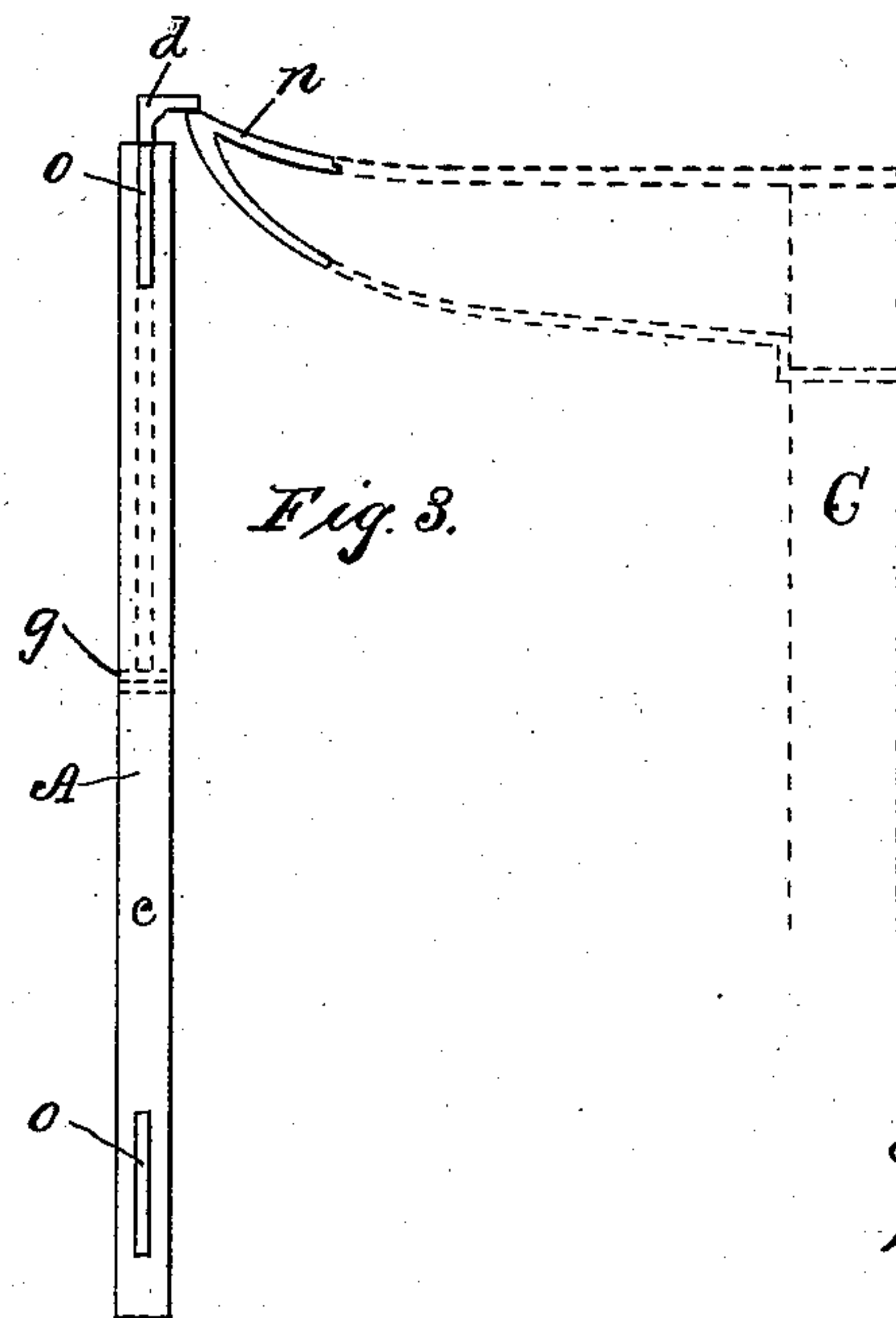
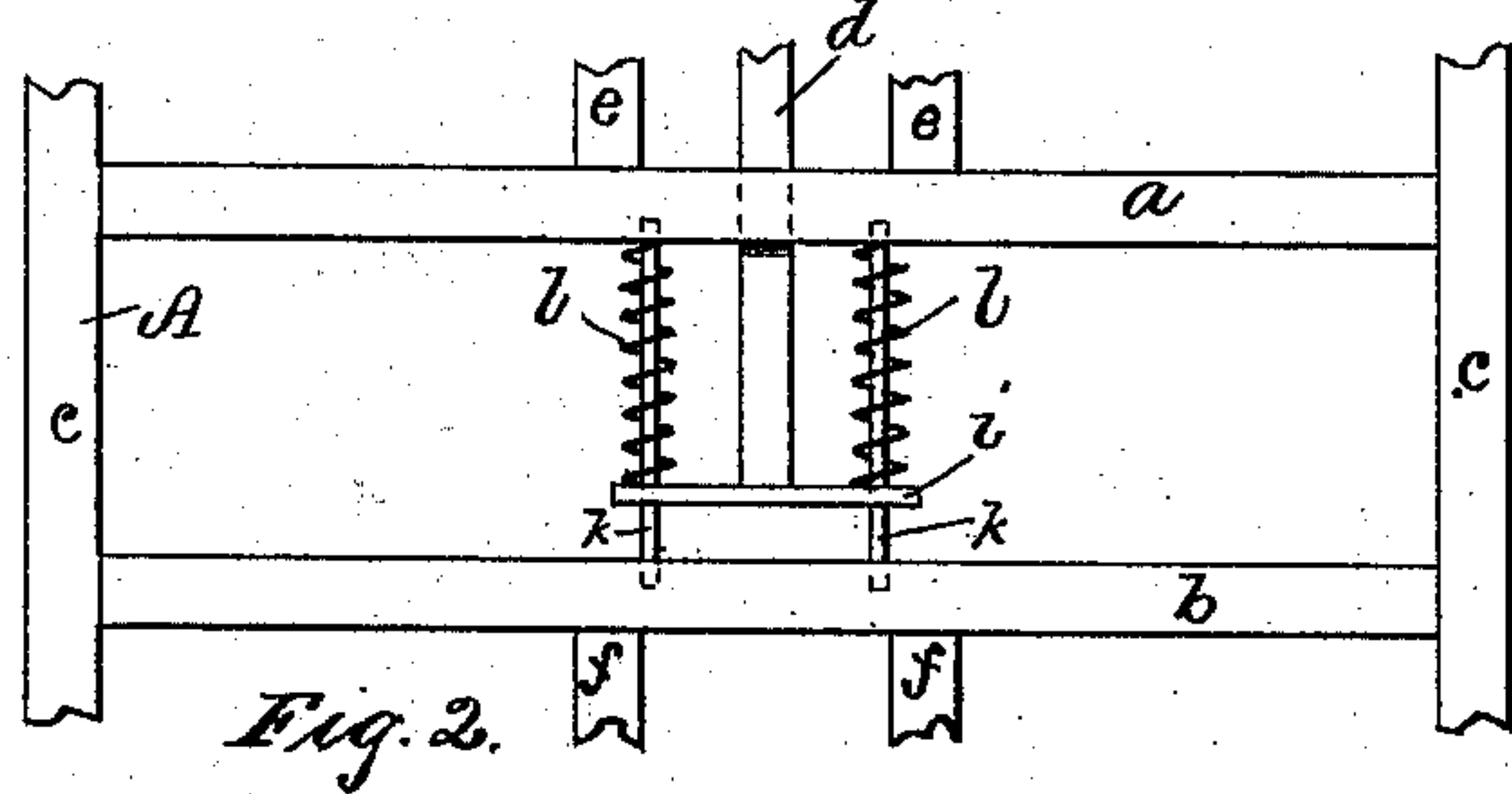
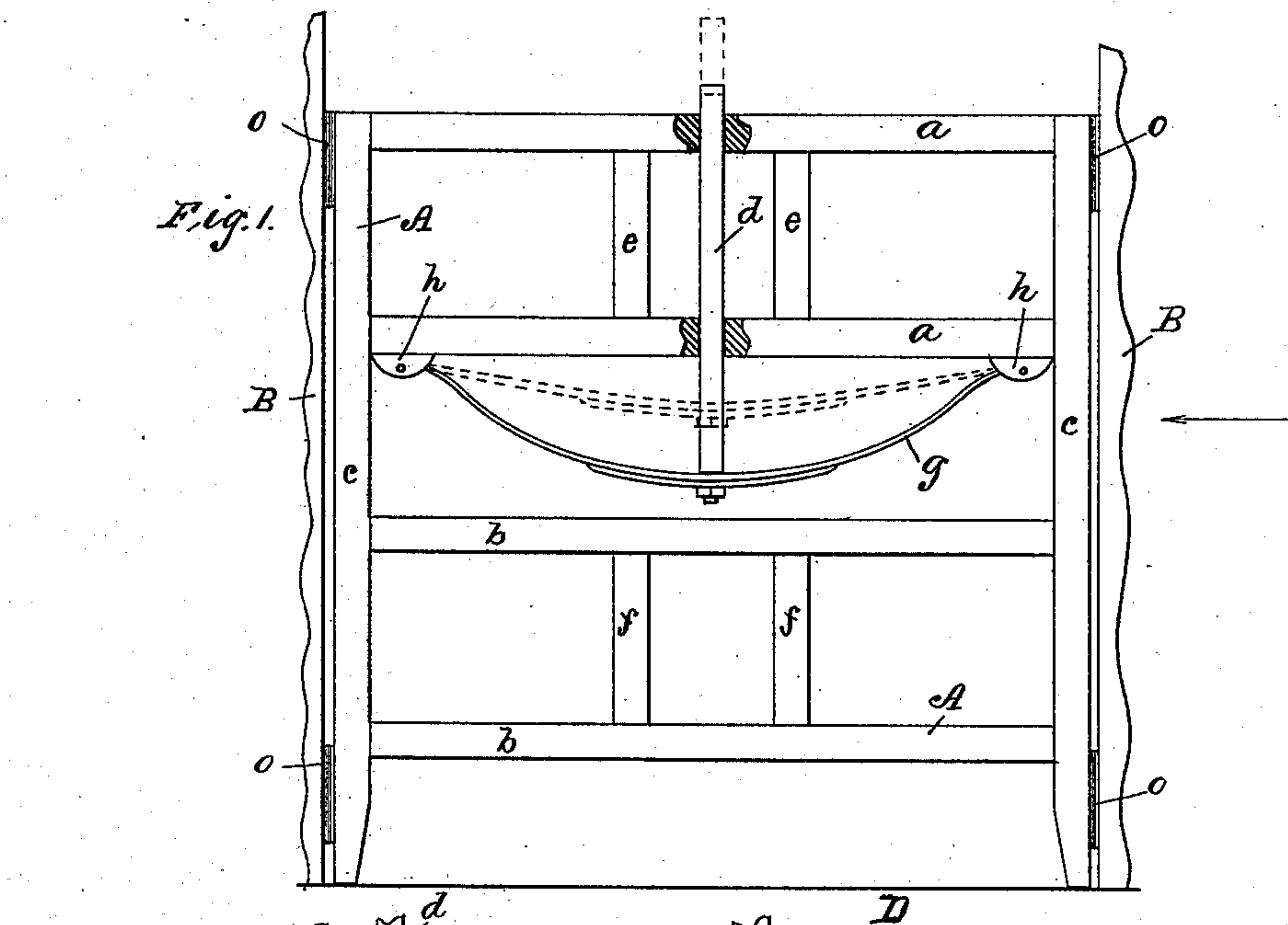


(No Model.)

O. L. DAVIS.
ELEVATOR GATE.

No. 402,412.

Patented Apr. 30, 1889.



Attest:
M. L. McDermott.
L. S. Whitmore.

Inventor:
O. L. Davis,
By E. B. Whitmore, Atty.

UNITED STATES PATENT OFFICE.

ORION L. DAVIS, OF ROCHESTER, NEW YORK.

ELEVATOR-GATE.

SPECIFICATION forming part of Letters Patent No. 402,412, dated April 30, 1889.

Application filed June 18, 1888. Serial No. 277,481. (No model.)

To all whom it may concern:

Be it known that I, ORION L. DAVIS, of Rochester, in the county of Monroe and State of New York, have invented a new and useful Improvement in Elevator-Gates, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

This invention relates to the gates or door-guards of freight-elevator wells, more particularly to those that move vertically and are raised automatically by the car as it arrives. When the car moves rapidly, as is the case with some elevators, it strikes or encounters the gate at rest with such force as to be liable to break or injure the latter, or the parts of both the car and gate receiving the shock primarily. To overcome this difficulty and relieve or deaden the shock resulting from the collision of the parts is the object of my present invention, the same being hereinafter fully described, and more particularly pointed out in the claim.

Referring to the drawings, Figure 1 is a front elevation of a gate or door-guard for the opening into an elevator-well. Fig. 2 shows a modification in the form of the spring and combined parts; and Fig. 3, an edge view of the parts seen, as indicated by arrow in Fig. 1.

Referring to the parts shown, A is a gate or door-guard, it being in the form of an open frame having vertical posts *c c* at its sides and horizontal cross-bars *a a b b*, with vertical stiffeners *e e f f*. The gate is held to slide vertically between door-posts or rigid parts B B in a manner that is common by means of projections *o* entering vertical grooves or races in the parts B B. When down, the gate rests upon the floor D.

d is a catch-bar or catch for the car, held to slide in vertical bearing in the cross-bars *a a* of the gate, the bar being turned inward at the top to engage or be operated upon by the lifter *n*, projecting from the frame or other

part of the car C. At its lower end the catch-bar is joined to an elliptical spring, *g*, convexed downward with its ends held in rests *h*, secured to the gate. This spring may be placed at the middle of the gate just beneath the lower cross-bar, *a*, as shown in Fig. 1, or it may be placed below the lower bar, *b*, its location being wholly a matter of convenience. Now, when the car moves upward and the lifter *n* encounters the movable catch-bar *d*, the latter will slide upward a short distance in its bearings in the frame, the spring yielding accordingly, thus allowing the inertia of the gate to be overcome gradually and effectually relieve the shock resulting from the contact of the car and gate.

As shown in Fig. 2, the catch-bar may be provided with a cross-piece, *i*, at its lower end to bear against spiral springs *l l*, instead of employing the elliptical spring *g*, as above described. These springs *l l* move on parallel, rigid, vertical rods *k k*, held by the adjacent cross-bars, *a b*, equidistant from the catch-bar and on opposite sides thereof, said cross-piece *i* being pierced near its ends to receive and move freely along the rods *k*. The spiral springs *l l* are the equivalent of the elliptical spring *g* in the matter of relieving the shock or jerk of the parts when encountered by the car, the spring or springs in either case constituting a yielding connection between the catch-bar and gate.

What I claim as my invention is—

In combination with the lifter of an elevator-car, a gate for the well, provided with a catch-bar held to move in vertical bearings in the gate, and a spring-connection between said catch-bar and gate, substantially as shown and described.

O. L. DAVIS.

Witnesses:

E. B. WHITMORE,
M. L. McDERMOTT.