

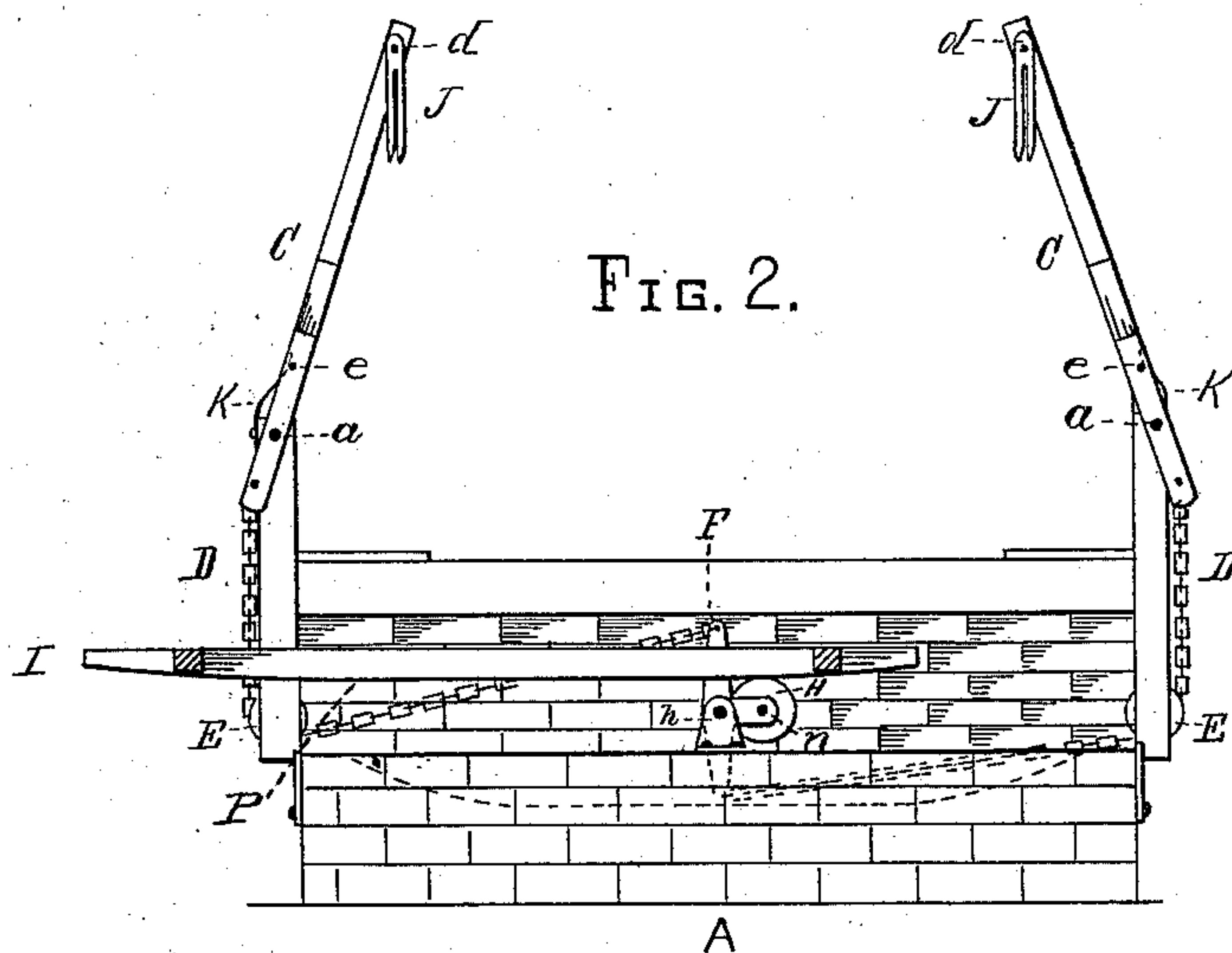
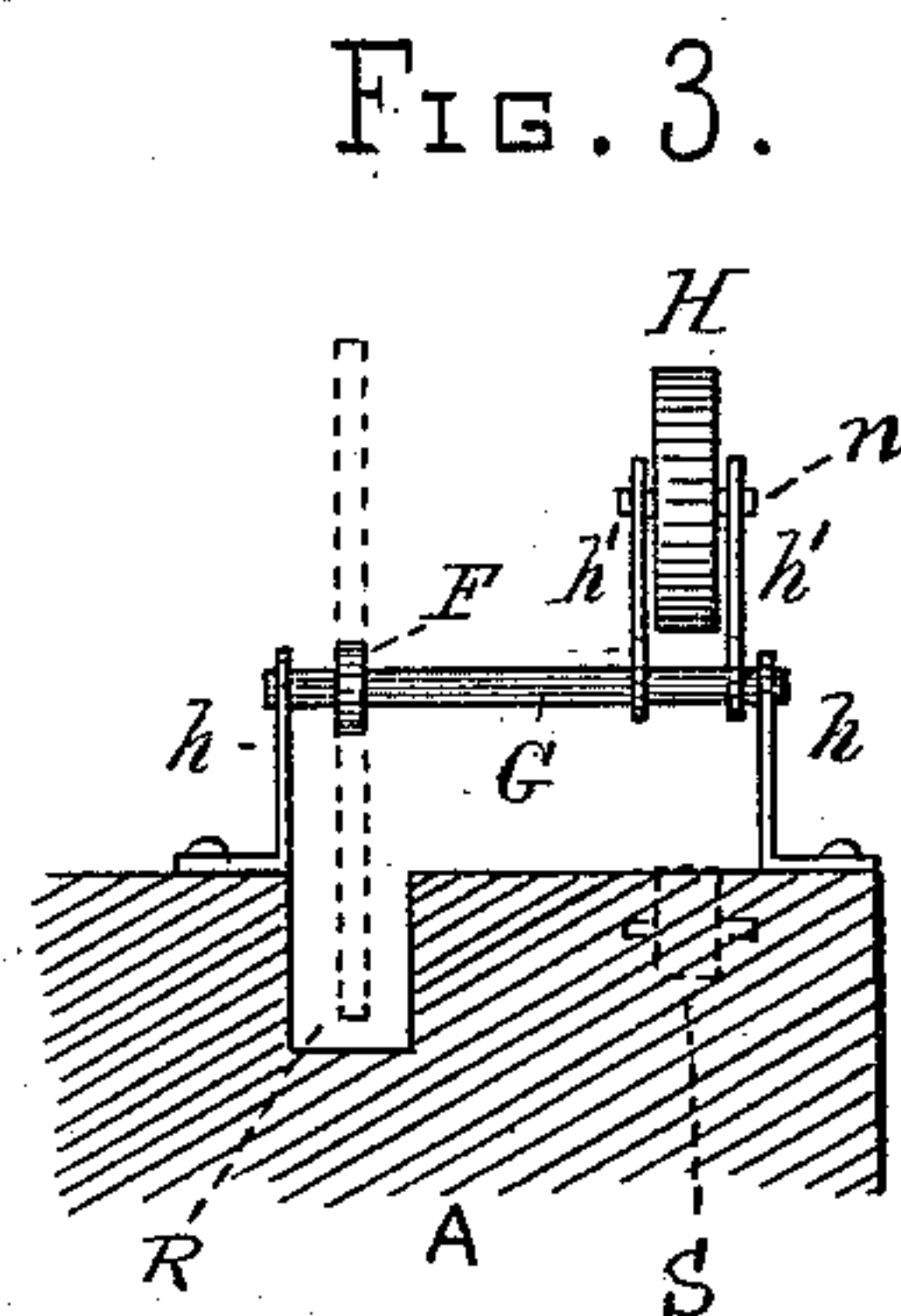
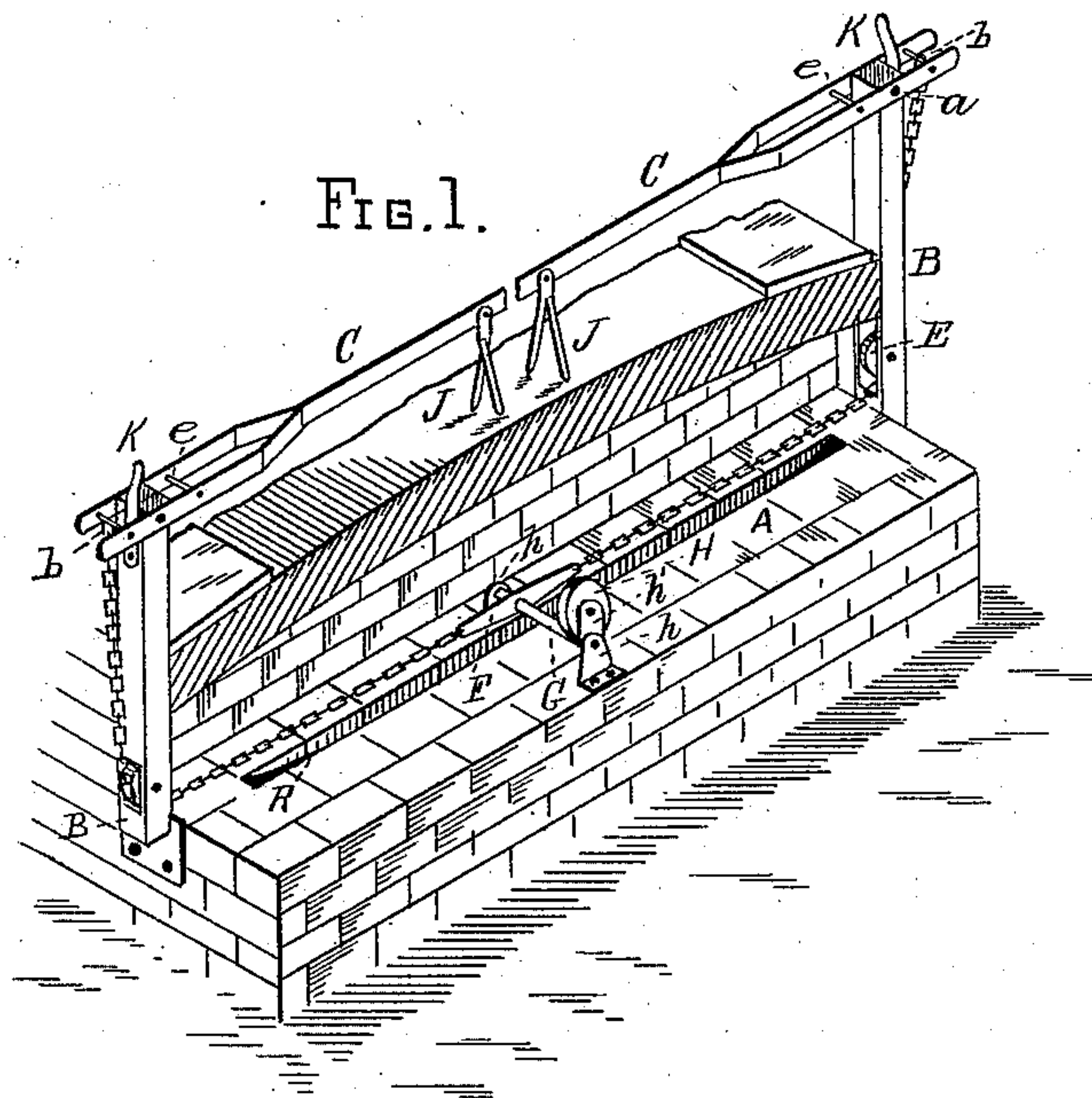
(No Model.)

H. J. ROHRBACH.

BRIDGE GATE.

No. 347,065.

Patented Aug. 10, 1886.



WITNESSES:

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HENRY J. ROHRBACH, OF CHICAGO, ASSIGNOR OF ONE-HALF TO CHARLES ALLEN, OF HINSDALE, ILLINOIS.

BRIDGE-GATE.

SPECIFICATION forming part of Letters Patent No. 347,065, dated August 10, 1886.

Application filed November 14, 1885. Serial No. 182,880. (No model.)

To all whom it may concern:

Be it known that I, HENRY J. ROHRBACH, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Bridge-Gates, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of a bridge-abutment provided with a bridge-gate embodying my improvements; Fig. 2, a front elevation thereof and a portion of a bridge-frame in position; Fig. 3, an enlarged side elevation of the lever mechanism and cam-roller device.

My invention relates to improvements in gates for swinging bridges, whereby the gates are opened and shut by the shutting and opening of the bridge. In contradistinction to other devices for a like purpose, the mechanism for opening and closing the gates at each end of the bridge consists of a horizontally-pivoted shaft, which is provided with levers connecting the chains which operate the gates, and provided with right-angular bearings which support an anti-friction roller, the shaft-bearings and roller forming what I term a "cam-roller" which is turned to one side by the action of the moving bridge in closing, bringing the anti-friction roller down onto the abutment-foundation, also bringing the levers on said shaft to a vertical position to draw upon the chains and hold the gate open. The gates, being held above their pivots on slightly-inward inclines by springs, gradually close as the bridge is being opened. The levers connecting the chains then lie in horizontal positions, the cam-roller in an elevated position. The tracks at the end of the bridge are in the form of segments or cams, that their ends may come in contact with the cam-roller above its pivot, and then gradually turn it down to one side.

A represents one of the bridge-abutments, to which is rigidly affixed slotted vertical posts B B.

C C represent the gate-arms, which are pivoted to the upper portions of said posts at *a a*. Inside of the pivots *a a* are affixed rods *e e*, which, when the arms are elevated, bear against springs K K, attached to the posts B B, and hold the arms inwardly inclined, so as to move

down and close when the track P on the bridge I releases the cam-roller H.

J J represent pivoted two-leg supports, which are carried by the gate-arms and automatically find their own footing on the roadway and support the arms C C against lateral swinging and vibration when lowered.

G represents a short shaft, which has bearings in suitable strong standards, *h h*. To this shaft is rigidly affixed a double lever, F. Operating-chains D connect with the ends of this lever, pass under sheaves E, and connect with the gate-arms at *b b*.

h' h' are standards rigidly attached to shaft G, and project up therefrom to form bearings for the pivot *n* of an anti-friction roller, H. From this it will be seen that the standards *h' h'* and the lever F occupy positions in planes which are at right angles to each other—that is, when the lever is horizontal the standards are vertical. When the bridge is closed, the weight of the ends thereof is supported wholly on the rollers H. They should therefore be strong enough for that purpose.

Instead of the rollers H bearing upon the abutment when the bridge is closed, they may be made to bear upon strong rollers let into the abutment, as shown by dotted lines S, Fig. 3, to obviate friction and facilitate the starting of the bridge.

A channel, R, is formed in the abutment for the free working of the chains and the lever F, and in practice it should be drained, to prevent the accumulation of water and ice.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In gates for swing-bridges, the shaft G, carrying the double lever F and standards *h' h'*, respectively, in horizontal and vertical planes, and the roller H, pivoted to said standards, in combination with the track P on the bridge I, chains D D, sheaves E, and gate-arms C, pivoted to the posts B B, and springs K, for inclining the arms inward, as specified.

2. The gate-arms C, combined with the pivoted two-leg supports J, as specified.

HENRY J. ROHRBACH.

Witnesses:

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