

No. 618.294.

Patented Jan. 24, 1899.

D. P. SAMMIS.
PNEUMATIC CARRIAGE BRAKE.

(Application filed Aug. 9, 1898.)

(No Model.)

2 Sheets—Sheet 1.

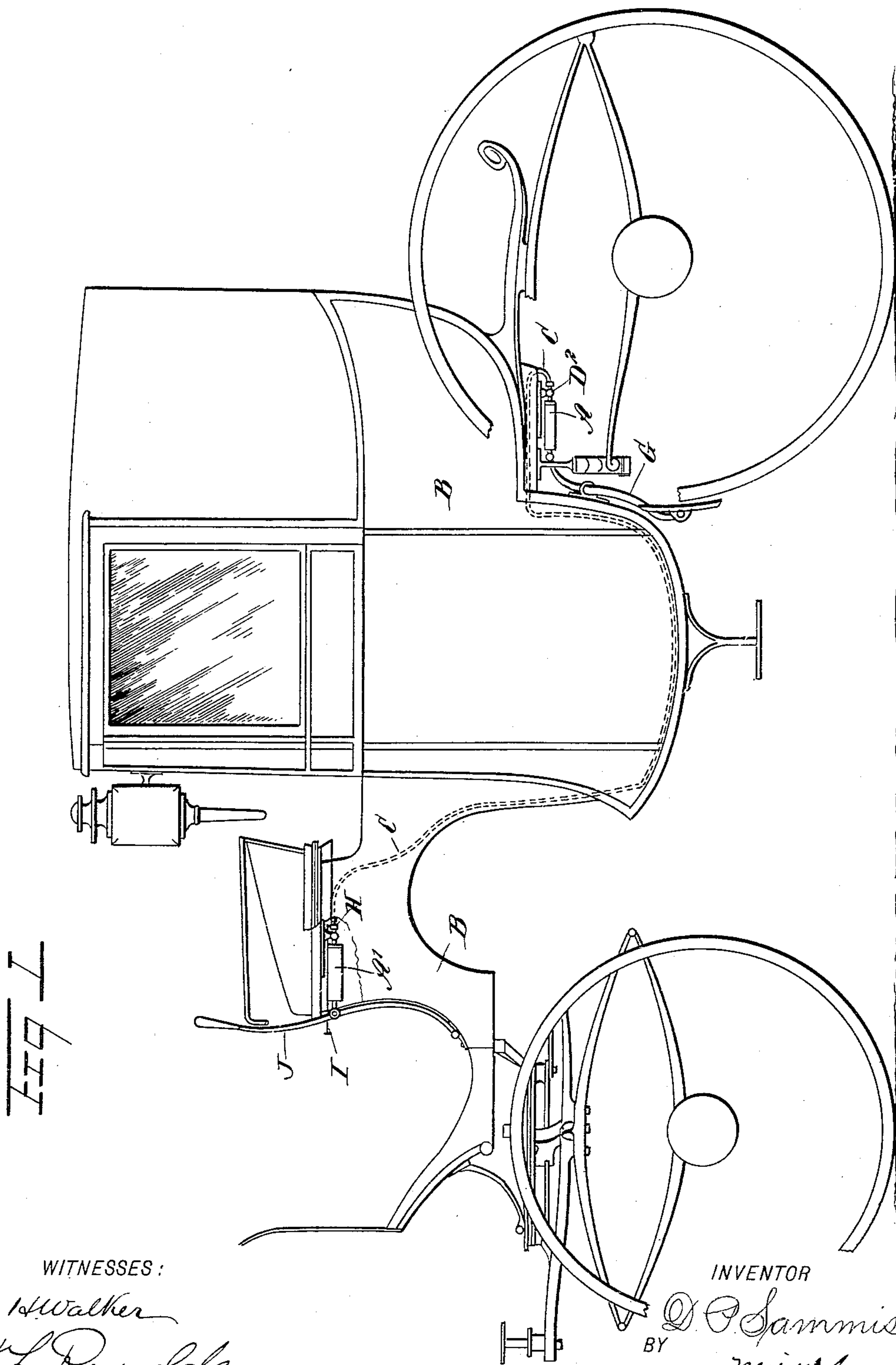


FIG 1

WITNESSES:

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H. L. Reynolds.

INVENTOR

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2 Sheets—Sheet 2.

Fig 2

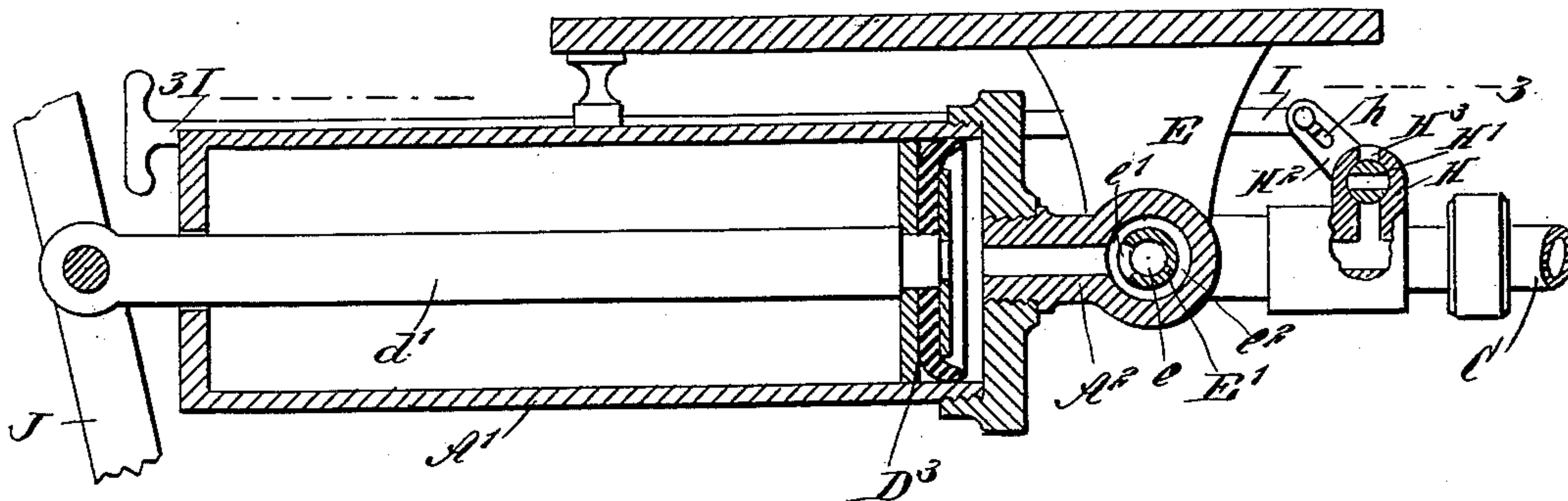


Fig 3

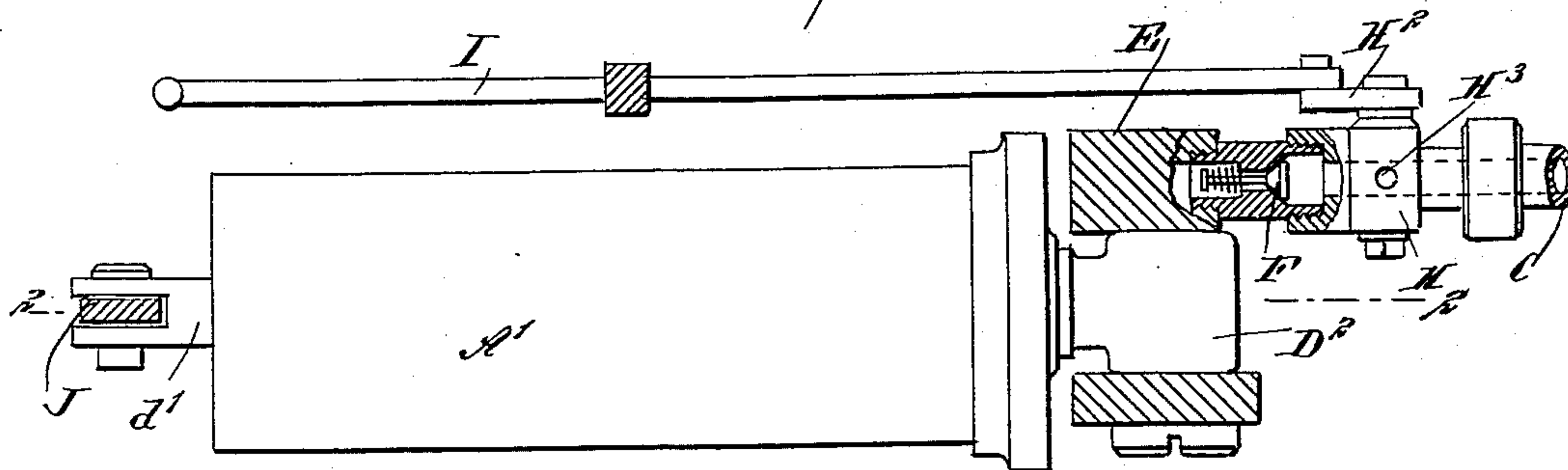


Fig 4

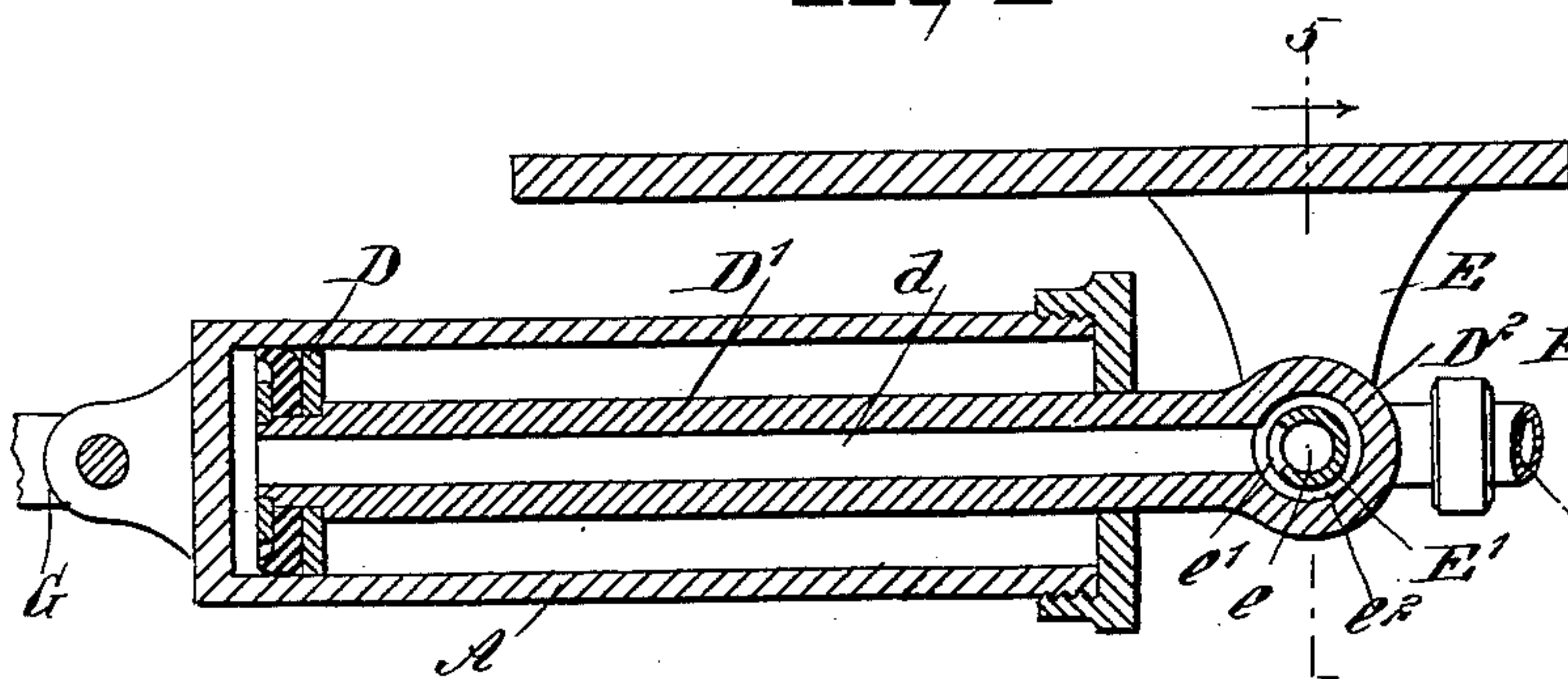


Fig 5

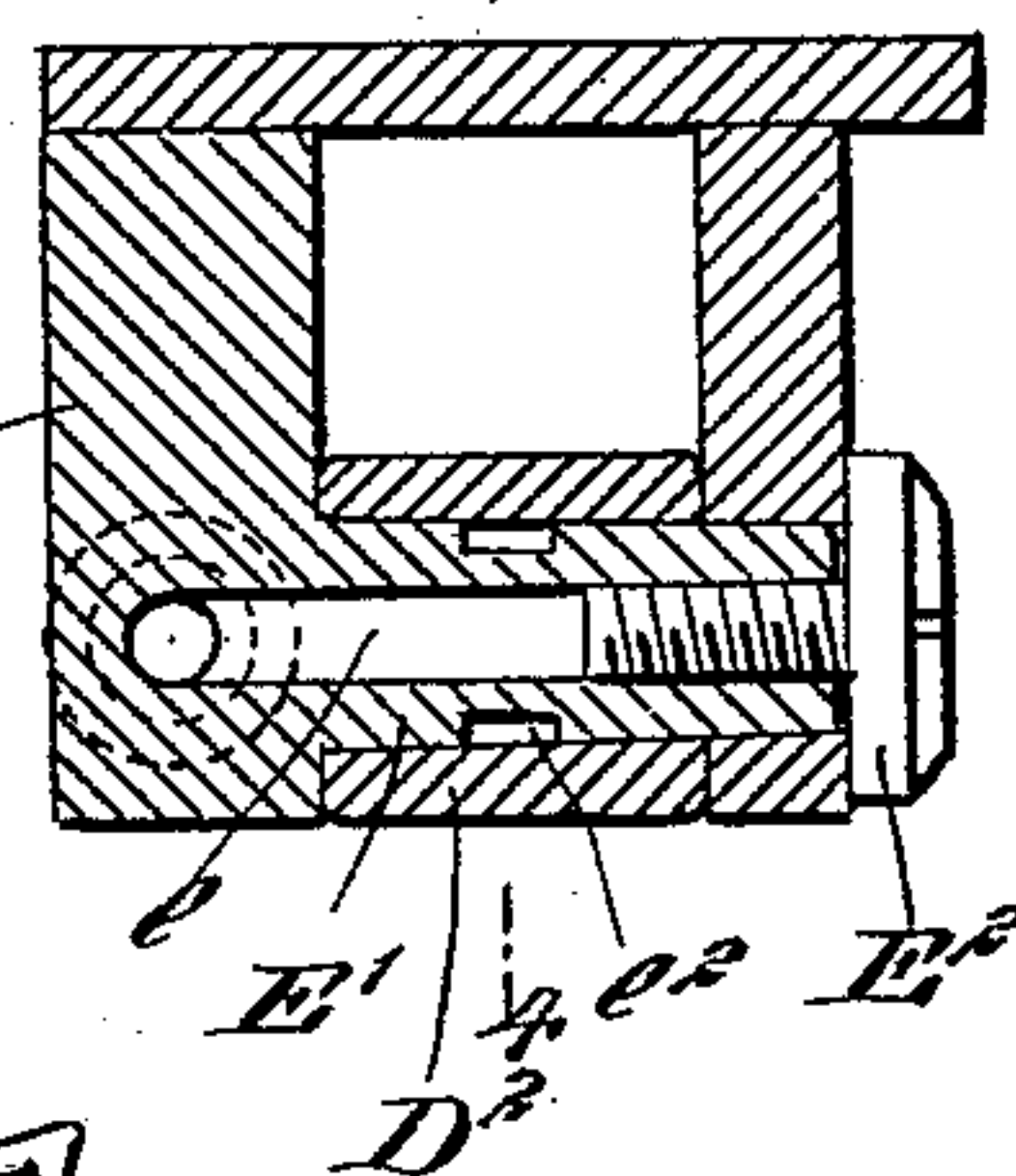
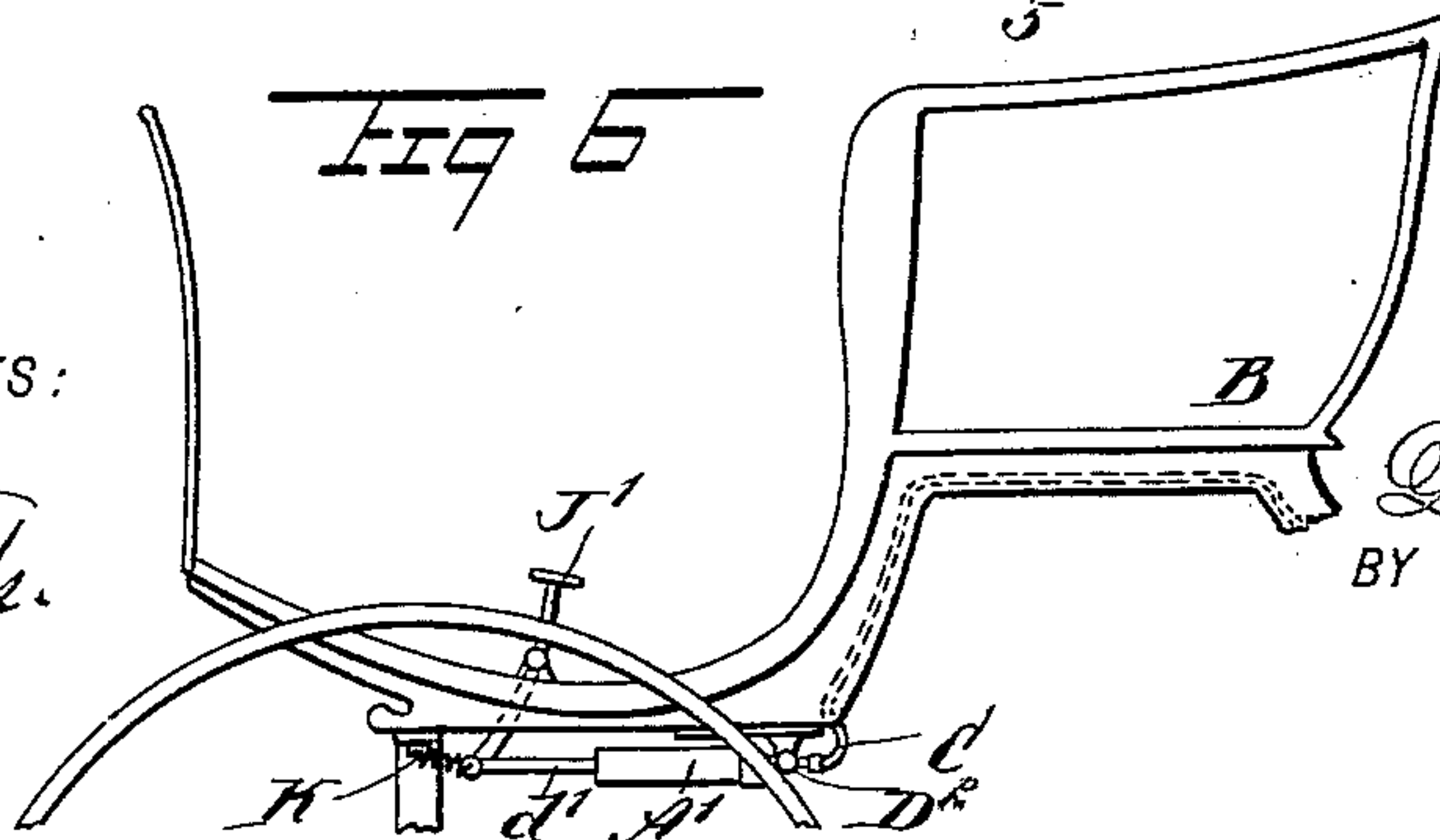


Fig 6



WITNESSES:

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UNITED STATES PATENT OFFICE.

DANIEL P. SAMMIS, OF NEW YORK, N. Y.

PNEUMATIC CARRIAGE-BRAKE.

SPECIFICATION forming part of Letters Patent No. 618,294, dated January 24, 1899.

Application filed August 9, 1898. Serial No. 688,224. (No model.)

To all whom it may concern:

Be it known that I, DANIEL PLATT SAMMIS, of the city of New York, borough of Manhattan, county and State of New York, have invented a new and Improved Pneumatic Carriage-Brake, of which the following is a full, clear, and exact description.

My invention relates to improvements in pneumatic carriage-brakes, and has for its object to provide a brake which will not be unsightly or interfere with the design of certain classes of pleasure-vehicles.

My invention comprises the novel features hereinafter described and claimed.

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 side elevation of a carriage having my brake attached thereto. Fig. 2 is a longitudinal sectional elevation through the air-pump on the line 2 2 in Fig. 3. Fig. 3 is a top plan view of the air-pump, with a portion of the discharge-channel in section on the line 3 3 of Fig. 2 and showing the check-valve. Fig. 4 is a longitudinal section on the line 4 4 of Fig. 5 through the power-cylinder. Fig. 5 is a section taken on the line 5 5 in Fig. 4; and Fig. 6 is a side elevation of a portion of a carriage, showing a different location for the air-pump.

The object of my invention is to provide a mechanism for operating brakes upon carriages and which shall be as much as possible out of sight and shall not require rods or other similar devices to connect the brake-operating levers with the brake-shoes.

With this object in view the brake is operated by means of an air-cylinder, and an air-pump is provided, which is located at any point convenient to the driver and provided with an operating-lever, which may be operated either by hand or by foot. The air-pump and the air or power cylinder which operates the brake are connected by a pipe, which may be of rubber, iron, or other suitable material.

In Fig. 1 one method of applying the brake and its operating mechanism is shown, the power-cylinder A being mounted beneath the carriage-body B. This power-cylinder is shown in detail in Figs. 4 and 5 and is connected directly to the upper end of the brake-

lever G and moves therewith. The piston D is mounted upon a rod D', having a bore d, said rod being pivoted at its outer end D² to a hanger or bracket E beneath the carriage-body, so that the cylinder may have vibrating movement such as is required by reason of its direct connection with the brake-lever G. The pivot end D² of the piston-rod is mounted upon a pin E', extending laterally from the bracket E, secured to the carriage-body, and the pin has a central bore e, communicating at one side by means of an aperture e' with an annular groove e² in the pin E', this portion of the pin being within the pivoted end D² of the piston-rod. The bore e of the pin E' connects with a pipe C, which leads to the air-pump A'. Air admitted to the cylinder A forces the cylinder outward, and this applies the brake. The brake proper may be of any suitable or desired construction. The air-pump A' is located at any point where it may be conveniently operated by the driver. As shown in Fig. 1, it is located immediately beneath the seat and is operated by means of a hand-lever J.

The air-pump is shown in detail in Figs. 2 and 3. The cylinder A' contains a piston D³, the rod d' of which is pivoted to the lever J, and its cylinder A' has a stem A² secured to its heads. This stem is hollow and is pivoted upon a pin, the construction of said stem and pin being identical with the construction described for the end of the piston-rod and its bracket. (Shown in Figs. 4 and 5.) The discharge-passage in the stem A² is connected with the other end of the pipe C, within which pipe is placed a relief or discharge valve, by which the pressure in the power-cylinder may be relieved. This device consists of a valve-casing H, having a valve H' therein, the valve being of the ordinary plug pattern and having an exterior arm H², provided with a slot h, receiving a pin upon a rod I. The slot in the arm H² permits of a variation in the attachment of the rod I to the arm. The rod I extends to a point where it may be conveniently engaged by the driver, and when it is desired to release the brake the driver pushes the rod I in, so as to permit air to escape through the valve H'.

The power-cylinder A is not provided with any check-valve, the pressure in the cylinder

being released by the valve H', located near the seat. The air-pump A' is provided with a check-valve F, which retains the pressure in the pipe and the power-cylinder A. This
 5 check-valve is located between the cylinder and the releasing-valve H'. The discharge from the valve H' is through an opening H³ in the valve-casing H.

It is evident that the location of the power-
 10 cylinder A may be widely varied, and it is thus adapted for attachment to carriages of any form of construction. The air-pump A' may also be operated by various means.

In Fig. 6 is shown a device differing some-
 15 what from that shown in Fig. 1. In this instance the air-pump is located beneath the carriage-body and operated by a lever J', adapted to be actuated by the foot of the driver. The lever is returned by means of a
 20 spring K, attached at one end to the lower end of the lever and at its other end to the carriage-body. This form of brake-operating mechanism is applicable to vehicles of any shape, and its parts may be located wher-
 25 ever found desirable or where least conspicuous. It enables a brake to be applied to vehicles of that class shown in the drawings, in which the wheels are intended to be swung under the vehicle and in which the use of
 30 straight connecting-bars is impossible.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A carriage-brake-operating mechanism,
 35 comprising a power-cylinder connected to the brake-lever, a piston having a hollow rod upon a hollow pivot, an air-pump having an operating-lever mounted conveniently to the driver, and a pipe connecting the pump and
 40 the pivot of the piston-rod of the power-cylinder, substantially as described.

2. A carriage-brake-operating mechanism, comprising a power-cylinder connected to the brake-lever, a piston having a hollow rod
 45 mounted upon a hollow pivot, an air-pump

having an operating-lever mounted conveniently to the driver, a relief-valve in the pump-discharge, a rod connected thereto and extending to a point convenient to the driver, and a pipe connecting the pump-discharge
 50 and the power-cylinder, substantially as described.

3. A brake-operating mechanism, comprising a power-cylinder connected to the brake-lever, a piston having a hollow rod, a pivot-
 55 pin upon which the outer end of said rod is mounted, the said pivot-pin having an annular groove located within the pivoted end of the piston-rod, and a central bore communicating by means of an aperture with the said
 60 annular groove, an air-pump having an operating-lever, and a pipe connecting the air-pump with the bore of the said pivot-pin, substantially as described.

4. A brake-operating mechanism, comprising a power-cylinder and piston, one of said
 65 parts being connected to the brake-lever and the other pivotally connected to the vehicle-body, the pivot forming said connection being hollow and communicating with the in-
 70 terior of the cylinder, an air-pump having an operating-lever, and a pipe connecting the pump with the said hollow pivot, substantially as described.

5. A brake-operating mechanism comprising
 75 a power-cylinder and piston connected respectively to the brake-lever and the vehicle-body, the piston having a hollow rod a hollow pivot-pin upon which the end of the piston-rod is mounted an air-pump having an
 80 operating-lever, a relief-valve in the pump-discharge, means for operating the same, a check-valve for the air-pump, and a pipe connecting the pump-discharge with the power-cylinder, substantially as described.

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