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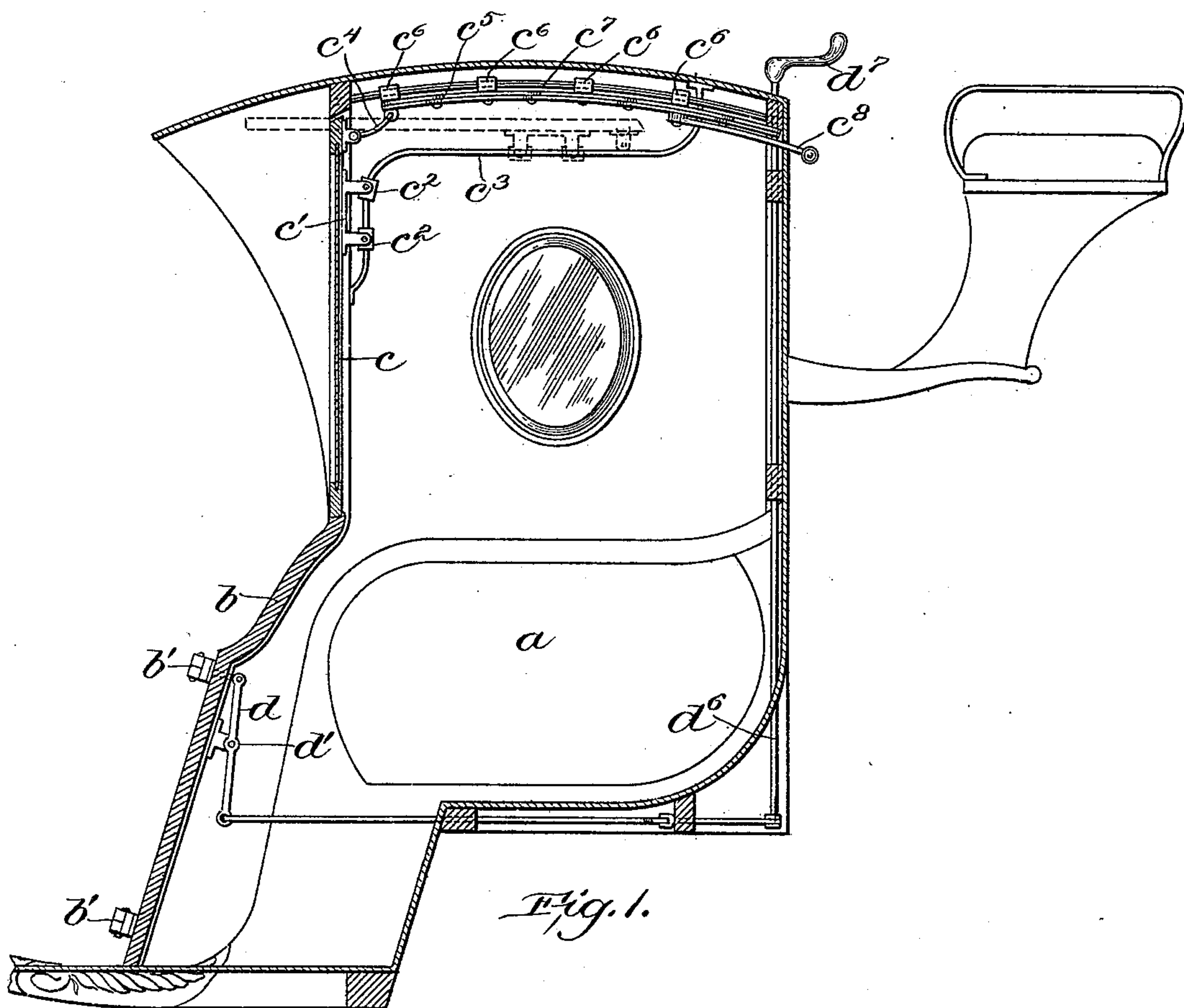
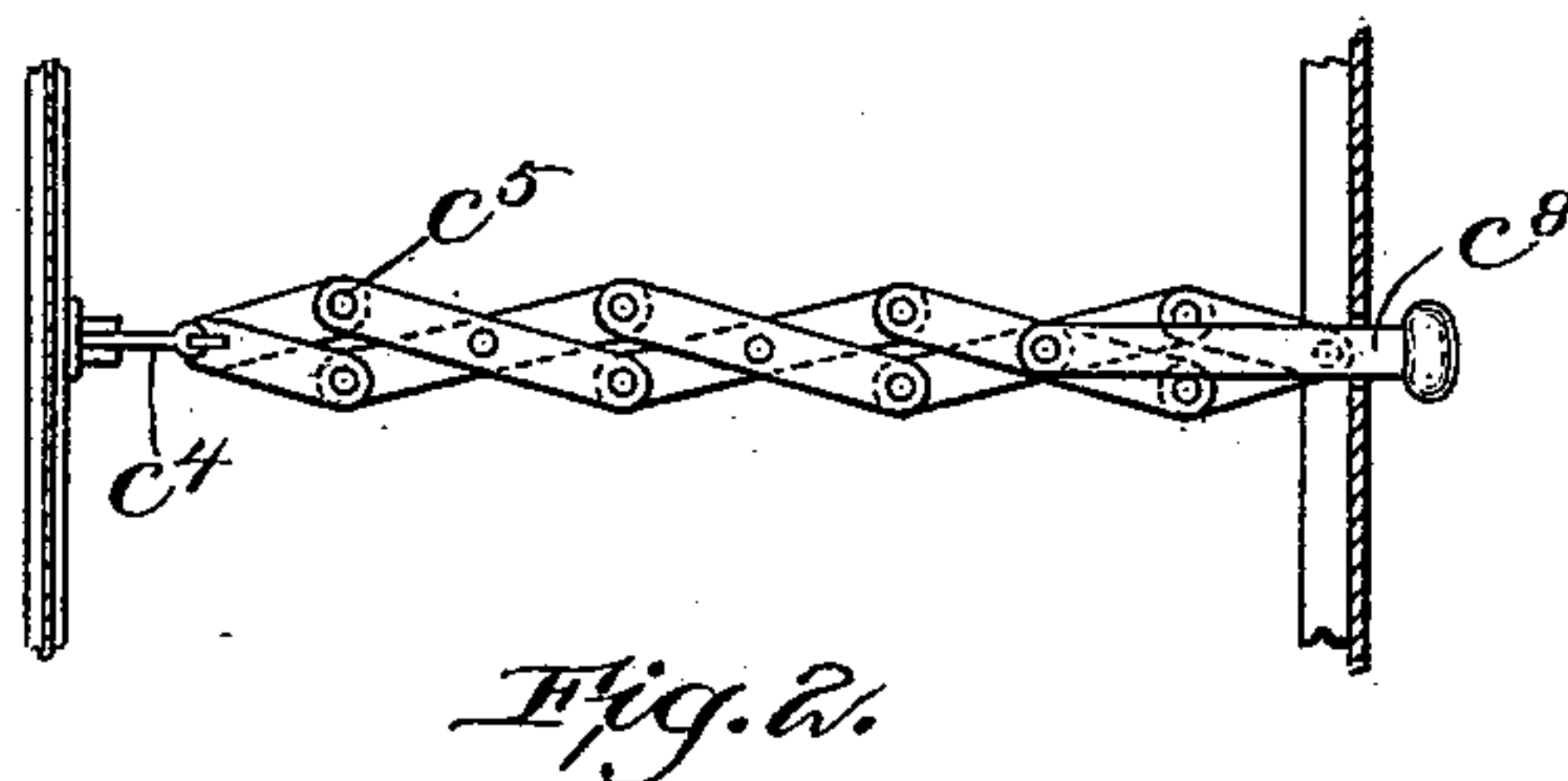
D. C. NORCOTT.
HANSOM.

Patented Nov. 21, 1899.

(Application filed May 2, 1896.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:

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Dwight C. Forsyth
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att'y.

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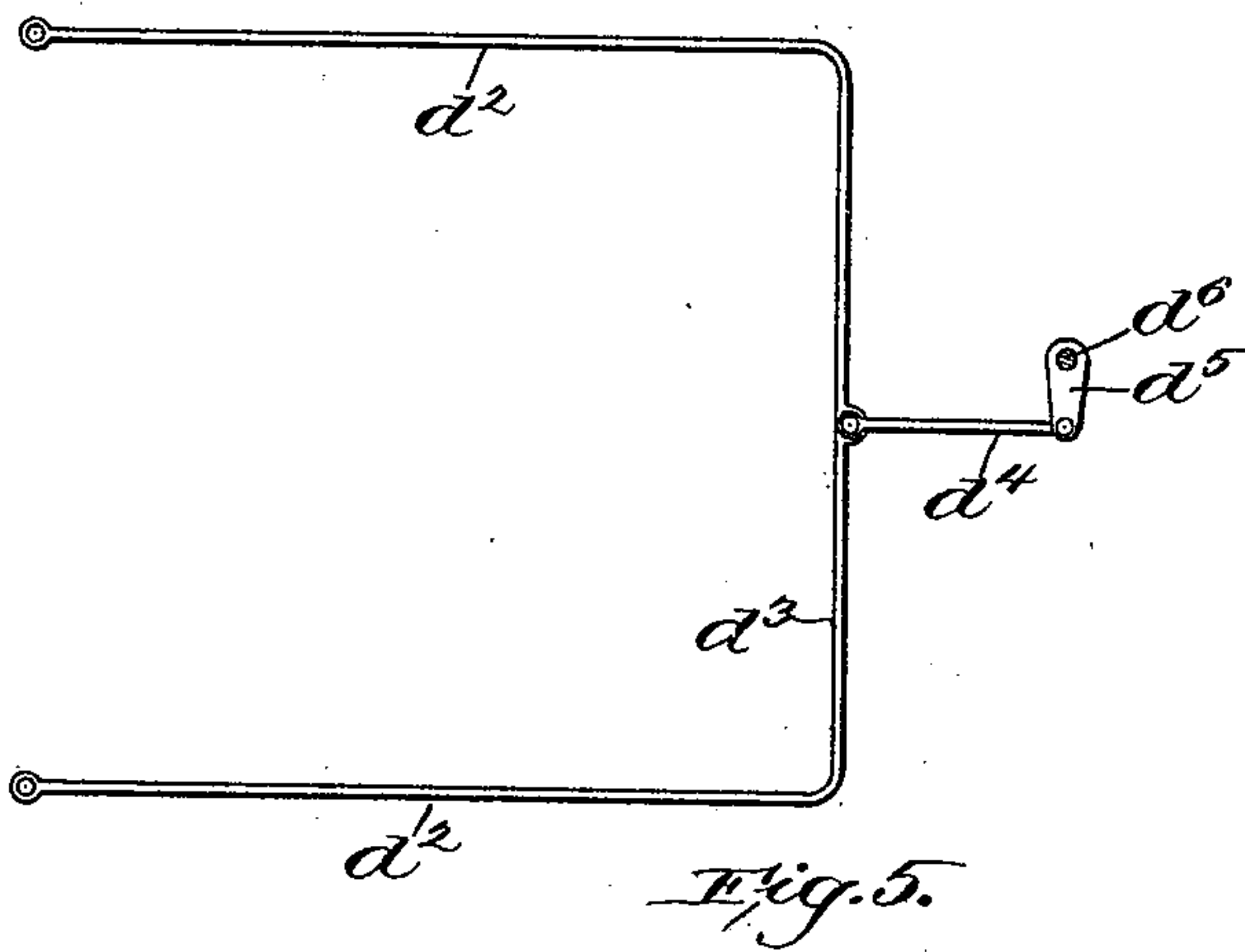
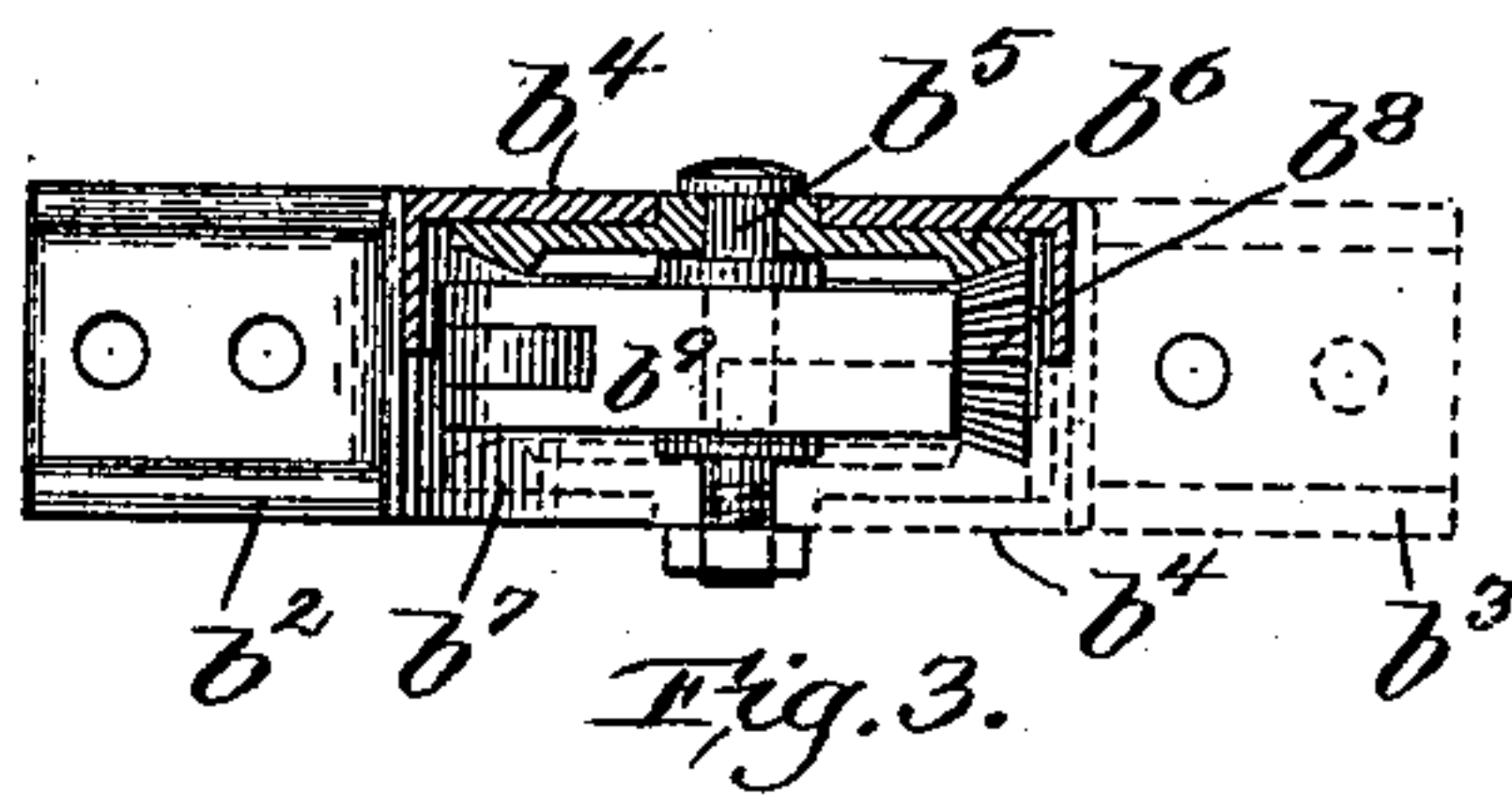
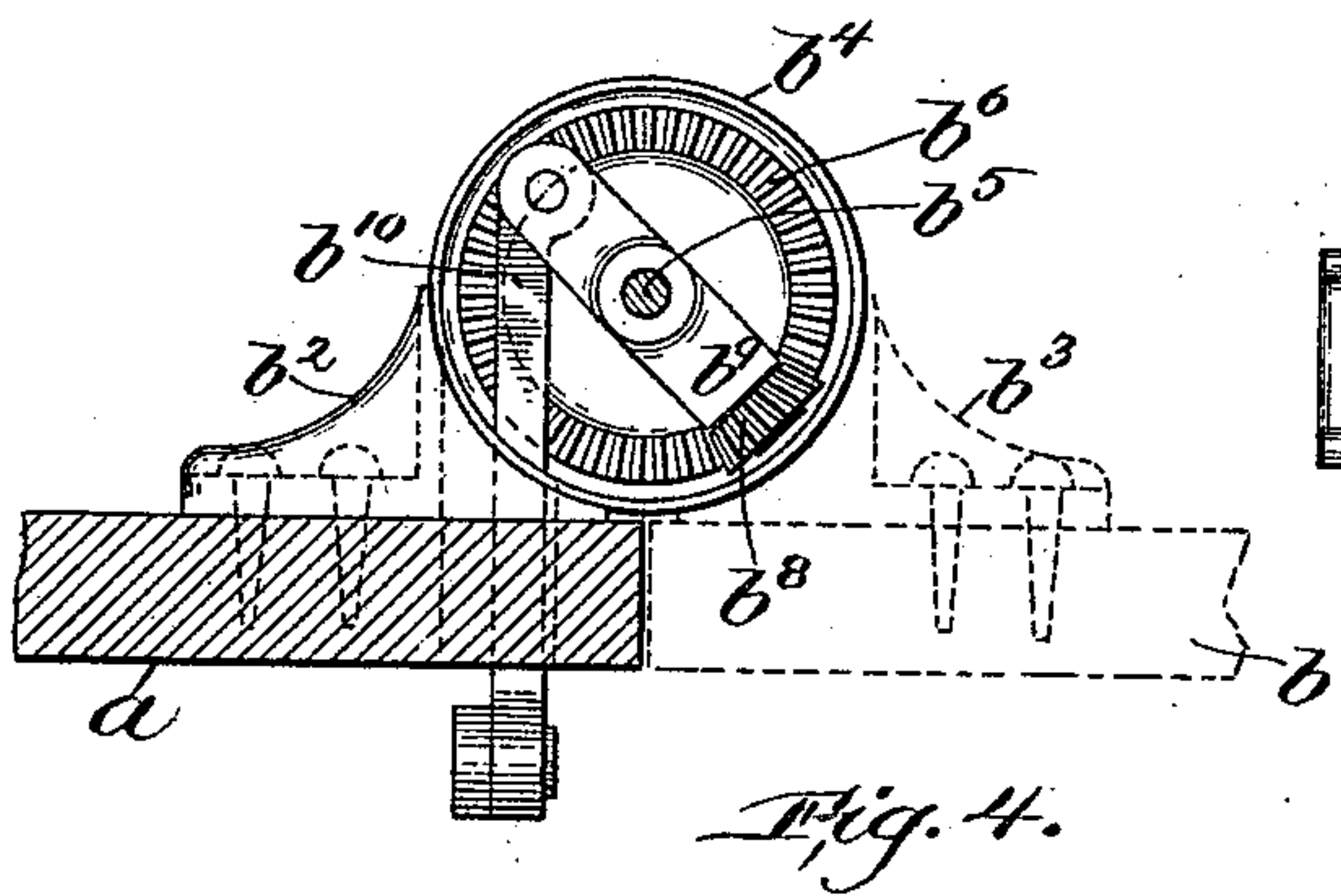
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UNITED STATES PATENT OFFICE.

DWIGHT C. NORCOTT, OF BOSTON, MASSACHUSETTS.

HANSOM.

SPECIFICATION forming part of Letters Patent No. 637,404, dated November 21, 1899.

Application filed May 2, 1898. Serial No. 679,425. (No model.)

To all whom it may concern:

Be it known that I, DWIGHT C. NORCOTT, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Hansoms, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention relates to hansoms, and has for its object to improve the construction of the means employed for operating the doors and also to improve the construction of the means employed for sliding the window.

In carrying out this invention the doors are made as usual and hinges are provided for them, by means of which they are connected with the frame, and one of the hinges of each door is constructed with an actuating device, by means of which it is operated, and an operating device is provided for said actuating device, whereby it may be operated by the driver perched on his seat at the rear of the vehicle.

A sliding window is provided with guides adapted to slide along on suitable curved guide-rods adapted to receive them, and a lazy-tongs operating device is provided for operating said sliding window which is accessible to the driver.

Figure 1 shows in vertical section a hansom provided with door and window operating devices embodying this invention. Fig. 2 is a detail of the lazy-tongs operating device. Figs. 3 and 4 are details of the hinge, showing an actuating device connected with it; and Fig. 5 is a detail of a coöperative part of the operating device for the actuating device of the hinge.

The body of the hansom *a* and its swinging doors *b* and sliding window *c* may be of any usual or suitable construction. The doors *b* are each provided with a pair of hinges *b'*, and one of the hinges of each pair—as the upper one, for instance—is constructed with an actuating device, to which an operating device is connected, whereby the doors may be positively opened and closed at will by the driver while sitting on his seat at the rear of the vehicle. The hinge which is thus provided with an actuating device (see Figs. 3 and 4) is composed, essentially, of two parts *b² b³*, one of which, as *b²*, is secured to the

frame or body *a* of the vehicle, and the other of which, as *b³*, is secured to the door. Each part *b² b³* has formed on it a component part *b⁴* of a circular shell, and said parts are herein shown as made alike and abut together or fit one within the other. The two parts of the hinge, each bearing a component part of the shell, are pivotally connected together by a pivot-bolt *b⁵*, which serves as a pintle for the hinge. The actuating device of the hinge is contained within and concealed by said shell *b⁴*, and said shell is provided for the purpose of thus receiving and concealing said actuating device.

As herein shown, the actuating device is composed of two gears *b⁶ b⁷*, made substantially alike, one of which, as *b⁶*, is secured to the stationary part of the hinge *b²*, and the other of which, as *b⁷*, is secured to the movable part of the hinge *b³*, both being contained within the shell *b⁴*, and said stationary and movable gears *b⁶ b⁷* are disposed within the shell *b⁴* on the pivot-bolt *b⁵*, so as to move relatively to each other on an axis coincident with the axis of the pintle of the hinge, and said gears *b⁶ b⁷* are located a short distance apart, with their toothed faces opposite each other. A pinion *b⁸* is interposed between said gears, which meshes with both of said gears *b⁶ b⁷*, and said pinion *b⁸* is journaled on the end of an arm *b⁹*, which is mounted on said pivot-bolt *b⁵* and is adapted to be moved on said bolt as an axis. The arm *b⁹* is extended at the opposite side of said pivot-bolt or pintle *b⁵* for a short distance, and to the extremity of said arm a bar *b¹⁰* is loosely connected, which projects inwardly through a slot in the shell. By moving the bar *b¹⁰* longitudinally the arm *b⁹*, bearing the interposed pinion *b⁸*, will be operated in one or the other direction, and the movable member *b³* of the hinge will be positively operated.

I do not desire to limit my invention in all respects to the particular construction of actuating device herein shown, as it is obvious that various forms of actuating devices may be employed adapted to accomplish the results herein specified, and, furthermore, I desire it to be understood that, so far as the employment of the shell is concerned, any other form or construction of actuating device than gearing may be employed.

The longitudinally-moving bars b^{10} , which are connected with the actuating devices of the hinges of each door, are loosely connected to the upper ends of levers d , which are in turn loosely connected to rearwardly-extended rods d^2 , which are connected together at the rear part of the vehicle by a rod d^3 , and at a point substantially at the middle of said connecting-rod d^3 a short bar d^4 is loosely connected, the rear end of which is loosely connected to a crank-arm d^5 , fixed to the lower end of a vertical rod or bar d^6 , which extends upwardly a sufficient distance to be within reach of the driver, and said rod or bar d^6 will be provided at its upper end with a hand-piece d^7 , by which it may be turned. It will be seen that by turning said vertical rod d^6 in one or the other direction the two doors will be positively opened and closed.

The sliding window c is made as usual and has on each side of it a frame c^1 , bearing a pair of guide-blocks c^2 , which are swiveled to their bearings, and said guide-blocks c^2 are formed with holes through them to receive and move along on guide-rods c^3 , which are supported by the frame at each side of the vehicle. The window c is thus supported at its sides by the guide-blocks c^2 on the guide-rods c^3 .

Midway the width of the window c a link c^4 is loosely connected, the opposite end of which is connected to a lazy-tongs operating device c^5 .

The lazy-tongs operating device c^5 is composed of a number of pairs of pivoted levers connected together and bearing a number of blocks c^6 , (see Fig. 1,) which are adapted to slide along on a rod c^7 , supported by the framework, which is especially adapted to receive said blocks. Thus the operating device c^5 is supported and guided by the rod c^7 , which is provided solely for such purpose. A hand-piece c^8 is provided at the outer end of said lazy-tongs operating device, which is accessible to the driver. By moving the hand-piece c^8 in and out the lazy-tongs operating device will be operated and the sliding window moved.

I claim—

1. In a hansom, a door having a hinge composed of two parts secured one to the door and the other to the frame, a pintle, a shell composed of two parts, one on each part of the hinge and movable relatively to each other on an axis coincident with the axis of said pintle, and an actuating device for said hinge contained within said shell, and means for operating it, substantially as described.

2. In a hansom, a door having a hinge com-

posed of two parts secured one to the door and the other to the frame, a pintle, and an actuating device consisting of a pair of gears, one on the stationary part and the other on the movable part of said hinge, an intermeshing pinion and an operating device for said actuating device, substantially as described.

3. In a hansom, a door, a hinge therefor composed of two parts, one on the door and the other on the frame, a pintle, an actuating device for said hinge composed of a pair of gears, one on the movable part and the other on the stationary part of said hinge, and an intermeshing pinion, an arm bearing it turning on the pintle as a center and an operating device connected to said arm, substantially as described.

4. In a hansom, a door, a hinge therefor composed of two parts one on the door and the other on the frame, a pintle, an actuating device for said hinge composed of a pair of gears, one on the movable part and the other on the stationary part of said hinge, and an intermeshing pinion, an arm bearing it turning on the pintle as a center, and a longitudinally-movable bar loosely connected to said arm and means for operating it, substantially as described.

5. In a hansom, a sliding window having guides thereon, guideways at each side on which said window slides and a lazy-tongs operating device for said window, substantially as described.

6. In a hansom, a sliding window having guides thereon, guideways at each side on which said window slides, an operating device loosely connected with said window composed of a number of connected lazy-tongs levers and a support therefor, substantially as described.

7. In a hansom, a sliding window, a lazy-tongs operating device therefor, composed of a number of lazy-tongs levers connected together and a number of sliding blocks bearing said levers and a rod on which said blocks slide, substantially as described.

8. In a hansom, a sliding window, two curved guide-rods c^3 , c^3 , two pivoted guides c^2 , c^2 , on each side of said window which embrace and travel along on said curved guide-rods, and means for operating said window, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DWIGHT C. NORCOTT.

Witnesses:

B. J. NOYES,

JENNIE L. HUTCHINSON.