

No. 625,783.

Patented May 30, 1899.

W. G. MILLER & W. L. HARRIS.  
HOSE COUPLING.

(Application filed Apr. 30, 1898.)

(No Model.)

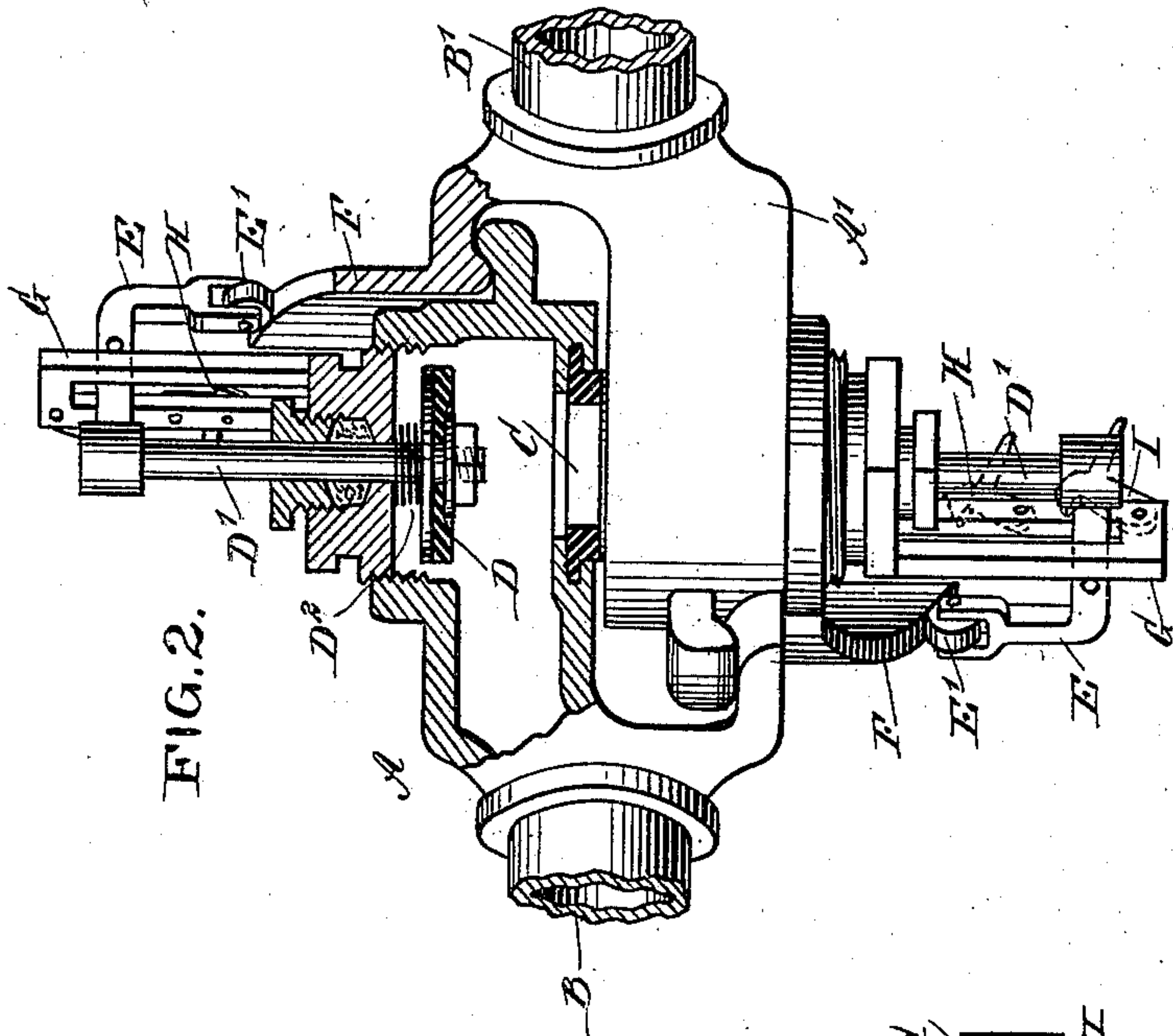


FIG. 2.

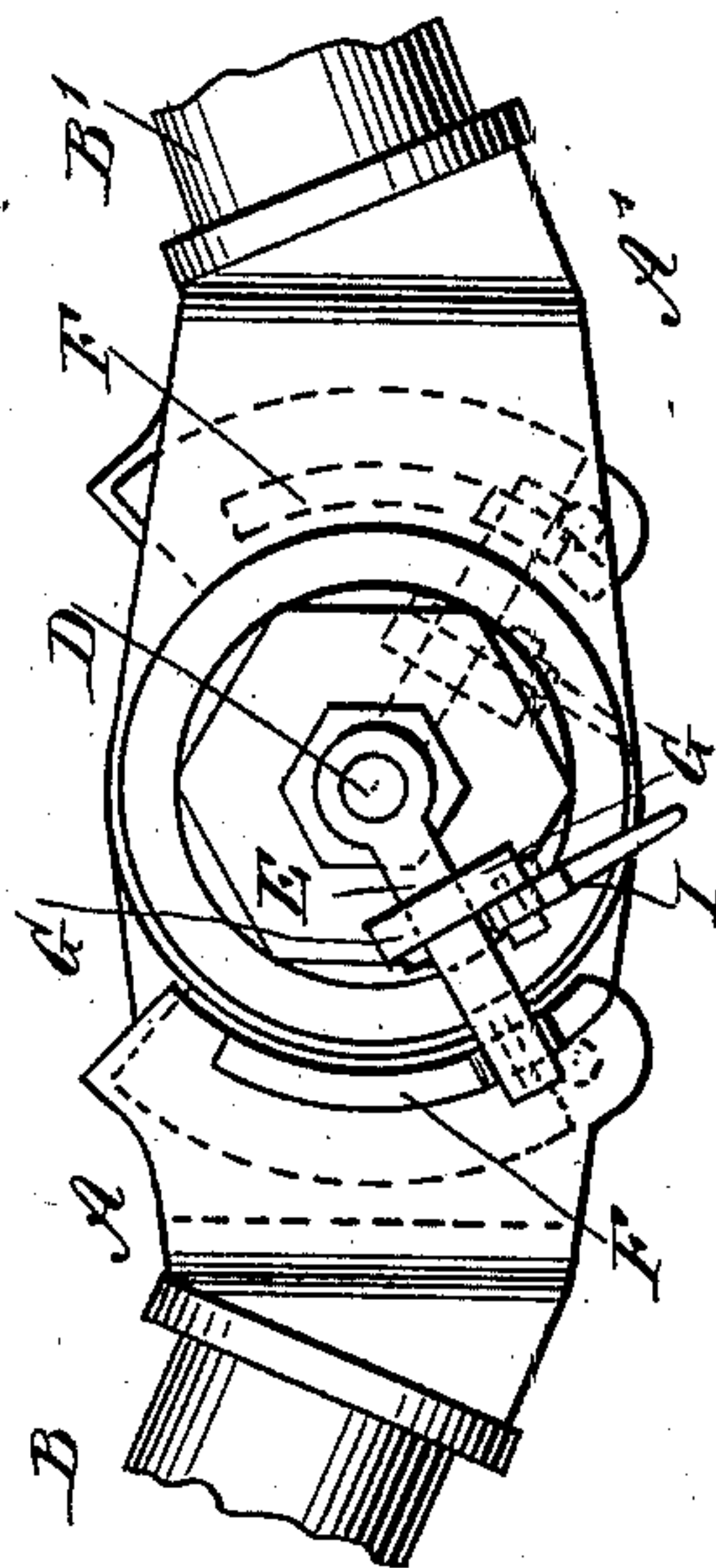


FIG. 4.

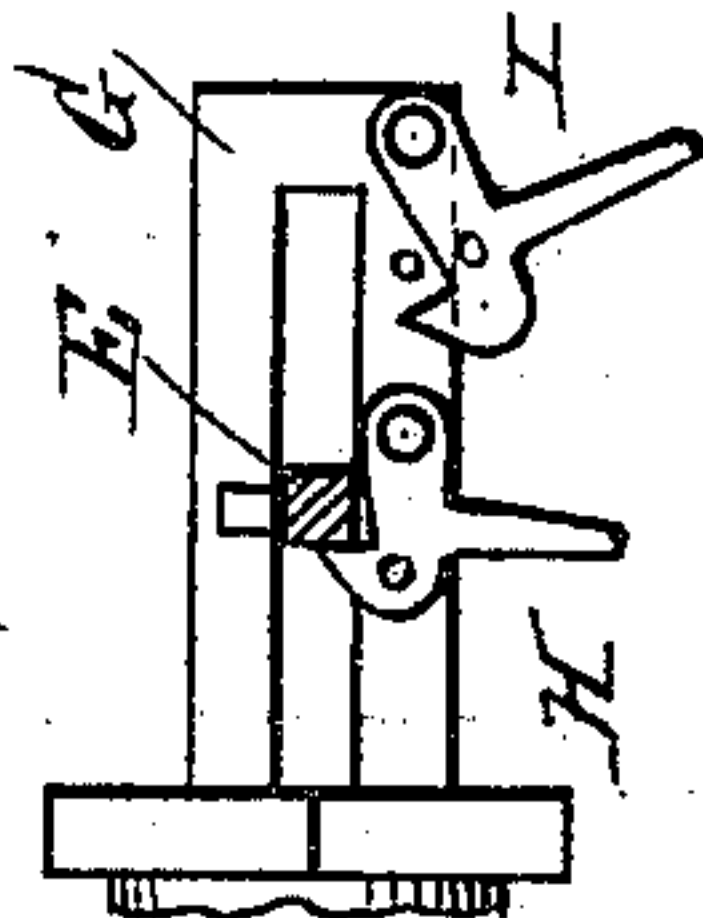


FIG. 5.

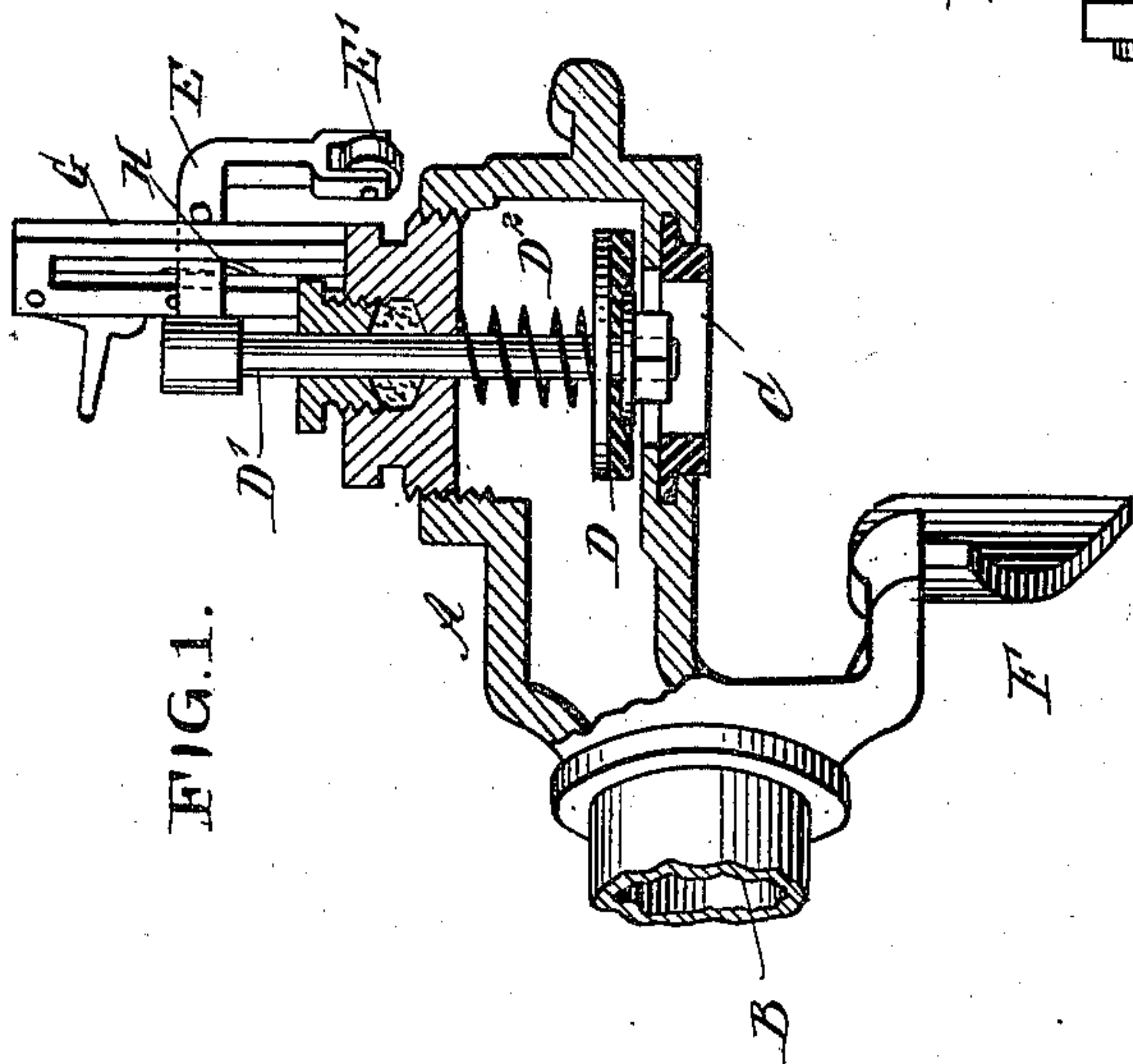


FIG. 1.

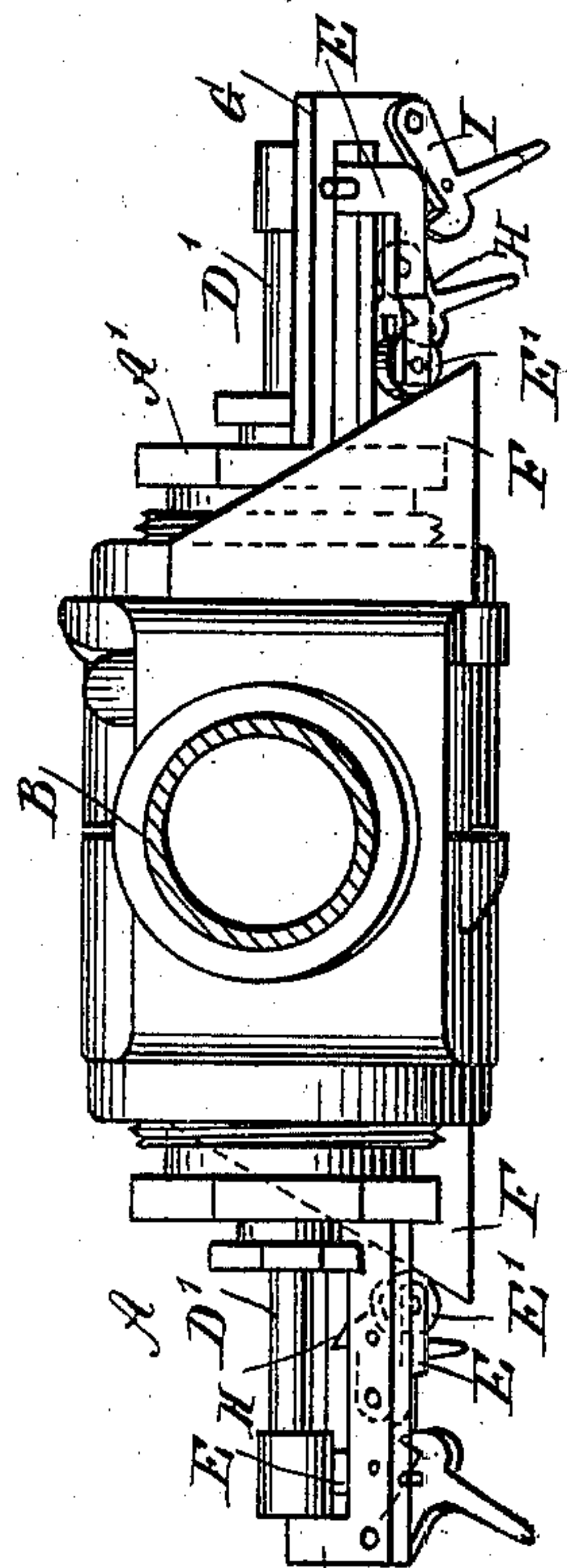


FIG. 3.

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# UNITED STATES PATENT OFFICE.

WALTER G. MILLER AND WILLIAM L. HARRIS, OF LODI, NEW YORK.

## HOSE-COUPLING.

SPECIFICATION forming part of Letters Patent No. 625,783, dated May 30, 1899.

Application filed April 30, 1898. Serial No. 679,349. (No model.)

*To all whom it may concern:*

Be it known that we, WALTER G. MILLER and WILLIAM L. HARRIS, of Lodi, in the county of Seneca and State of New York, have invented a new and Improved Hose-Coupling, of which the following is a full, clear, and exact description.

The invention relates to fluid-pressure brakes; and its object is to provide a new and improved hose-coupling arranged in such a manner that in case a train breaks in two the brakes in the rear section are gradually applied to bring the said section slowly to a stop, while the brakes in the forward section remain fully under the control of the engineer, who is thus enabled to keep the section moving until the rear section has come to a stop, and thus prevent collision.

The invention consists of novel features and parts 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 characters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional plan view of one of the members of the coupling. Fig. 2 is a similar view of the coupling, one of the members being in elevation. Fig. 3 is an end elevation of the same. Fig. 4 is a side elevation of the same, and Fig. 5 is an end elevation of the locking device for the valve.

The hose-coupling is provided with the members A A', connected in the usual manner with the hose B B', respectively, leading to the train-pipes of the adjacent cars. The members A A' are of any approved construction and arranged to be readily coupled or uncoupled, each member having a valve-seat C for establishing communication between the two members. A valve D is adapted to close the valve-seat C from the inside of the member, and this valve D is held on a valve-stem D', fitted to slide in a suitable stuffing-box carried by the corresponding member, a spring D<sup>2</sup> pressing on the valve to move the latter normally toward its seat unless restrained by external means from so doing, as hereinafter more fully described.

On the outer end of each valve-stem D' is secured an arm E, carrying a friction-roller

E', adapted to travel on an incline F, carried by the other member of the coupling, so as to move the arm E, the stem D', and the valve D outward on coupling the two members to establish free communication between the members at the registering valve-seat C. When the members A A' are uncoupled, then the springs D<sup>2</sup> move the valves D to their seats unless restrained, for the purpose presently to be described.

Each arm E is fitted to slide in a suitable guideway G, carried by the corresponding member A or A', and on this guideway G is pivoted a latch H, adapted to engage the arm E at the time the latter is near an innermost position—that is, when the valve D is near its seat, without, however, being fully seated. A latch I is also pivoted near the outermost end of the guideway G to engage the arm E and to lock the valve D in an extreme outermost position at the time the member is to be used in connection with an ordinary coupling member not having our improvement.

When the device is in use, the member A' on the rear end of the car has its latch H swung outward by the operator previous to the coupling to permit the valve D to completely seat itself when the coupling members are uncoupled or separated upon breaking of a train. The member A<sup>2</sup> on the forward end of the car has its latch H swung by the operator into the path of the arm E and is held in that position by a pin inserted through registering apertures in the guideway and latch, so that when the coupling members are separated the valve D of this member is only partly closed by the spring to allow air to escape from the section of the train of which the car forms a part.

It is to be understood that when it is desired to hold any of the latches away from the opening or slot in the guideway a pin is inserted in an aperture in the latch and engages an outer side of the guideway.

Now it is evident that when the train breaks in two and the members A A' become uncoupled the spring D<sup>2</sup> in the member A' forces the valve D completely to its seat, so that the rear end of the train-pipe of the forward section of the train is completely closed. The valve D in the member A is moved by the spring only partly into a closed position owing to the latch H standing in the path of its arm E, so that



air can escape gradually through the valve-seat C and gradually apply the brakes at the rear section of the train. Thus the rear section comes gradually and safely to a stop, while the forward section is fully under the control of the engineer, who can now keep this section moving until the rear section has come to a stop before recoupling or connecting the two sections with each other.

10 Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

1. In a hose-coupling the combination of two members adapted to be locked together, and each provided with a valve, means for holding said valves open when the members are locked together and means for allowing the valve in the forward member to completely close and in the rearward member to partially close upon separation of the members, substantially as shown and described.

2. A hose-coupling provided with a member having a valve-seat, a spring-pressed valve for said seat, an arm carried by the stem of the valve, and adapted to be engaged by an incline on the other member, whereby the valve will be open when the members are coupled, and have a tendency to completely close when the connection between the members is broken and means for limiting the inward movement of said arm and that of the valve-stem, to prevent said valve from completely seating itself on its valve-seat, substantially as shown and described.

35 3. A hose-coupling provided with a member

having a valve-seat, a spring-pressed valve for said seat and having a stem extending to the outside of the member, an arm on said valve-stem, a guideway for said arm and a latch for engaging said arm and locking the latter and the valve in an outermost position, as set forth.

4. A hose-coupling, provided with a member having a valve-seat, a spring-pressed valve for said seat and having a stem extending to the outside of the member, an arm on said stem, a guideway for said arm and in which it is adapted to slide, and means for obstructing said guideway whereby to prevent said arm from sliding therein, as set forth.

5. In a hose-coupling, the member provided with a valve-seat, a valve spring-pressed upon said seat and having a stem extending to the outside of the member, a guideway on said member, a bent arm connected to said stem and inserted through said guideway, said arm being provided at its lower end with a roller adapted to ride upon an incline on the other member of the coupling to hold the valve open when the members are coupled, and latches on said guideway and arranged to be swung over the opening therein whereby to engage with said arm and prevent the seating of the valve when the members are uncoupled, as set forth.

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Witnesses:

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