

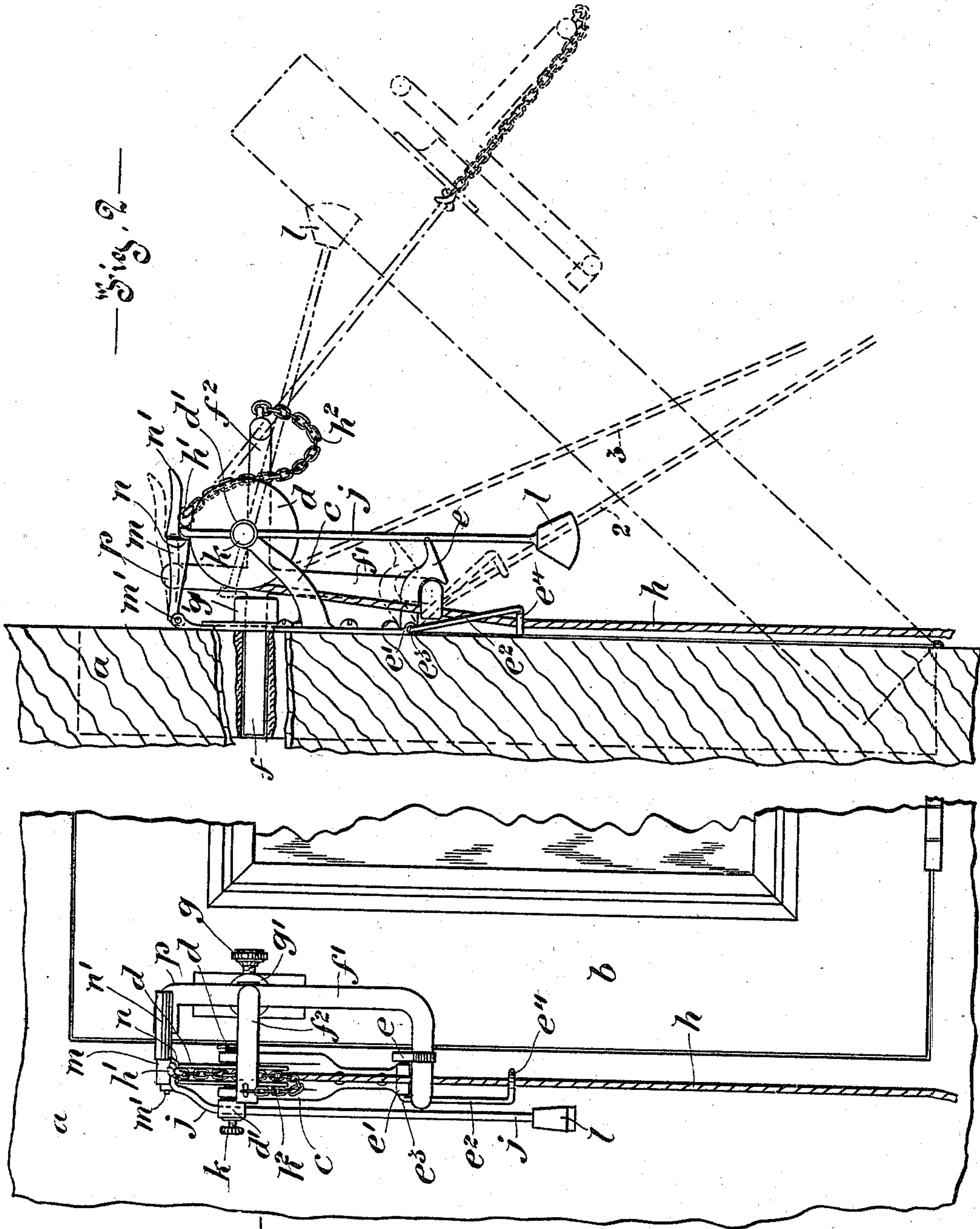
(No Model.)

3 Sheets—Sheet 1.

J. KNEEN.
TRANSOM OPERATOR.

No. 537,830.

Patented Apr. 23, 1895.



Witnesses
Richard H. [Signature]
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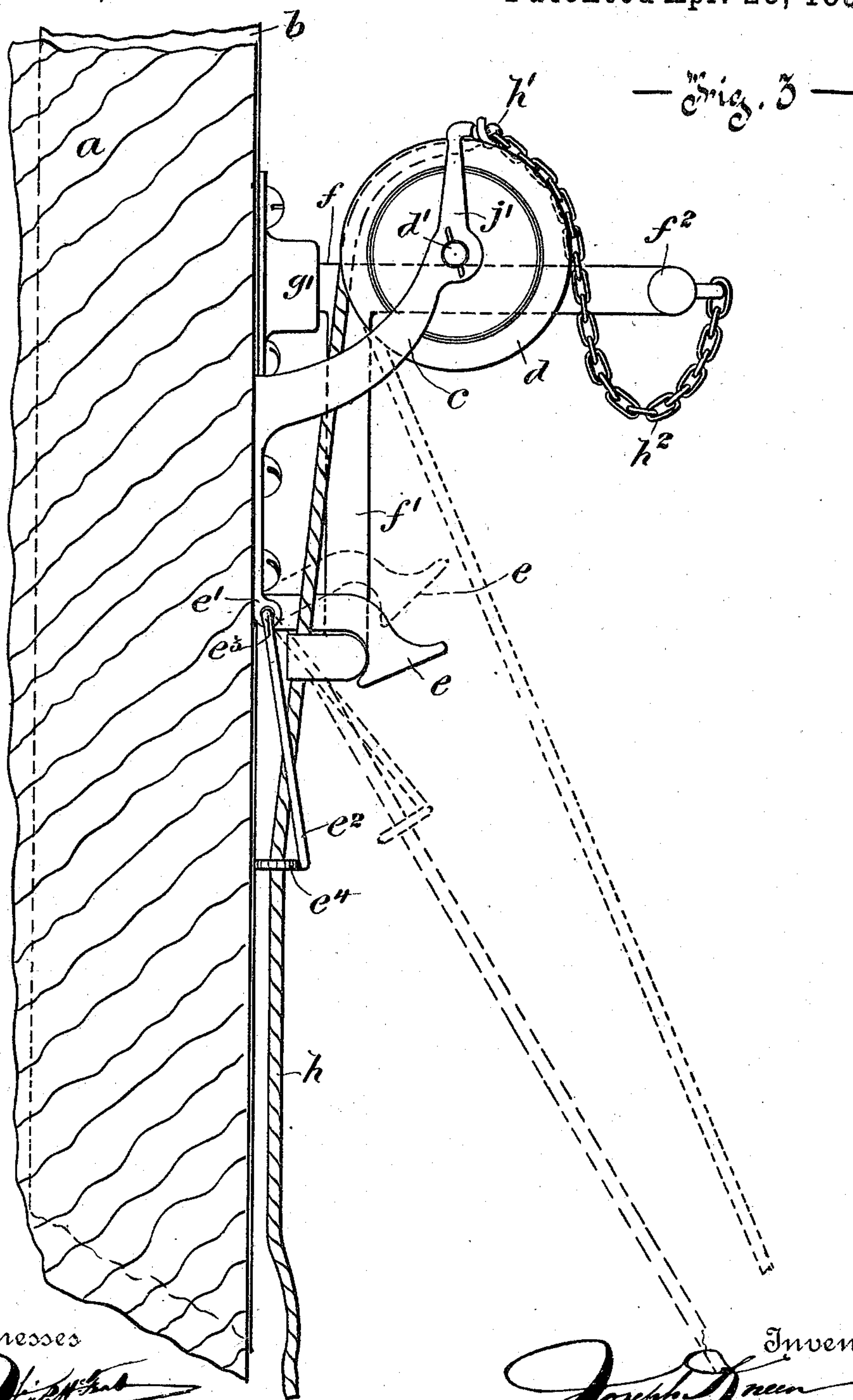
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(No Model.)

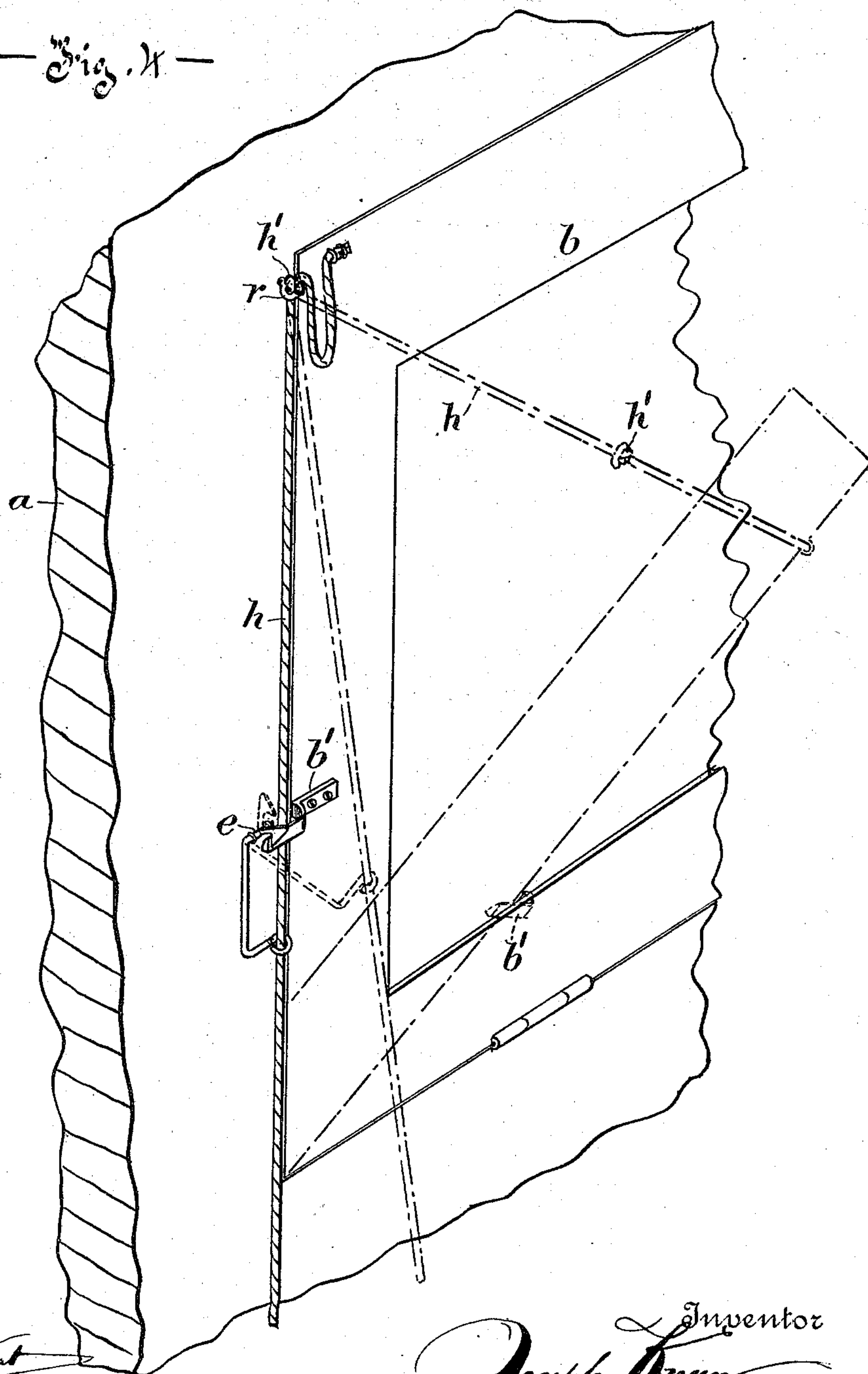
3 Sheets—Sheet 3.

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— 319.4 —



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UNITED STATES PATENT OFFICE.

JOSEPH KNEEN, OF MONTREAL, CANADA.

TRANSOM-OPERATOR.

SPECIFICATION forming part of Letters Patent No. 537,830, dated April 23, 1895.

Application filed July 18, 1894. Serial No. 517,919. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH KNEEN, of the city of Montreal, in the district of Montreal and Province of Quebec, Canada, have invented certain new and useful Improvements in Devices for Opening, Closing, and Locking Transoms; and I do hereby declare that the following is a full, clear, and exact description of the same.

10 This invention relates to the opening and closing devices for transoms which are operated by flexible connections and has for its object to furnish a device which will allow both operations to be performed by a single
15 cord and a positive locking of the transom when closed at a point immediately adjacent thereto.

The invention consists of the devices and combinations of parts hereinafter described
20 and claimed, and for full comprehension thereof reference must be had to the annexed drawings forming a part of this specification in which like symbols indicate corresponding parts, and wherein—

25 Figure 1 is a front elevation of the device with a portion of the transom and framing; Fig. 2, a side elevation of same; Fig. 3, a side elevation of the device showing certain parts dispensed with, and Fig. 4 a perspective view
30 of a simplified form of my invention.

a is the side framing of the door or other part above which the transom b is placed, this latter being hinged at its lower edge as shown, or centrally so that the upper edge can fall
35 outward and downward. On the framing a at a point near the top edge of the transom a forked bracket arm c is secured to carry a grooved pulley or wheel d which is loosely mounted on a spindle d' free to revolve in said
40 arm. Beneath this arm c on the framing a gravity dog or hook e is loosely pivoted in a bearing e' and has a downwardly projecting arm or extension e^2 from its spindle or pivot e^3 , the free end of which arm e^2 is formed with
45 an eye e^4 .

On the side of the transom adjacent to the bracket arm c on the framing, fingers f' , f^2 united to a common stem or shank f , are secured through such shank which is adjust-
50 ably held by means of a set screw g , in a socket g' screwed to the transom. The finger

f' projects downward parallel with and has its end bent across the framing so as to engage the gravity hook e while the finger f^2 projects outwardly at right angles to that f' 55 and has its end bent around a short distance in front of the wheel d .

h is the flexible connection or cord, for operating the device and which is attached at its upper end to the finger f^2 in front of the 60 pulley, taken over such pulley down behind the end of finger f' and through the eye e^4 in the end of the arm e^2 of the gravity hook e . This flexible connection has a knot or enlargement h' , formed in it a few inches from 65 its upper end, which acts in conjunction with a stop, to be presently described to maintain an amount or length of slack indicated by a section of chain h^2 in the connection the purpose of which will be clearly set forth in de- 70 scribing the operation of the device.

The stop alluded to is preferably in the form of a bent rod j which is passed through a transverse opening in the enlarged end of the spindle d' of the pulley d and held in place 75 by a set screw k , one end of the rod carrying a counterbalance weight l and the other being bent across the periphery of the pulley in such close proximity thereto as to prevent the knot or enlargement h' in the flexible connec- 80 tion from passing it.

Operating in connection with the stop j , as will be presently described, there is a gravity lock in the form of a pivoted arm or finger m pivotally connected at m' to the base of the 85 bracket arm c and formed with a shoulder n and a lateral extension n' the bottom of which is curved to facilitate the engagement therewith and traveling thereunder of a third or auxiliary finger p carried by the stem f of the 90 fingers f' , f^2 on the transom to elevate such finger m .

The operation of the device is as follows: The operating cord is drawn outward to the angle indicated by dotted lines 2 which has 95 the effect of rotating through the arm e^2 the spindle e^3 , of the gravity hook e thus elevating same to the dotted position shown in Fig. 2 and releasing the finger f' on the transom, after which the cord now in contact with the 100 finger f' and being drawn upon straightens out to the angle shown by dotted lines 3 and

in so doing moves the finger f' and with it the transom outward sufficiently beyond the perpendicular to cause it to fall. In order to prevent the pull upon the cord extending to the finger f^2 and so holding the transom against outward movement the stop j checks it at the end of the section of chain h^2 thus maintaining the length of slack between the stop and the finger f^2 which allows the transom to be moved and fall outwardly. After being started in this way the transom can be allowed to fall to any desired distance there being no check upon the outward pull upon the cord and when in the proper position it is held by securing the lower end of the cord to any suitable cleat, not shown. To close the transom the cord is pulled upon and elevates the transom and as it moves in past the pulley the auxiliary finger p comes into contact with the curved under side of the lateral projection n' on the gravity locking arm m and in passing raises such arm so as to release the stop j and allow the enlargement h' on the cord to swing such stop to the dotted position shown in Fig. 2 thus allowing the cord including the slack section to be drawn taut thus forcing the transom home; and on the cord being released the counterbalance weight l will automatically cause the stop j , lock m and slack portion h^2 to assume their normal position.

I may here remark that with the transom in good working order and free from any chance of sticking or obstruction (which of course necessitates the forcing of the transom against such obstruction) there is no absolute necessity for the use of the locking arm m and the auxiliary finger p for operating it, nor is there any necessity for making the stop j in the form described (the object of which is to automatically overcome the weight of the cord and lift it sufficiently to furnish the slack section) since the slack section might be permanently maintained by a fixed stop j' projecting from the bracket arm c as shown in Fig. 3 and the transom thrown into its place by a quick pull upon the cord which would impart sufficient momentum to carry it into position to be locked by the gravity hook e engaging the finger r' . If desired the gravity hook e can also be dispensed with and there will still remain an effective device for securing the opening and closing of the transom without the use of double cords.

When a very cheap transom operating device is desired it will only be necessary (as shown in Fig. 4) to insert a screw eye r into the framing a (in place of the pulley d) through which the operating cord h , knotted as at h' and connected as at s to the transom b is passed downward behind a "goose-neck" projection b' with which the hook e engages, the operation of this form of transom being the same as that illustrated in Fig. 3.

What I claim is as follows:

1. As a means for opening and closing transoms hinged at their lower edges a single operating cord attached at one end to the tran-

som, a support on the frame for such cord and the latter arranged to present a slack section of its length between said support and its point of connection with the transom to allow of using the main length of cord for the purpose of moving outward or opening the transom, and an intermediate tilting device upon which the main length of the cord will bear.

2. As a means for opening and closing transoms hinged at their lower edges, a single operating cord attached at one end to the transom, a support on the frame for such cord, a projection from the transom at a point below said support for the cord to bear upon when pulled outward from a vertical position and the cord arranged to present a slack section of its length between said support and its point of connection with the transom for the purpose set forth.

3. In a device for opening, closing and locking transoms, the combination with a locking device, of a single operating cord connected at its upper end with said transom, a support on the frame for such cord and the latter being operatively connected with said locking device, and arranged to present a slack section of its length between said support and its point of connection with the transom and a projection from the transom at a point below said support for the cord to bear upon when pulled outward from a vertical position for the purpose set forth.

4. In a device for opening, closing and locking transoms which are hinged at their bottom edges, the combination with a support, for an operating cord, mounted on the frame adjacent to the transom,—of an arm or finger projection carried by the transom and extending across the face of said frame, a gravity lock on said frame adapted to engage said finger, and an operating cord secured at its upper end to the transom, passing over said support or pulley, down behind said finger and operatively connected with the gravity lock, the said cord being further provided with an enlargement near its upper end acting in conjunction with the said support to prevent the pull upon same extending to the point of connection with the transom at times for the purpose set forth.

5. In a device for opening and closing transoms which are hinged at their bottom edges, the combination with a support or pulley for an operating cord mounted on the frame adjacent to the transom, of two arms or finger projections from the transom, one of which arms is bent downward and across the face of said frame and the other of which is projected outwardly to have the upper end of the operating cord secured thereto, an operating cord so secured at its upper end, passing over said support or pulley and down behind the finger extending across the frame with means to which its lower end can be secured, and a stop engaging said operating cord to prevent the pull upon same extending to the finger to which its upper end is secured when

the transom is being opened by pulling such cord outward against the finger extending across the frame.

6. In a device for opening, closing and locking transoms which are hinged at their bottom edges, the combination with a gravity lock and a support or pulley for an operating cord mounted on the frame adjacent to the transom,—of two arms or finger projections from the transom one of which arms is adapted to be engaged by said gravity lock and the other to have the upper end of the operating cord secured thereto, an operating cord

so secured at its upper end, operatively connected with the gravity lock, carried over said pulley or support and adapted to bear upon the finger engaged by such lock, and a stop engaging said operating cord to prevent the pull upon same extending to the finger to which such cord is attached when the transom is being opened, for the purpose set forth.

Montreal, June 18, 1894.

JOSEPH KNEEN.

In presence of—

WILL P. McFEAT,
FRED J. SEARS.