

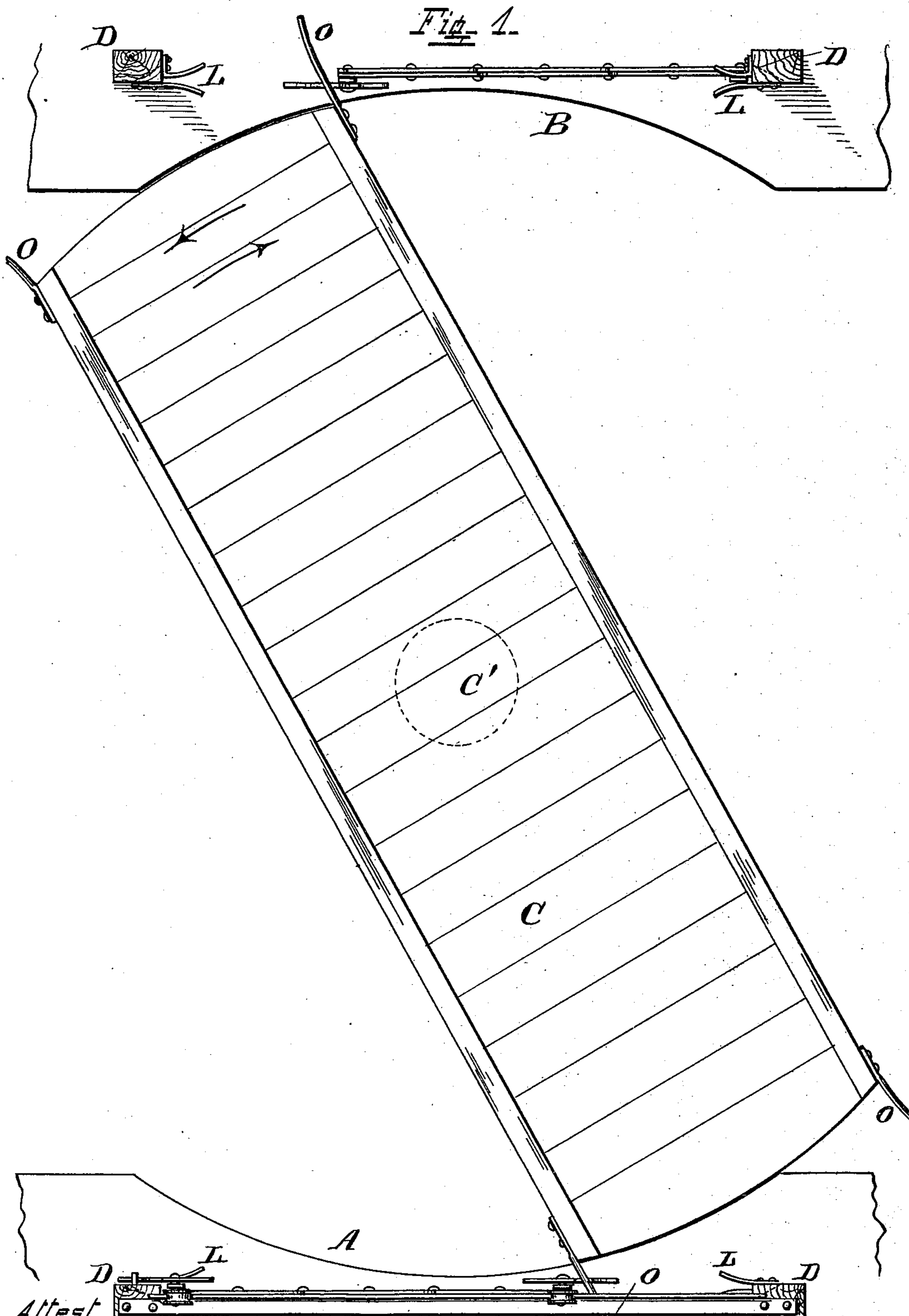
(No Model.)

2 Sheets—Sheet 1.

D. GREENHOOT.
DRAW BRIDGE GATE.

No. 377,807.

Patented Feb. 14, 1888.



Attest
Carl Spengel
George Heidman.

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Inventor David Greenhoot
By Arthur Stein Atty.

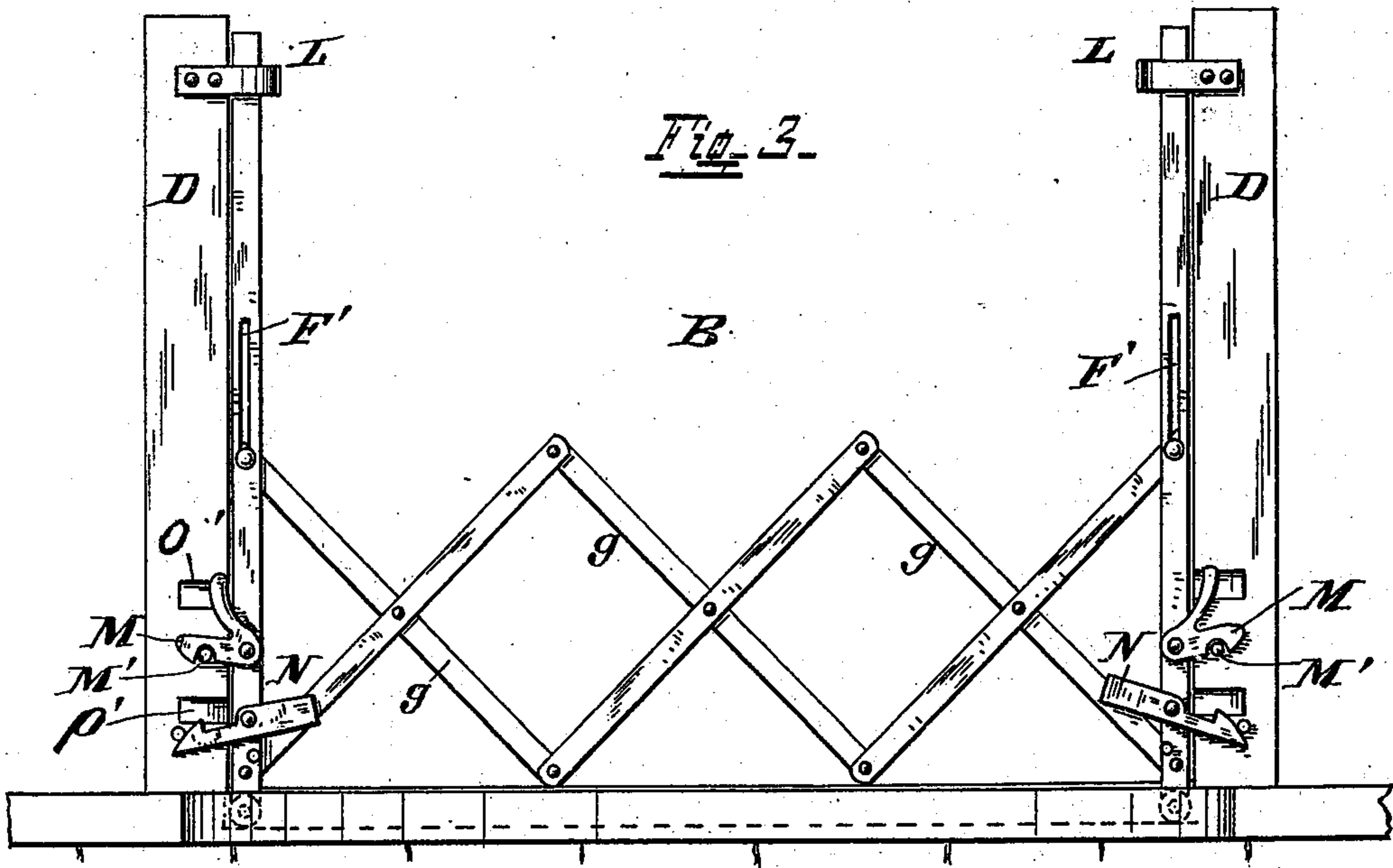
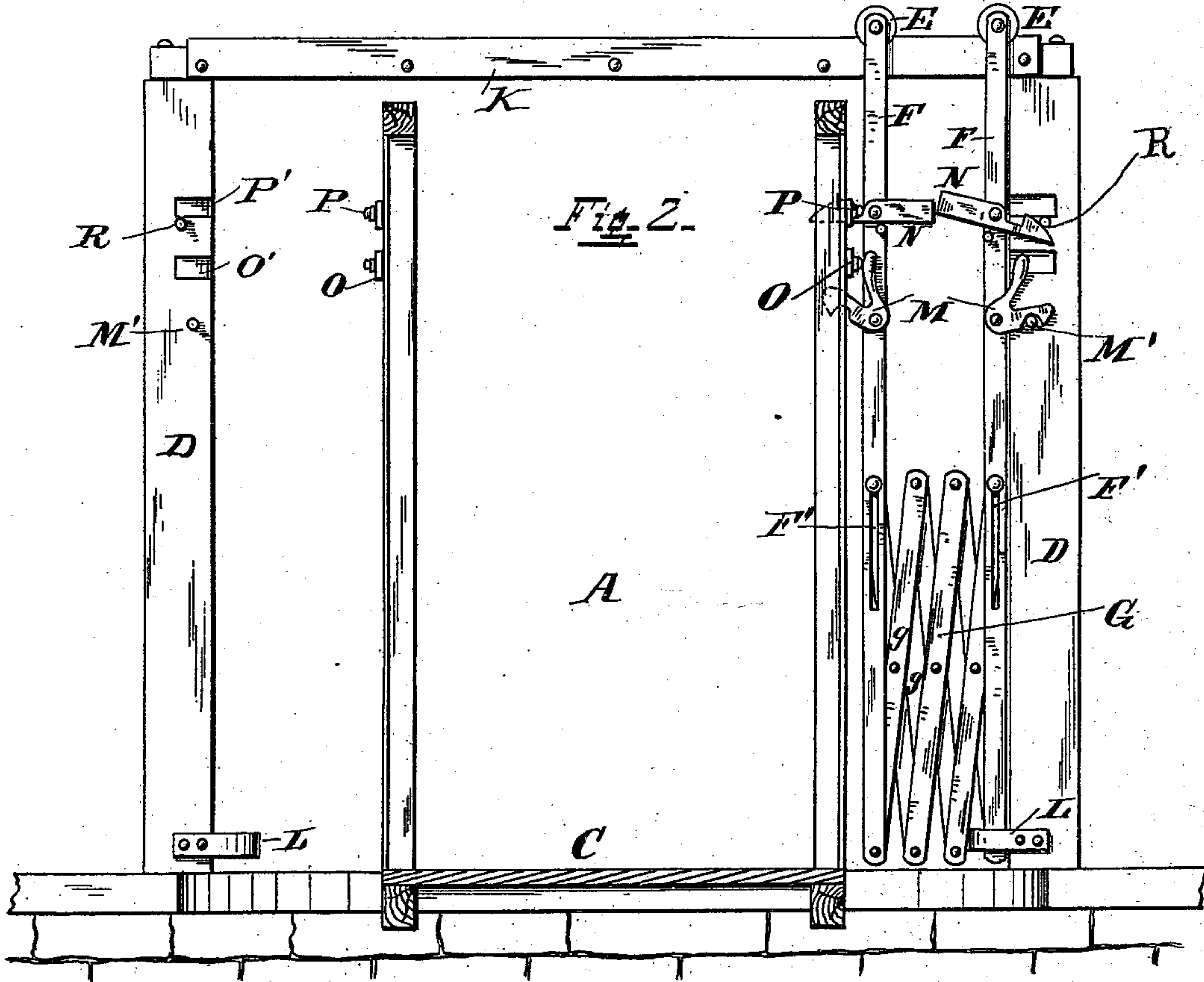
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UNITED STATES PATENT OFFICE.

DAVID GREENHOOT, OF CINCINNATI, OHIO.

DRAW-BRIDGE GATE.

SPECIFICATION forming part of Letters Patent No. 377,807, dated February 14, 1888.

Application filed November 9, 1887. Serial No. 254,671. (No model.)

To all whom it may concern:

Be it known that I, DAVID GREENHOOT, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented a certain new and useful Improvement in Automatic Draw-Bridge Gates, of which the following is a full, clear, and exact description.

My invention relates to an improvement in draw-bridge gates which are arranged to be automatically opened and closed with the bridge—that is, as the bridge is swung round to open the water-way the bridge of course becomes closed, and unless the approach to it is protected by a gate or guard any one endeavoring to cross the bridge and not seeing its position, by reason of darkness or carelessness, would fall into the water. It is necessary, therefore, for protection to have the approach to the bridge at either end protected by a gate or guard. If an attendant is required at each end of the bridge to close the gates as the bridge is closed or swung to open the water-way and to open the gates as the bridge is again swung back or opened, it necessitates a very considerable expense, and unless the attendant is very careful, as well as prompt, accidents are liable to happen, and in crowded streets much time is lost.

My invention is designed to remedy this by providing a gate which is automatically opened and closed by the act of opening and closing the bridge.

In the accompanying drawings, forming part of this specification, Figure 1 is a ground plan view of my improved bridge-gates. Fig. 2 is an end view or elevation of the bridge and gates when open to travel. Fig. 3 is an end view of the gate when closed to travel.

In Fig. 1 the bridge is shown partially closed. In Fig. 2 the gate is represented as supported by rollers rolling on the cross-beam K, while in Fig. 3 the gate is represented as supported on rollers running in a slot across the roadway, but below the surface. In Fig. 1 the gate is represented at A as supported from the top, at B as supported from the bottom. The construction and operation of the gate is the same in both cases, the only difference being in the manner of support. It is sometimes inconvenient to support the gate from above by

a beam across the roadway. In such cases it may be supported from below, in the manner shown in Fig. 3, by the rollers moving in the slot, or, when desired, it may have both the top and bottom supports.

C is an ordinary draw-bridge swung on an ordinary turn-table, as at C'. On either side of the roadway or approach to the bridge are upright supports D D, and across their top extends the beam K. Suspended on that beam by means of the rods F F and rollers E E is a folding gate, G, consisting of strips of wood or metal g, crossing one another and pivoted together at their ends and at the points of crossing. The outer ends of this gate are attached by pivots to the upright bars F F, the upper pivots moving in the vertical slots F' F'. On the upright supports D D are forked guides L L, which receive the bars F F and hold them in a vertical position when stationary against the supports D D. On the bars F F, at either end of the gate, are pivoted the hooks M M, which engage over pins M' M' on the stationary supports D D and hold the gate shut. There are also pivoted to these bars F F hooks N N. On the ends of the bridge are fingers O O and P P. The fingers P P on opposite sides at opposite ends of the bridge are caught on the hooks N when the bridge is open. As the bridge is swung round, these fingers and hooks draw one side of the gate until it comes against the support D and is caught by the guide or guides L, as shown in Fig. 3. In these supports are provided notches or slots P' and O', which permit the ends of the fingers P and O to swing past them. A pin, R, strikes the beveled edge of the hook N and releases the finger P, so that the bridge moves on free into a position at right angles with its closed position or clear round, while the hook M catches on the pin M' and holds the gate closed, both ends of the gate being hooked securely to the supports D.

As the bridge is swung back or swung round, the finger O passes through the slot O', strikes the upper arm of the hook M, and releases the gate and presses it back into the position shown in Fig. 2, the finger P at the same time becoming immediately engaged with the hook N, ready to pull the gate closed again at the next turn of the bridge. The bridge cannot

close without closing the gate and cannot open without opening it.

As the attachments of the gate are the same at both ends of the gate, the bridge, when
5 closed, need not necessarily be opened by swinging it back, but may be turned on round and make a complete circle, opening the gate from the opposite side.

The hooks operate automatically to fasten
10 the gate closed when the bridge is closed; but as the bridge is opened these hooks are automatically unlocked, so that the fingers or arms on the bridge may press the gate open. At the same time the hooks N become engaged
15 over the arms or fingers P, so that as the bridge is swung again to close it the gate is pulled shut by the same action, and as soon as shut the hooks are released, so that the bridge may swing on around free.

20 Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In combination with the swinging draw-bridge, the folding gate G, provided with hooks for fastening the gate to the side supports, 25 which are automatically released by the bridge in the act of being opened, substantially as and for the purpose described.

2. In combination with a swinging draw-bridge, the folding gate G, provided with hooks 30 which automatically engage with fingers or arms on the bridge, so that when the bridge is closed the gate will be drawn shut and when shut the hooks automatically released from the bridge and the gate locked, substantially 35 as and for the purpose described.

3. The folding gate G, provided with hooks M M and N N, for locking it to the bridge or to the supports D D, substantially as and for the purpose specified.

DAVID GREENHOOT.

Witnesses:

ALFRED M. ALLEN,
ARTHUR STEIN.