight upon one end adapted to slide thereon, and having its opposite end arranged to engage with one of said sliding bars, and means for overcoming the pressure of said weight by the air-pressure from said chamber, substantially as described.

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

JOHN FAY WILSON.

Witnesses:

BYRON L. GLENN,  
P. H. HAND.