

(No Model.)

J. S. BROWN.
FLOOD AND SLUICE GATE.

No. 316,733.

Patented Apr. 28, 1885.

Fig. 1.

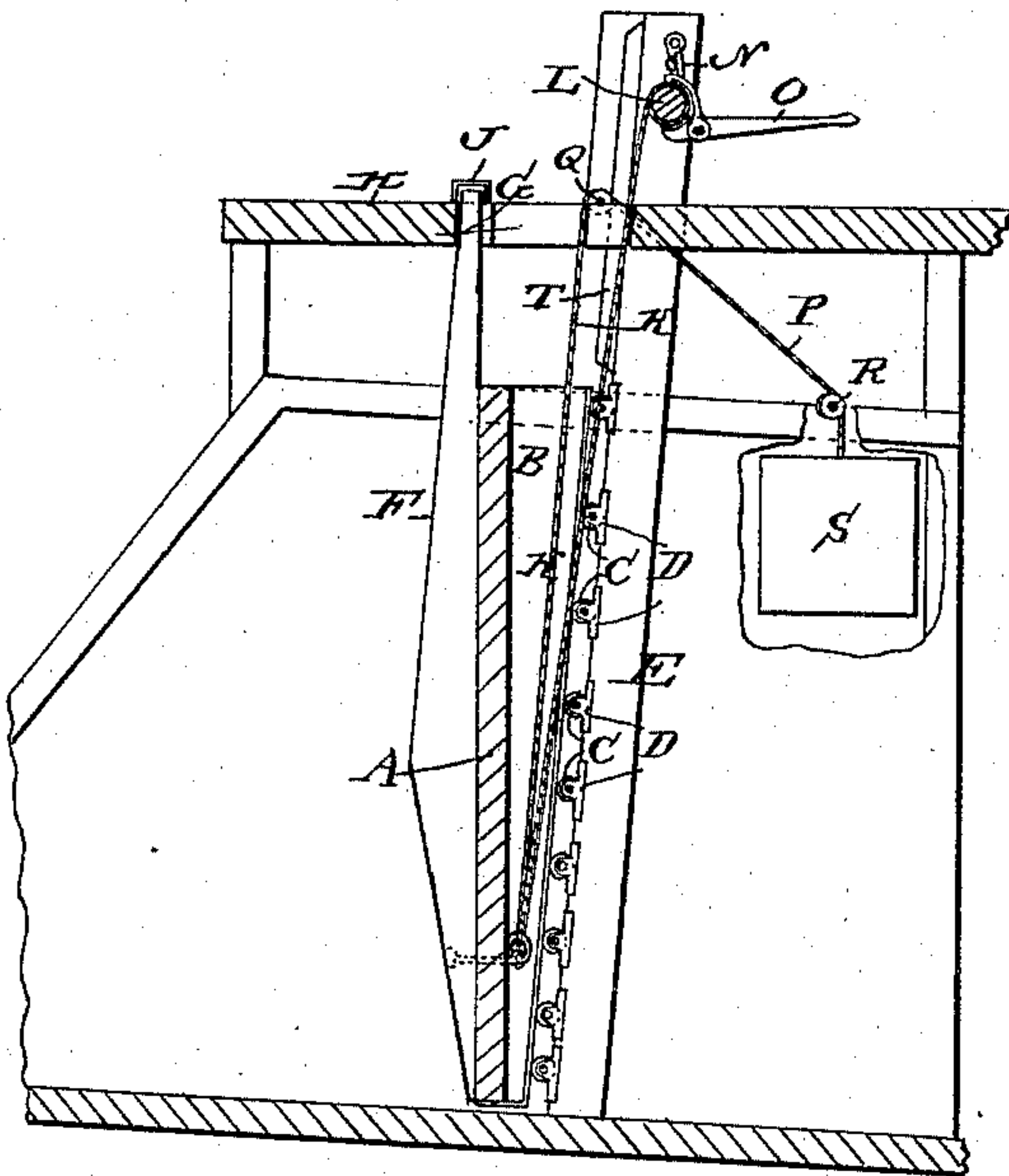


Fig. 2.

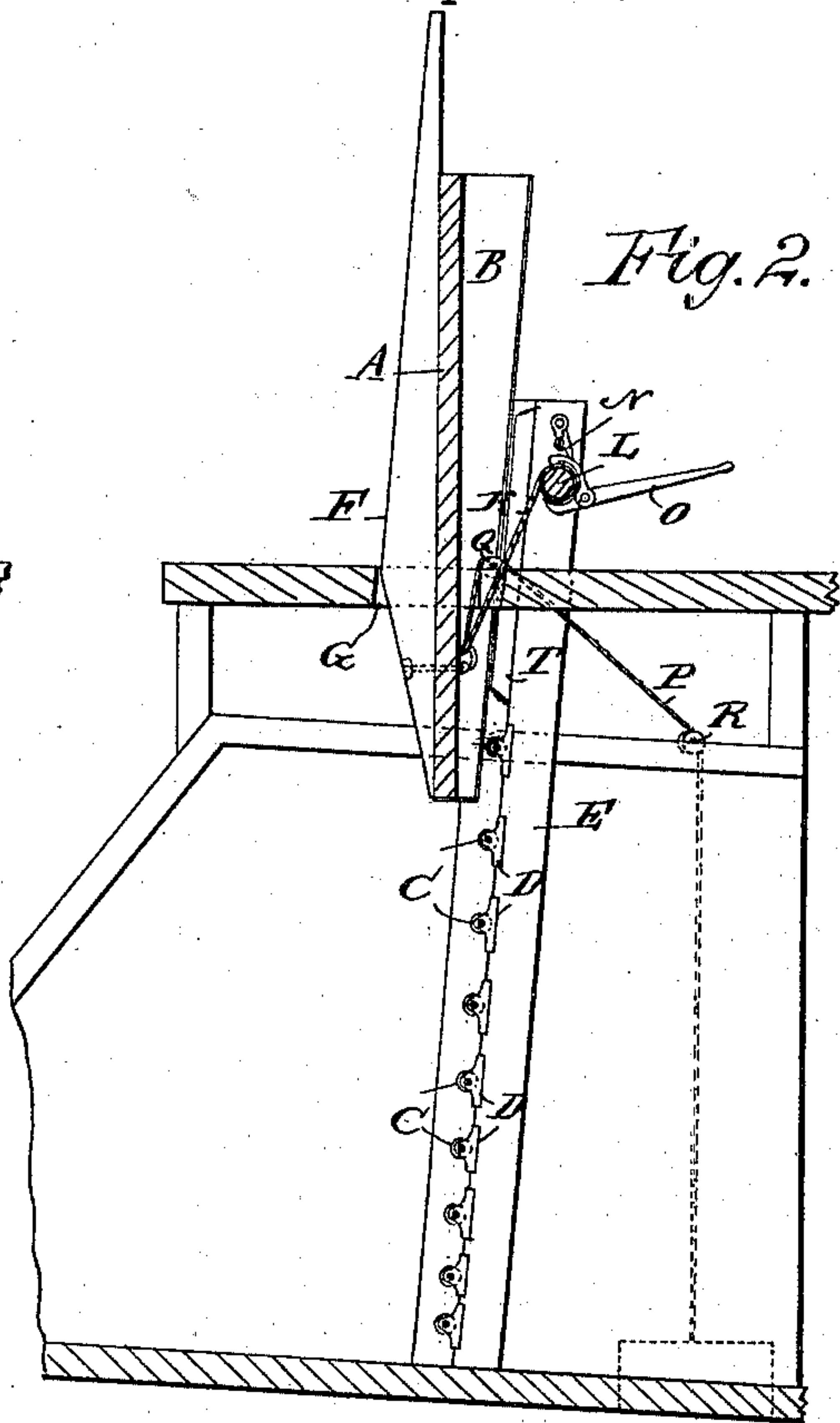


Fig. 3.

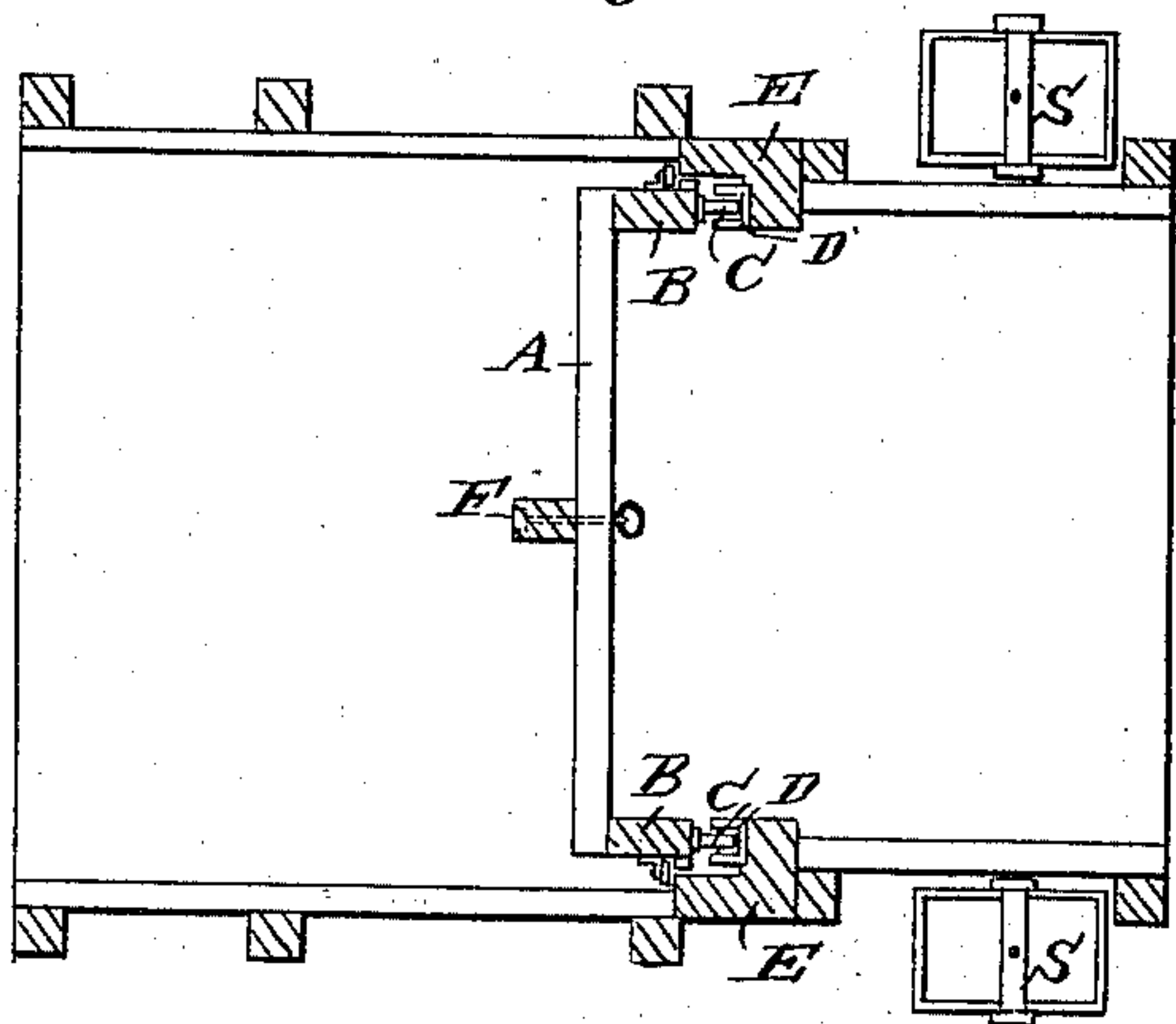
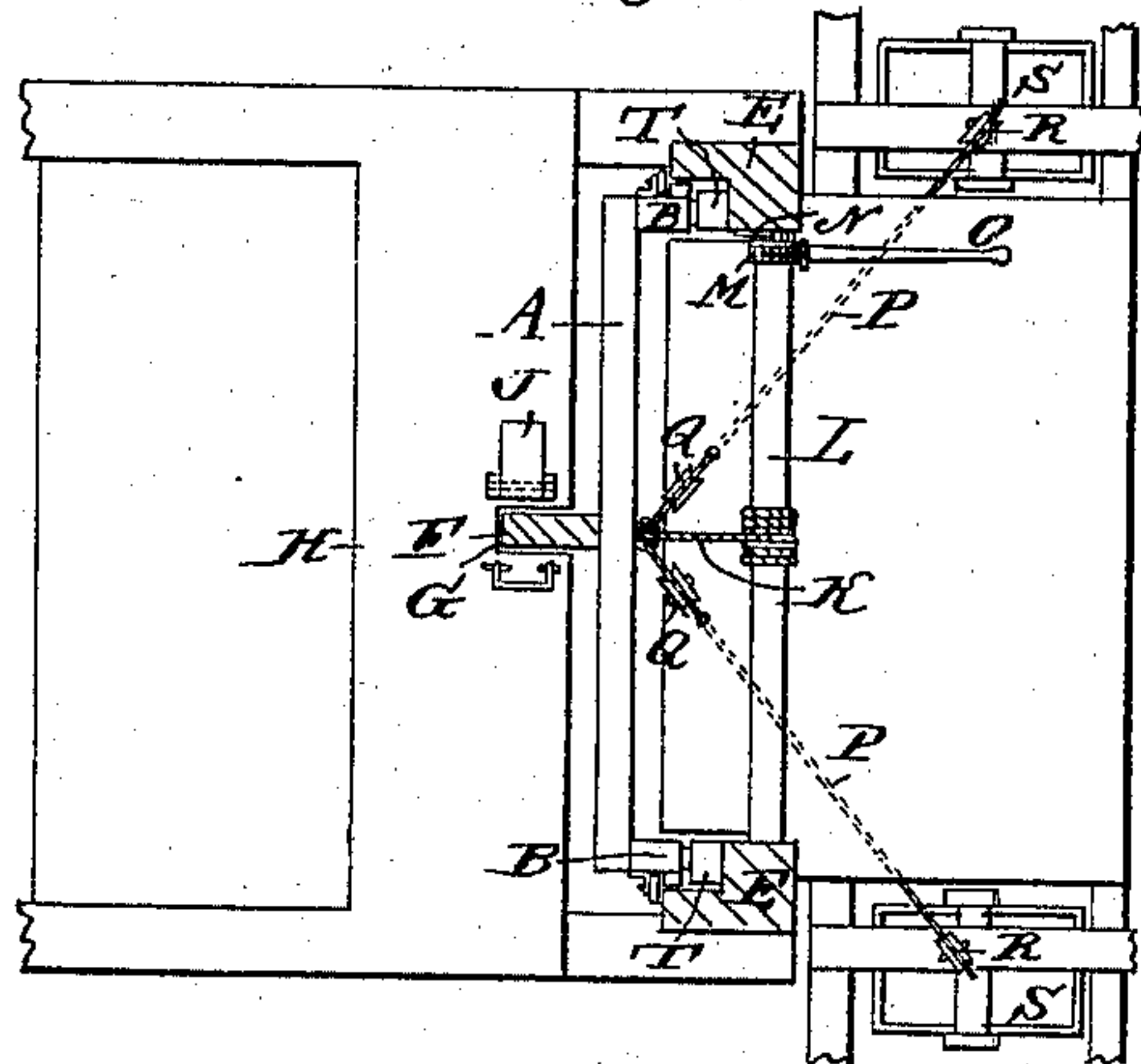


Fig. 4.



WITNESSES:

Wm. Beyer
C. Sedgwick

INVENTOR:

J. S. Brown
BY *Munn & Co*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JAMES S. BROWN, OF EUREKA, CALIFORNIA.

FLOOD AND SLUICE GATE.

SPECIFICATION forming part of Letters Patent No. 316,733, dated April 28, 1885.

Application filed September 26, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES S. BROWN, of Eureka, in the county of Humboldt and State of California, have invented a new and Improved Flood and Sluice Gate, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved flood and sluice gate which will not cramp in the ways and can thus be raised and lowered very easily and rapidly.

The invention consists of the combinations of parts and their construction, substantially as hereinafter fully set forth and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a cross-sectional elevation of my improved gate, the same being lowered. Fig. 2 is a like sectional view of the gate, the same being raised. Fig. 3 is a sectional plan view of the gate near the bottom. Fig. 4 is a sectional plan view of the same near the top.

The gate A, made of wood or metal, is provided on its outer surface with a guide-beam, B, at each end, the outer edge of the guide-beam being inclined at an angle of about eighty-five degrees, and the inclined edges of the guide-beams run on rollers C, pivoted on trucks D or jamb-beams E, secured to the sides of the sluice, &c., at an angle of eighty-five degrees. On the inner face of the gate an upright guide, F, is secured, which passes through a slot, G, in the deck H, upon which the persons manipulating the guide stand. A locking device, J, on the deck or platform H at the slot G, serves to lock the gate in place when lowered, as shown in Fig. 1. A rope or chain, K, is secured on the outer surface of the gate near the bottom and on the longitudinal central line, and the said rope is also secured on a drum, L, journaled in the jamb-beams E at their upper ends. A ratchet-wheel, M, is formed on one end of the drum, and a pawl, N, provided on one beam E engages with the said ratchet-wheel. A pawl-lever, O, is provided for revolving or turning the drum. Two ropes or

chains, P, secured to the gate at the central line near the bottom, pass over two pulleys, Q, and two pulleys, R, and weights S are secured to the free ends of the ropes or chains. Above the trucks D cleats T are secured to the beams E, to prevent the gate from tilting when raised. The gate must always move vertically to the current. The pressure of the water against the inner face of the gate—that is, on the face on which the current acts—greatly assists in raising the gate. The weights S partly balance the gate and assist in raising it. The bearing-faces of the guides B and F are parallel.

The gate is manipulated in the following manner: If the gate is to be raised—that is, opened—the rope or chain K is wound on the drum L by means of the pawl-lever O, and at the same time the weights S descend and assist in raising the gate. To lower or close the gate, the drum is released to permit the gate to descend. On the outer surfaces of the beams B adjustable battens are placed, which, by the pressure of the water, are pressed tightly against the jambs and prevent the water from escaping through the side crevices. Metal plates are secured on the guide-beams B on the surfaces that run on the rollers.

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

1. The vertically-movable gate having the central guide on one side and additional guides upon the opposite side at its vertical edges, the bearing-faces of said guides being parallel, in combination with the inclined beams to guide said gate in its movement, substantially as and for the purpose set forth.

2. The vertically-movable gate having the central guide on one side, which guide has an upwardly extended arm, said gate having upon the opposite side at its vertical edges additional guides, the bearing-faces of said guides being parallel, in combination with the inclined beams having trucks, substantially as and for the purpose set forth.

JAMES S. BROWN.

Witnesses:

FRED. W. BELL,
S. I. ALLARD.