

No. 622,016.

Patented Mar. 28, 1899.

W. R. PITT.
GATE.

(Application filed Nov. 15, 1898.)

(No Model.)

Fig. 1.

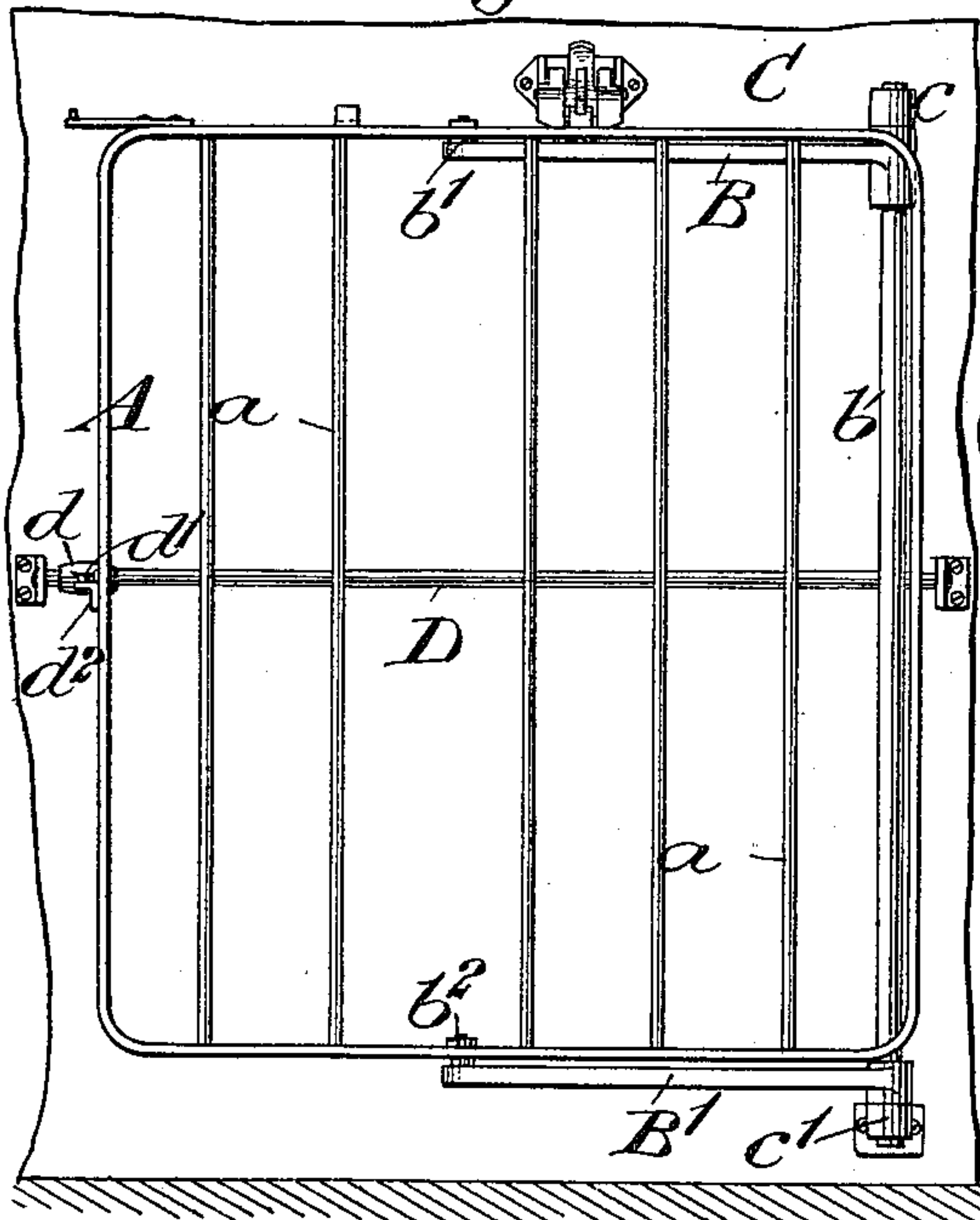
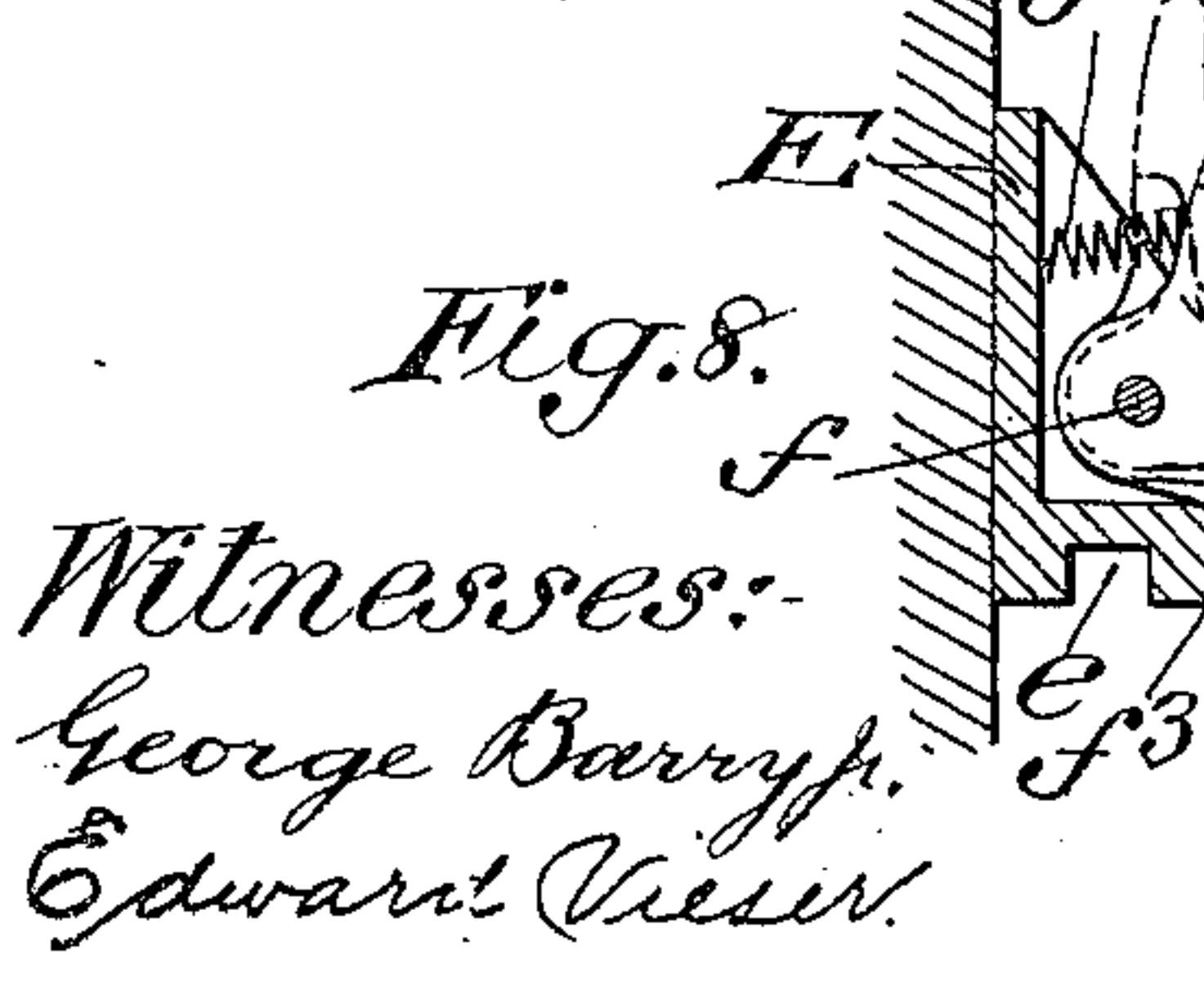
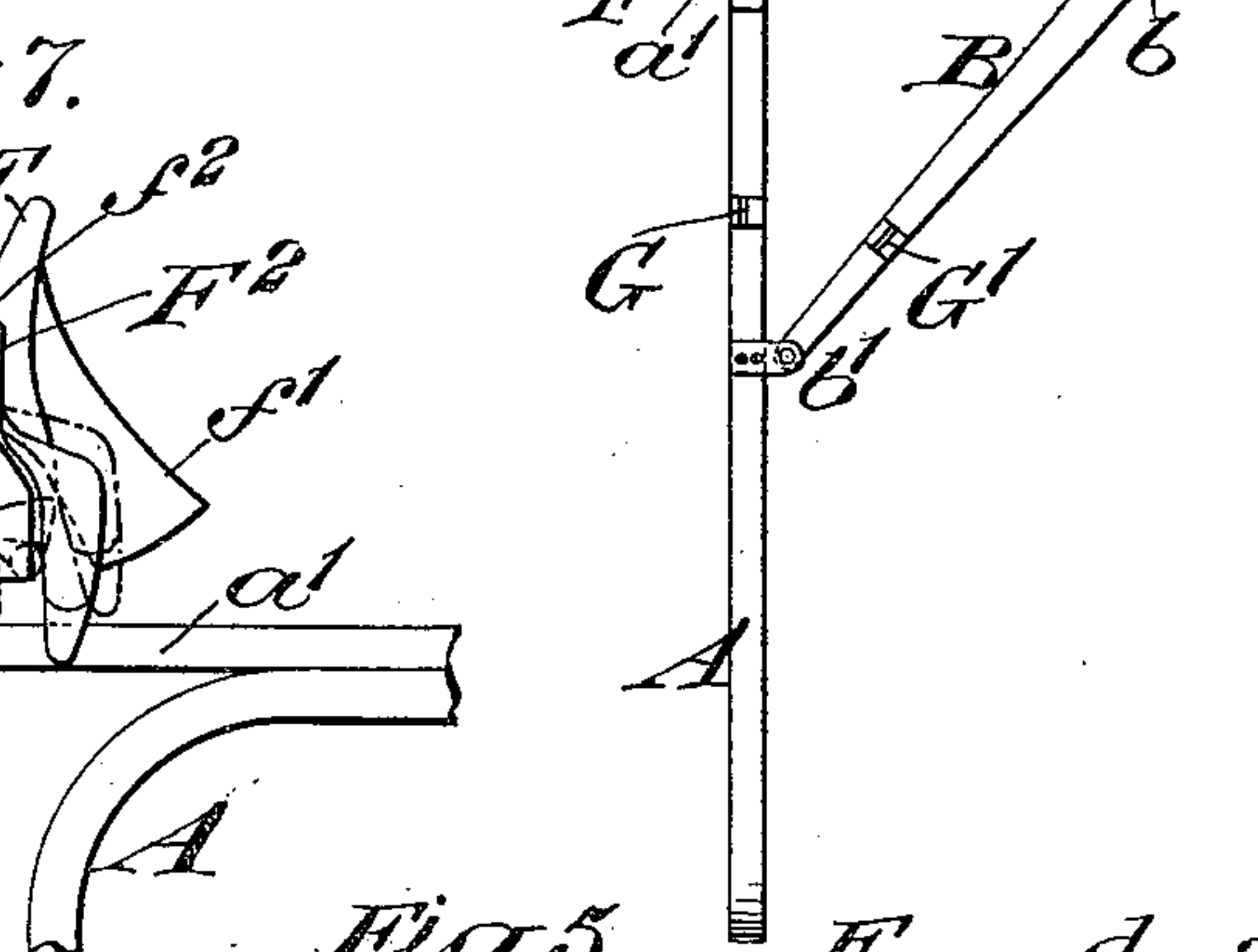
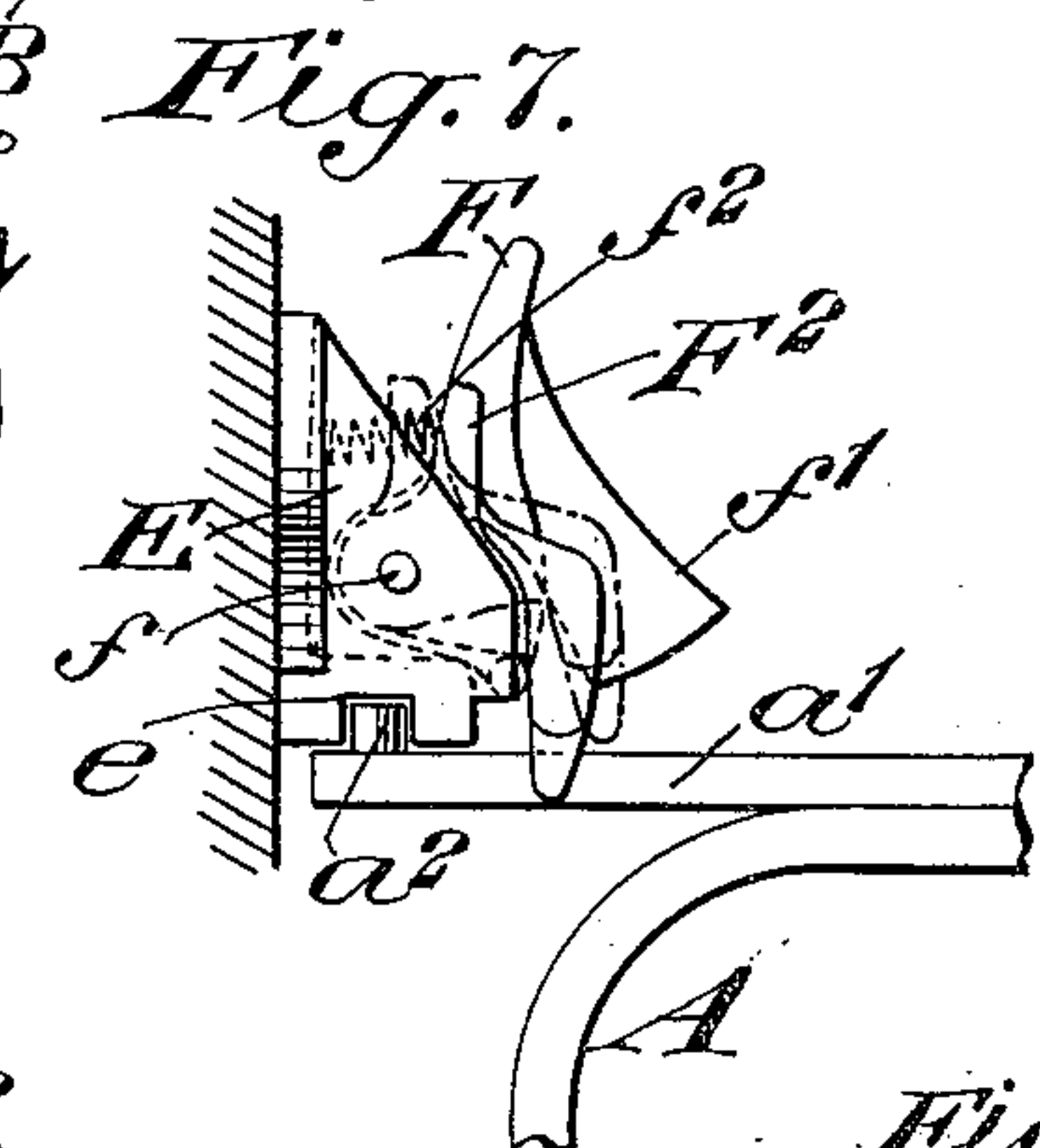
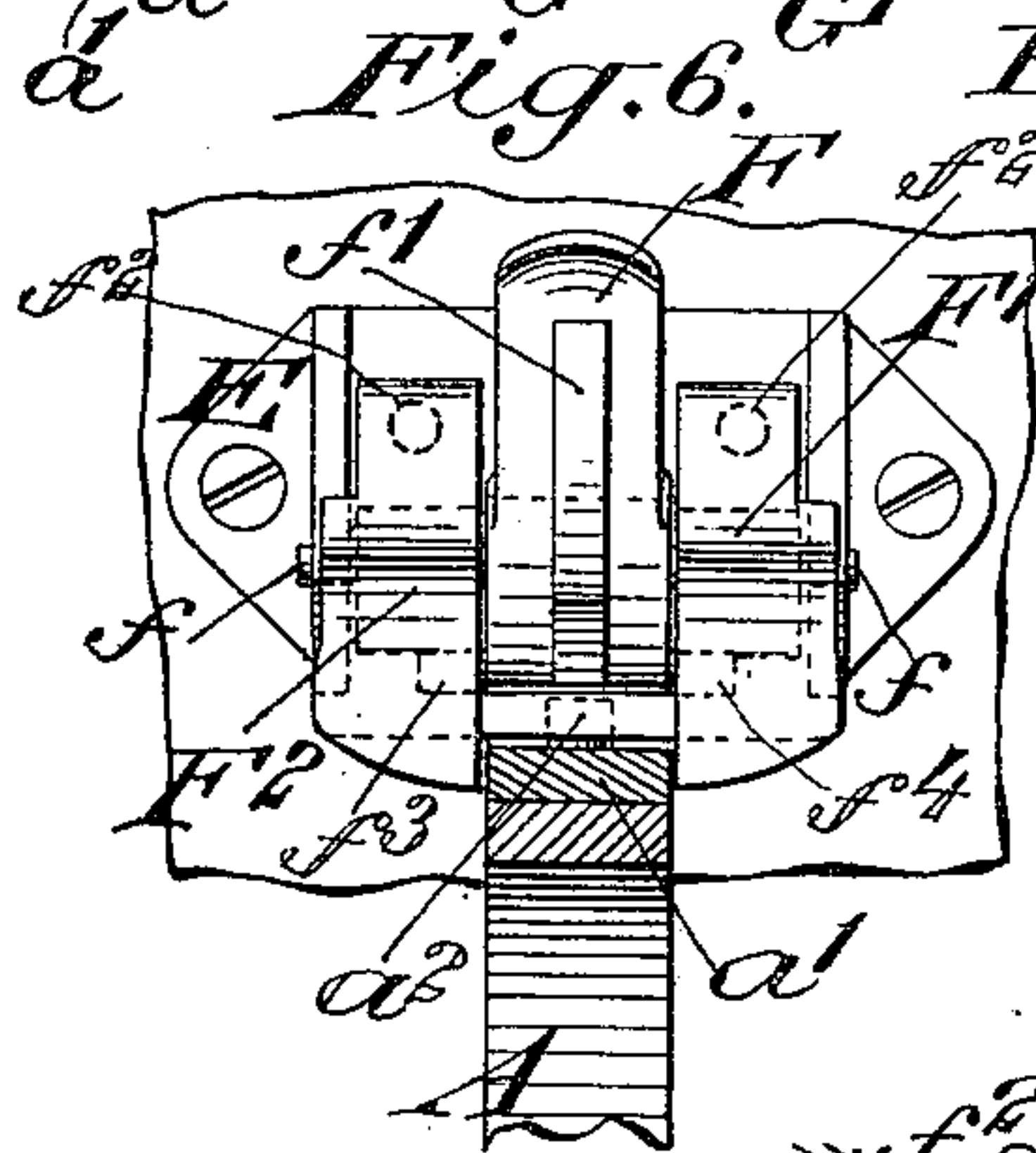
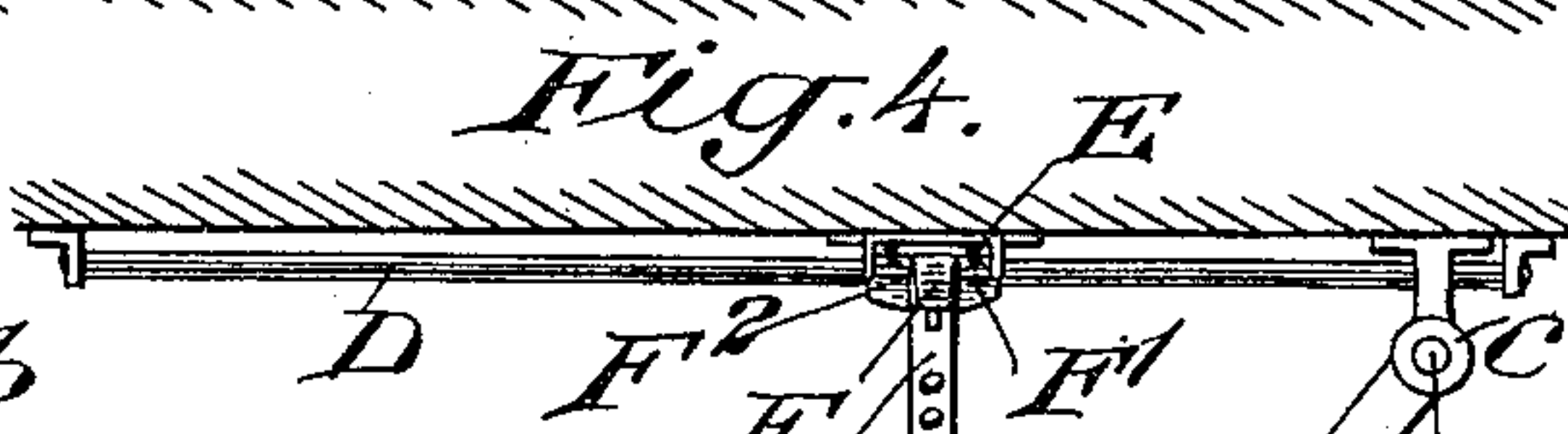
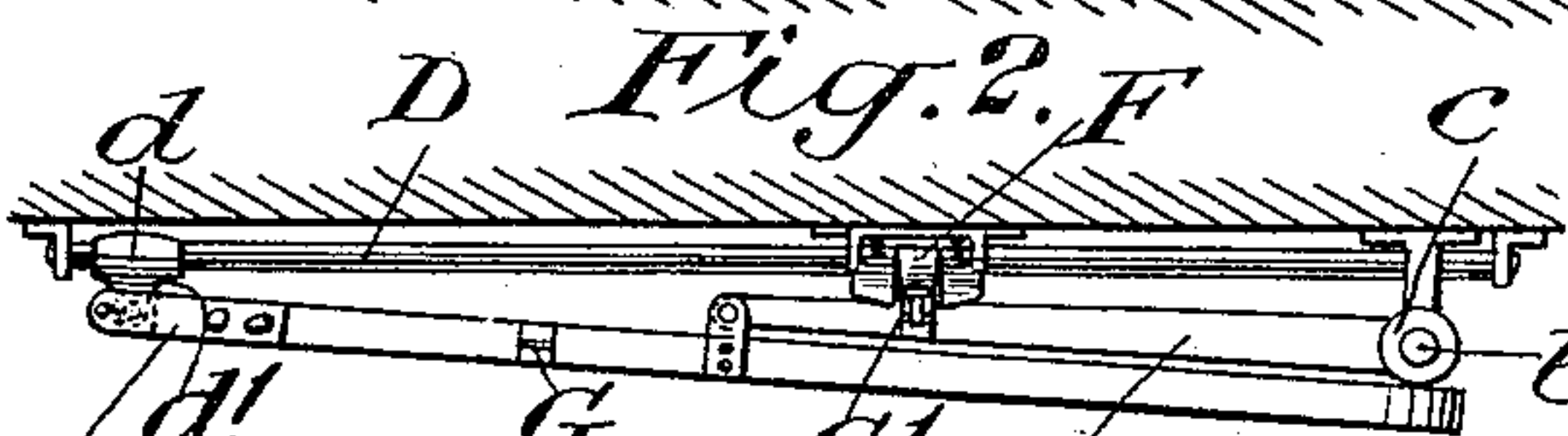
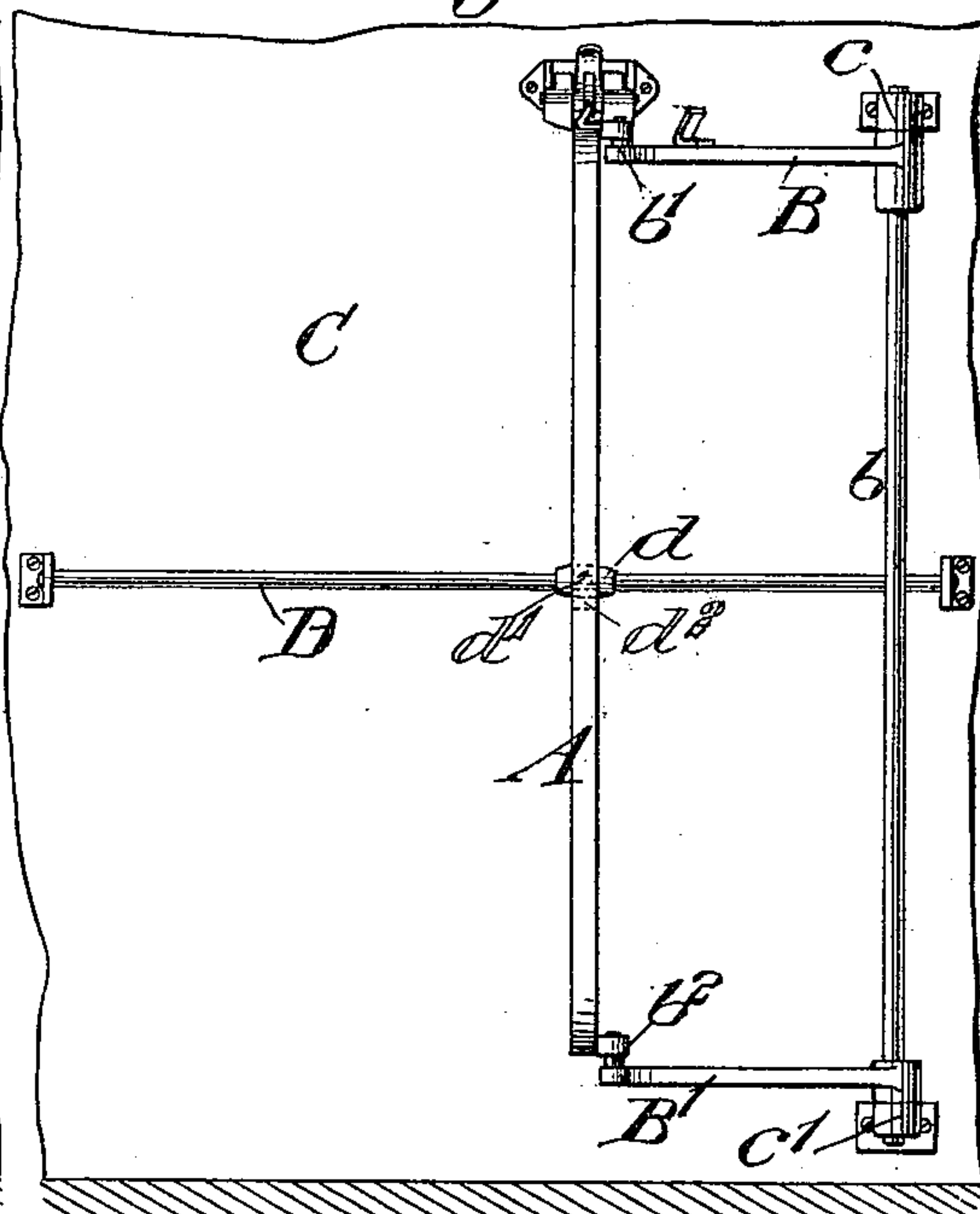


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM R. PITT, OF NEW ROCHELLE, NEW YORK.

GATE.

SPECIFICATION forming part of Letters Patent No. 622,016, dated March 28, 1899.

Application filed November 15, 1898. Serial No. 696,502. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM R. PITT, a citizen of the United States, and a resident of New Rochelle, in the county of Westchester and State of New York, have invented a new and useful Improvement in Gates, of which the following is a specification.

My invention relates to an improvement in gates, and more particularly to gates arranged to simultaneously swing and fold into an open position and to simultaneously swing and unfold into its closed position.

The object is to simplify the structure and at the same time reduce to a minimum the field traversed by the gate during its swinging and folding movement.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is a view of the gate as it appears when swung into its open or folded position in one direction. Fig. 2 is a top plan view of the same. Fig. 3 is a view in end elevation showing the position of the gate when it is swung into its unfolded closed position. Fig. 4 is a top plan view of the same. Fig. 5 is a top plan view showing the position of the gate when it is swung into its folded open position in the opposite direction from that shown in Figs. 1 and 2. Fig. 6 is an enlarged view, in face elevation, of a three-part latch for holding the gate in its several positions. Fig. 7 is a view of the same in side elevation, showing the position of the latch when the gate is closed; and Fig. 8 is a view in vertical section through the latch, showing the central part engaged with the catch on the gate to hold it open.

The gate itself is here represented as of skeleton form, and consists of a metallic rim A, extending around the four sides, and a series of bars *a*, extending between and connected with the top and bottom of the rim A. The particular structure of the gate itself is not, however, an important feature of my present invention, and the form here shown is one of the many forms which may be utilized for various purposes, as may be required.

The gate is supported by means of a pair of arms B B', pivoted at their inner ends to a fixed support—as, for example, the wall C of a car or building—the preferred manner of

pivoting them to the fixed support being by means of a pintle-rod *b*, to which the arms B B' are fixed, the rod itself being mounted in sockets *c c'*, attached to the wall. The opposite or outer ends of the arms B B' are pivotally secured to the top and bottom of the gate, as at *b' b²*. By this structure the gate is supported wholly by and free to swing on the free ends of the arms B B' in either of two opposite directions, as may be required. To further limit the gate in its swinging movement, its inner edge has a traveling engagement with a stationary rod or bar D, fixed to the wall C in a position transverse to the axis about which the gate swings. The traveling connection with the bar D is conveniently made by means of a sleeve *d*, fitted to slide longitudinally along the bar D and provided with a lug *d'*, through which it is pivotally secured to a bracket *d²*, fixed to the inner edge of the gate. This connection forces the inner edge of the gate as the gate swings into and out of its open or closed position to travel along a path in proximity to the bar D, and when the latter is fixed in proximity to the wall causes the inner edge of the gate to travel along a path parallel with said wall and in proximity thereto.

The gate is provided at its top inner corner with an arm *a'*, projecting inwardly a short distance from the inner edge of the gate and fixed securely to the rim of the gate, the said arm *a'* being provided with an upwardly-extending lug *a²* on its rear end, which as the gate reaches its closed position (shown in Figs. 3 and 4) enters a groove *e* in the bottom of a latch-supporting bracket E, and thereby prevents the gate from sagging under any pressure which may be exerted upon it—as, for example, from passengers on the platform of a car leaning their weight upon it. The latch-supporting bracket E has pivotally secured thereto on a common pintle *f* (see Fig. 6) three latches—a central latch F and two side latches F' and F². The central latch has an outwardly and downwardly extending nose *f'*, which is adapted to hook over a catch G on the top of the gate or a corresponding catch G' on the upper supporting-arm B, according as the gate is swung into its open position in the one or the other of two opposite directions. The latches F' and F² are adapted to

rest with their free ends upon opposite sides of the top rim of the gate when the gate is in its closed position, as shown in Figs. 3 and 4, and the said latches are preferably held yieldingly in their positions by means of springs f^2 , inserted between their upper ends and the face of the bracket E. The central latch F is further provided with laterally-projecting pins $f^3 f^4$, (see Figs. 6 and 8,) which rest normally in engagement with the back faces of the lower ends of the latches $F' F^2$, so that when the central latch F has its upper end pressed back toward the wall to lift it from the catch G or G' it will simultaneously lift the latches $F' F^2$ out of the path of the arm a' on the top of the gate, and hence will leave the gate free to be swung into its closed position.

By the above-described structure the heel or inner edge of the gate may be swung in either direction along the guide-bar D, and the gate will be opened and folded in either of two opposite directions, as shown in Figs. 2 and 5. When opened in the one direction, (indicated in Fig. 2,) the gate itself will be folded onto the outer sides of the supporting-arms B B', and when opened in the opposite direction it will be folded on the inner sides of said supporting-arms B B', as shown in Fig. 5. The free edge of the gate when swung into its open position or back into its closed position will traverse a path only a short distance away from the normal position of the gate when it is closed, so that it may be opened and closed without disturbing a crowd of passengers in close proximity to it, a condition of things which often happens in overcrowded street and railway cars. Furthermore, it may be opened in either of two directions at pleasure, according as the crowd is forcing itself onto the car or forcing itself off the car.

The supporting-arms B B' in addition to their function as gate-supports serve another very important function—viz., that of bracing the gate. The position of the gate when closed, as shown in Fig. 4, will illustrate the position of the supporting-arms B B' when the gate is in its closed position, the said arms forming diagonal braces extending from a point about midway of the gate to the fixed sockets on the wall.

It is obvious that changes might be resorted to in the form and arrangement of the several parts without departing from the spirit and scope of my invention. Hence I do not wish to limit myself strictly to the structure herein shown and described; but

What I claim is—

1. A gate, swinging arms forming a main support for the gate and having a pivotal connection with the gate and a fixed guide extending transversely to the plane of the gate when the latter is in its closed position, one edge of the gate having a traveling connection with the guide, the several connections being so arranged that the supporting-arms assume positions oblique to the plane of the gate when the latter is in its closed position, substantially as set forth.

2. A gate, swinging arms forming a support for the gate, the gate being pivoted to the supporting-arms to swing into full open position upon opposite sides of the supporting-arms and means for causing one edge of the gate to follow a predetermined path across the plane of the closed position of the gate during its opposite swinging movements, substantially as set forth.

3. In combination, swinging supporting-arms, a gate pivotally secured to the free ends of said arms and a fixed bracket independent of the gate-support and in position to engage the inner edge of the gate when the latter is closed to prevent the free edge of the gate from sagging under abnormal pressure, substantially as set forth.

4. The combination with a swinging gate and its support, of a gate-fastener, the gate and its support being arranged to engage the fastener, the one when the gate is opened in one direction and the other when the gate is opened in the opposite direction, substantially as set forth.

5. The combination with a swinging gate and its support, of a triple latch, two parts of the latch being arranged to hold the gate closed and the other to hold the gate open, substantially as set forth.

6. The combination with a swinging gate and its support, of a triple latch, two parts of the latch being arranged to hold the gate closed and the other to hold the gate open, the said two latch parts being under the control of the said one part to be released simultaneously with the release of the one part, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 14th day of November, 1898.

WILLIAM R. PITT.

Witnesses:

FREDK. HAYNES,
EDWARD VIESER.