

No. 695,650.

Patented Mar. 18, 1902.

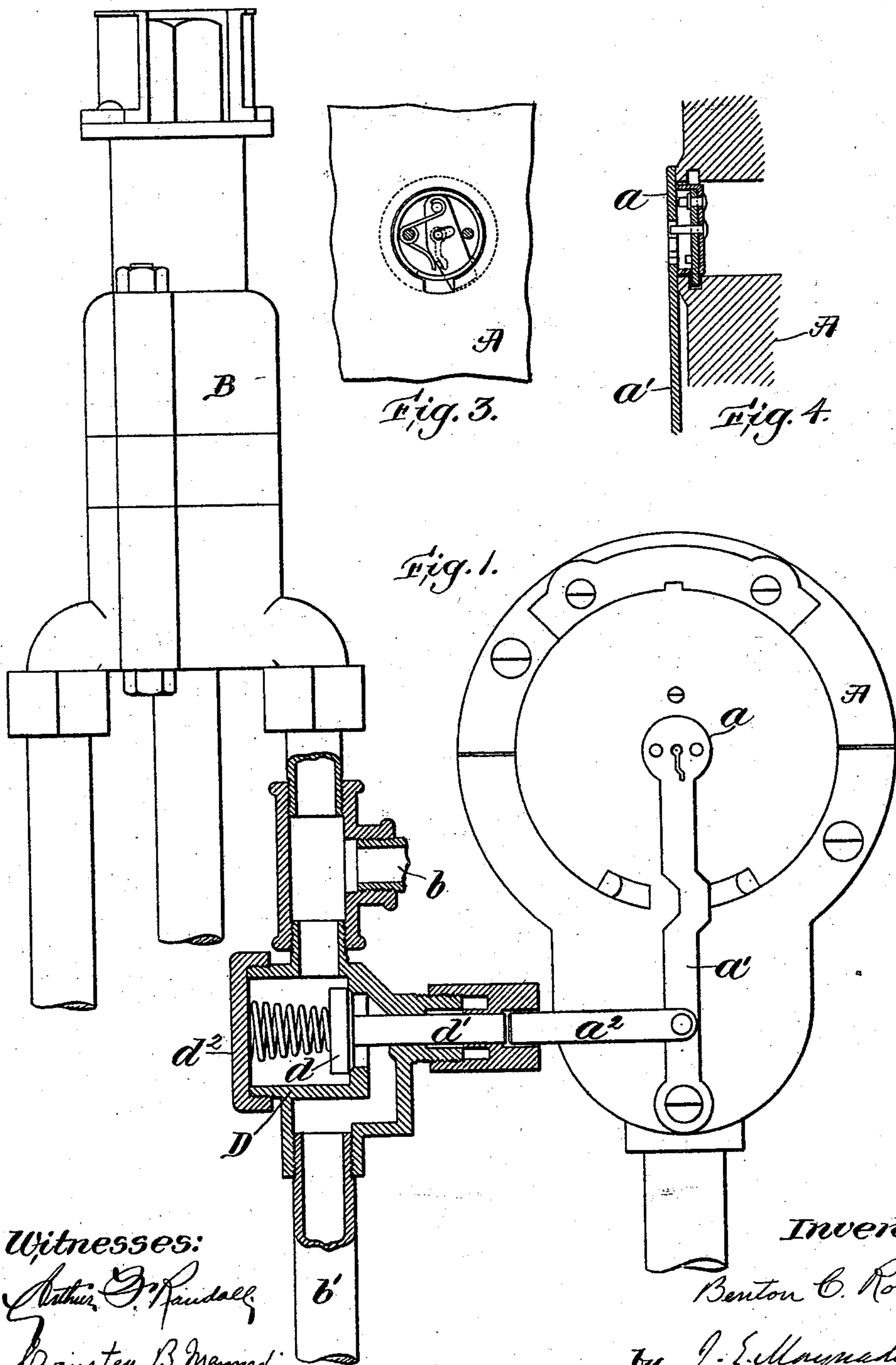
B. C. ROWELL.

TRUCK MACHINE FOR AUTOMATICALLY APPLYING BRAKES.

(Application filed May 19, 1900.)

2 Sheets—Sheet 1.

(No Model.)



Witnesses:

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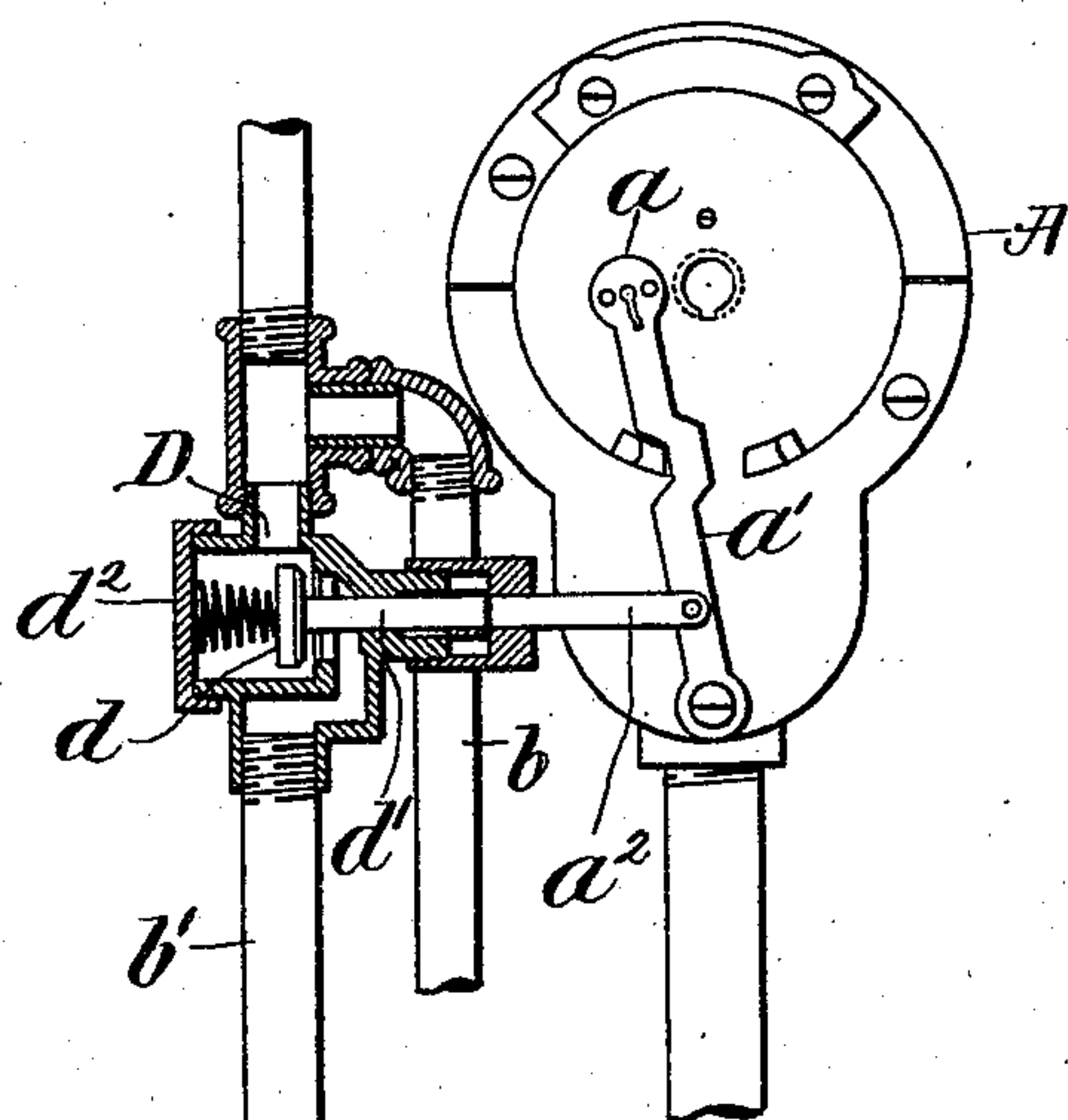
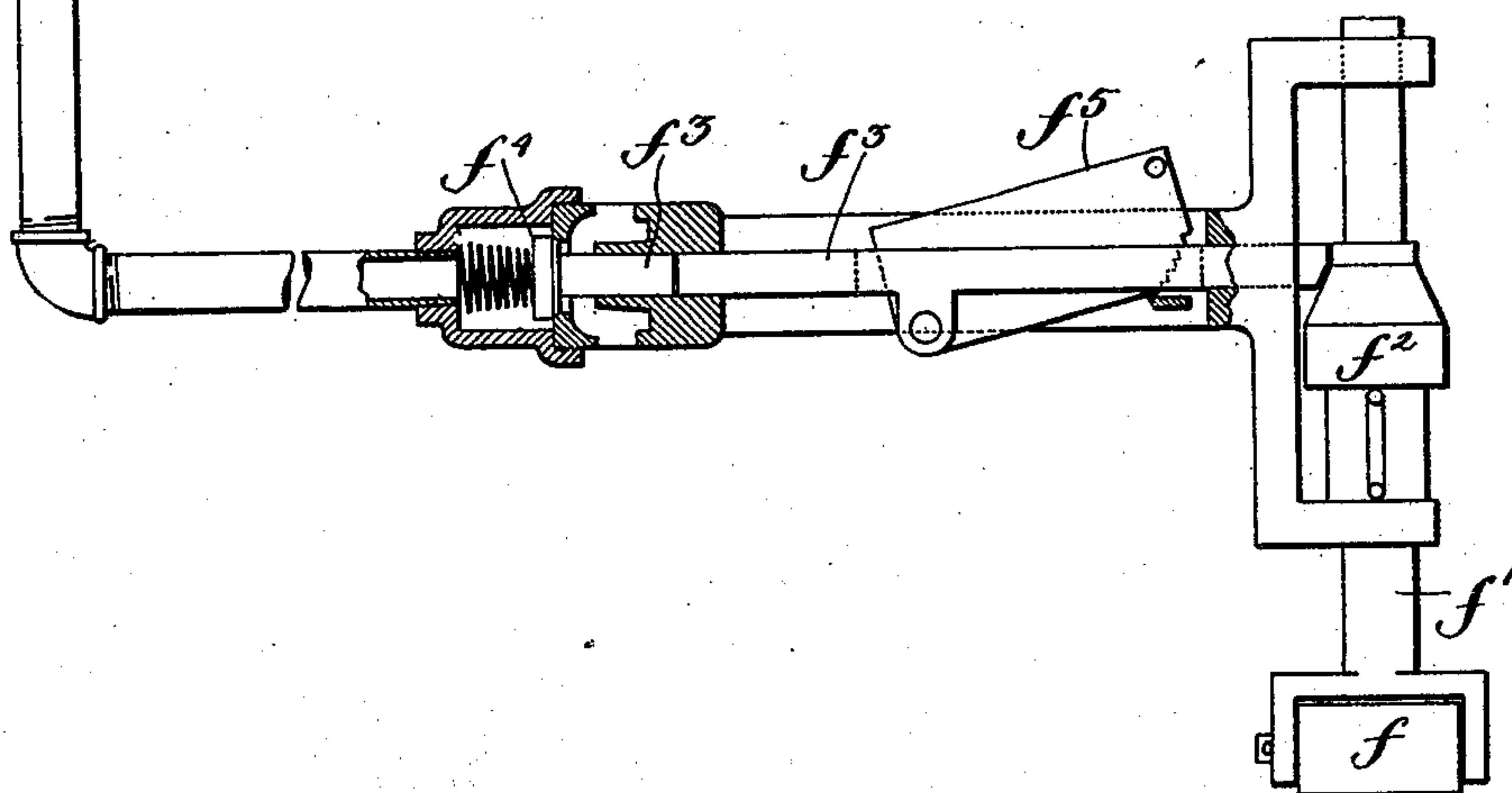


Fig. 2.



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UNITED STATES PATENT OFFICE.

BENTON C. ROWELL, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE ROWELL POTTER SAFETY STOP COMPANY, OF PORTLAND, MAINE, A CORPORATION OF MAINE.

TRUCK-MACHINE FOR AUTOMATICALLY APPLYING BRAKES.

SPECIFICATION forming part of Letters Patent No. 695,650, dated March 18, 1902.

Application filed May 19, 1900. Serial No. 17,242. (No model.)

To all whom it may concern:

Be it known that I, BENTON C. ROWELL, of Chicago, in the county of Cook and State of Illinois, have invented an Improved Truck-Machine for Automatically Applying Brakes, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation of an engineer's valve and electric controller with the main portions of my invention in section. Fig. 2 is an elevation, on a smaller scale, illustrating my invention ready for use. Figs. 3 and 4 are details.

In the use of the well-known safety-stop system for automatically applying brakes on any train which attempts to pass a safety-stop when at "danger" the locomotive is supplied with what is now well known as a "truck-machine," which consists, essentially, of a truck mounted on the lower end of a vertical rod and a vent-valve opened by the upward movement of that rod, the opening of that valve applying the brakes and each safety-stop when at "danger" causing the upward movement of that vertical rod. In that system as heretofore used only one truck-machine is used for one train, and the object of my invention is to make that system applicable practically to trains in which all or several of the cars are motor-cars—as, for example, to trains of electric cars under the system known as the "unit" system of propulsion, when any one of the motor-cars may be the head car of a train.

My invention consists in an additional valve controlling the flow of air from the train-pipe to the vent-valve of the truck-machine, which additional valve is automatically opened when the motorman applies his operating-handle to the electric controller and closed automatically when that handle is removed, the new result being that the truck-machine is made ready for operation automatically when the motor-car on which the motorman operates the train is made ready.

In the drawings, A is the electric controller, too well known to need description, and B is what is commonly called the "engineer's

brake-valve," also well known, except that I use a T connection in order to obtain two outlets, one for the train-pipe *b*, the other for the truck-pipe *b'*. To this T connection I attach casing D, which contains the additional valve *d* and its stem *d'*. The cap *d*² serves to close casing D after the valve and its seating-spring are put in place.

The electric controller A as usually made has a cover over the socket for the handle of the controller, and I modify this cover *a* by mounting it on a lever *a'*, in order that a rod *a*² may be attached to the cover in such a way that when the cover is moved to one side the rod *a*² will unseat valve *d*, and thereby connect truck-pipe *b'* with train-pipe *b*. I also prefer to use a lock on cover *a* or on lever *a'*; but that of course is optional. The lock, as shown in Figs. 3 and 4, is of ordinary construction.

The operation is as follows: The motorman to apply the handle moves cover *a* to clear the socket of electric controller A; but in doing that he automatically unseats additional valve *d*, and thereby renders the truck-machine of that motor-car operative, while the truck-machines of all the other motors of the train remain inoperative, for the reason that the additional valves *d* of these cars remain seated. When the train passes over a safety-stop at "safety," the truck *f* of the truck-machine will not come in contact with the arms of the safety-stop, which are then depressed; but as it is highly important that those arms shall be elevated as soon as the truck of the head car has passed them the truck of each of the following cars will come in contact with those arms, and the vertical rod *f* will be thereby moved upward; but this will be an idle movement, for the reason that the additional valve *d* of each following car is seated, cutting off connection between train-pipe *b* and truck-pipe *b'*. Should the train attempt to pass over a safety-stop at "danger," the truck *f* on the head car strikes the arms of the safety-stop, rod *f* is moved upward, and the cone *f*² on that rod moves stem *f*³ of the vent-valve *f*⁴ and unseats that valve, thus venting truck-pipe *b'*, and there-

by venting train-pipe *b* and applying the brakes. The detent *f*⁵ holds vent-valve *f*⁴ open, as usual.

What I claim as my invention is—

- 5 In combination with an engineer's valve and an electric controller, the truck-pipe, its vent-valve, means for operating the vent-valve, an additional valve controlling the passage from the engineer's valve to the truck-

pipe, and a connection between that additional valve and the electric controller such that when the controller is made ready for operation the truck-machine is also made ready for operation.

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