No. 673,695.

Patented May 7, 1901.

H. BLUEHER.

IRRIGATING DEVICE.

(Application filed Dec. 27, 1900.)

(No Model.)

3 Sheets—Sheet 1.

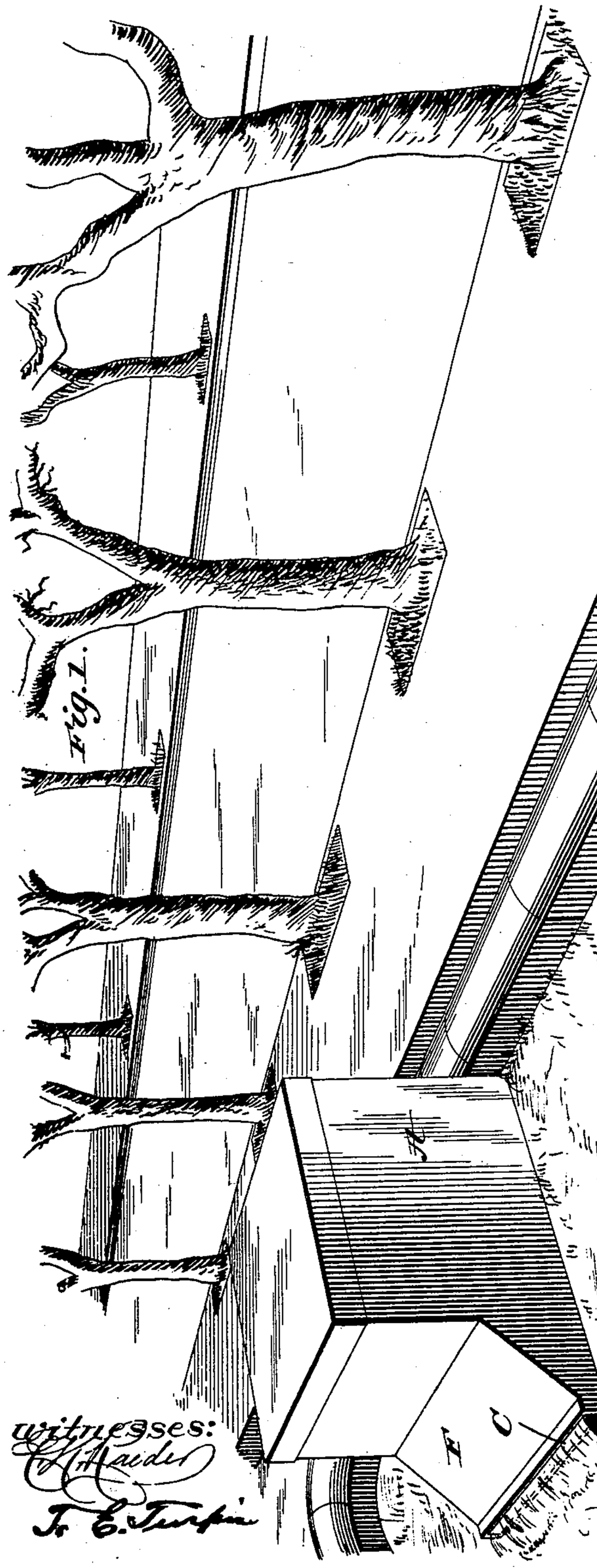

Fig. 1.

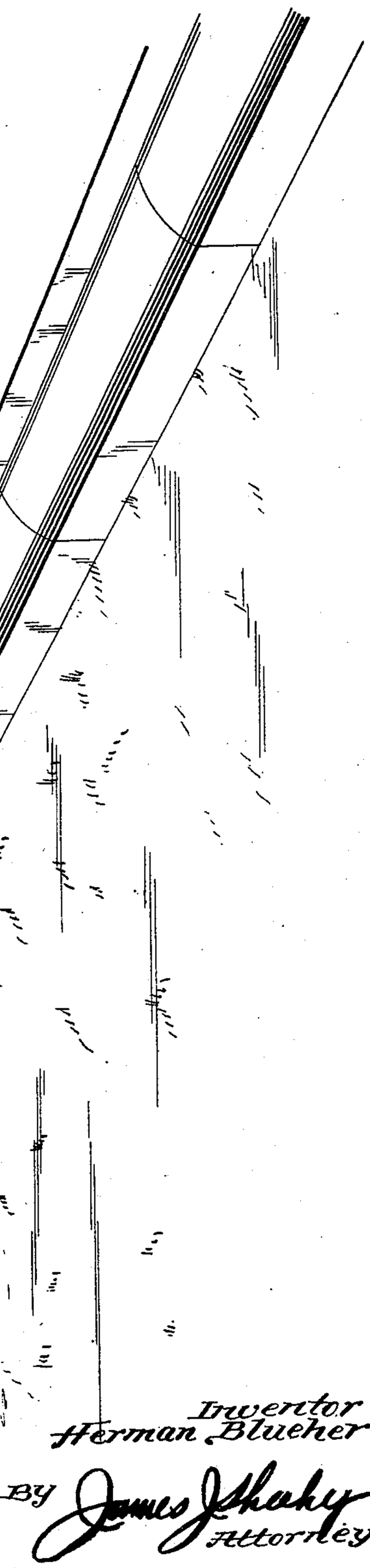

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Fig. 2.

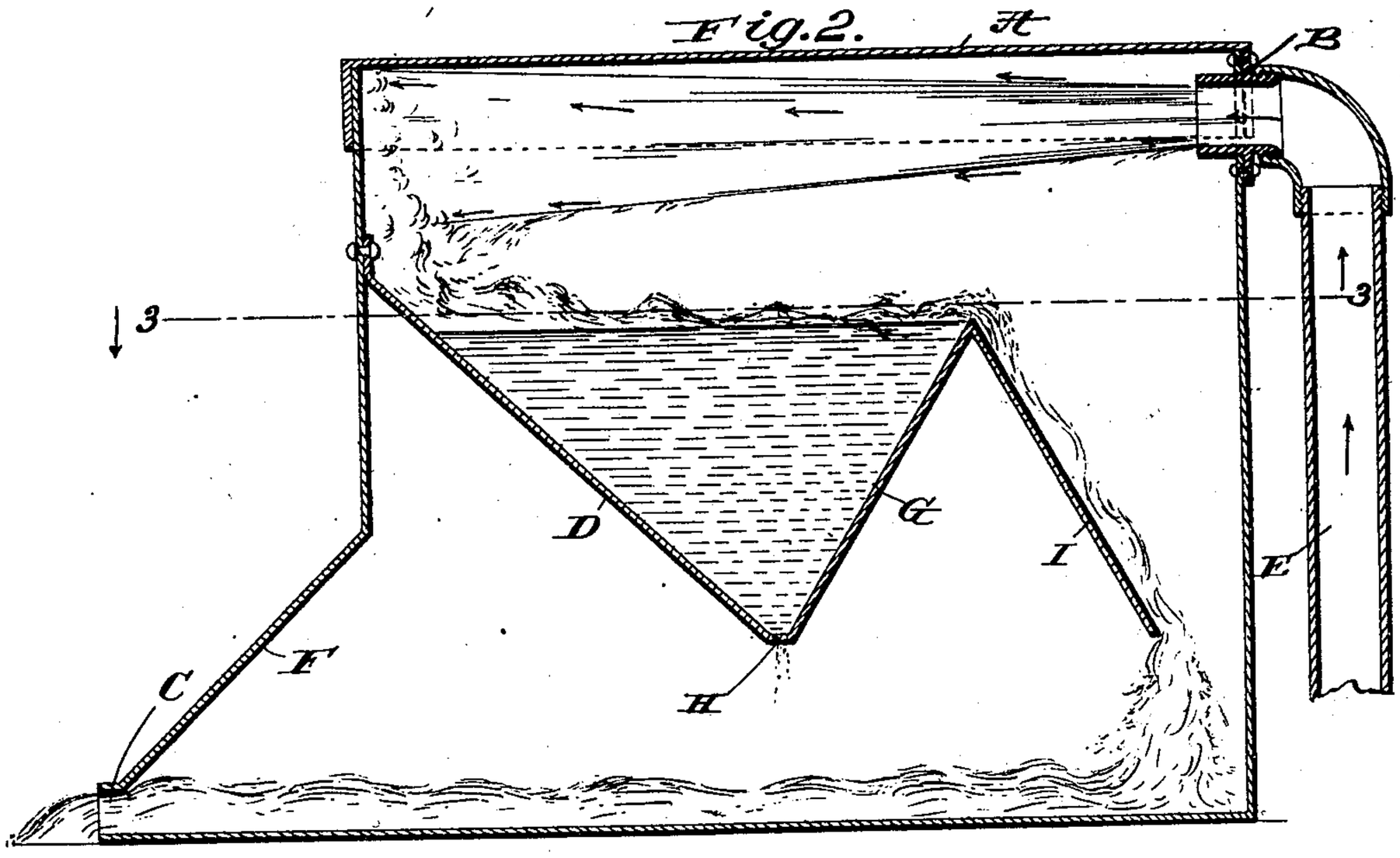
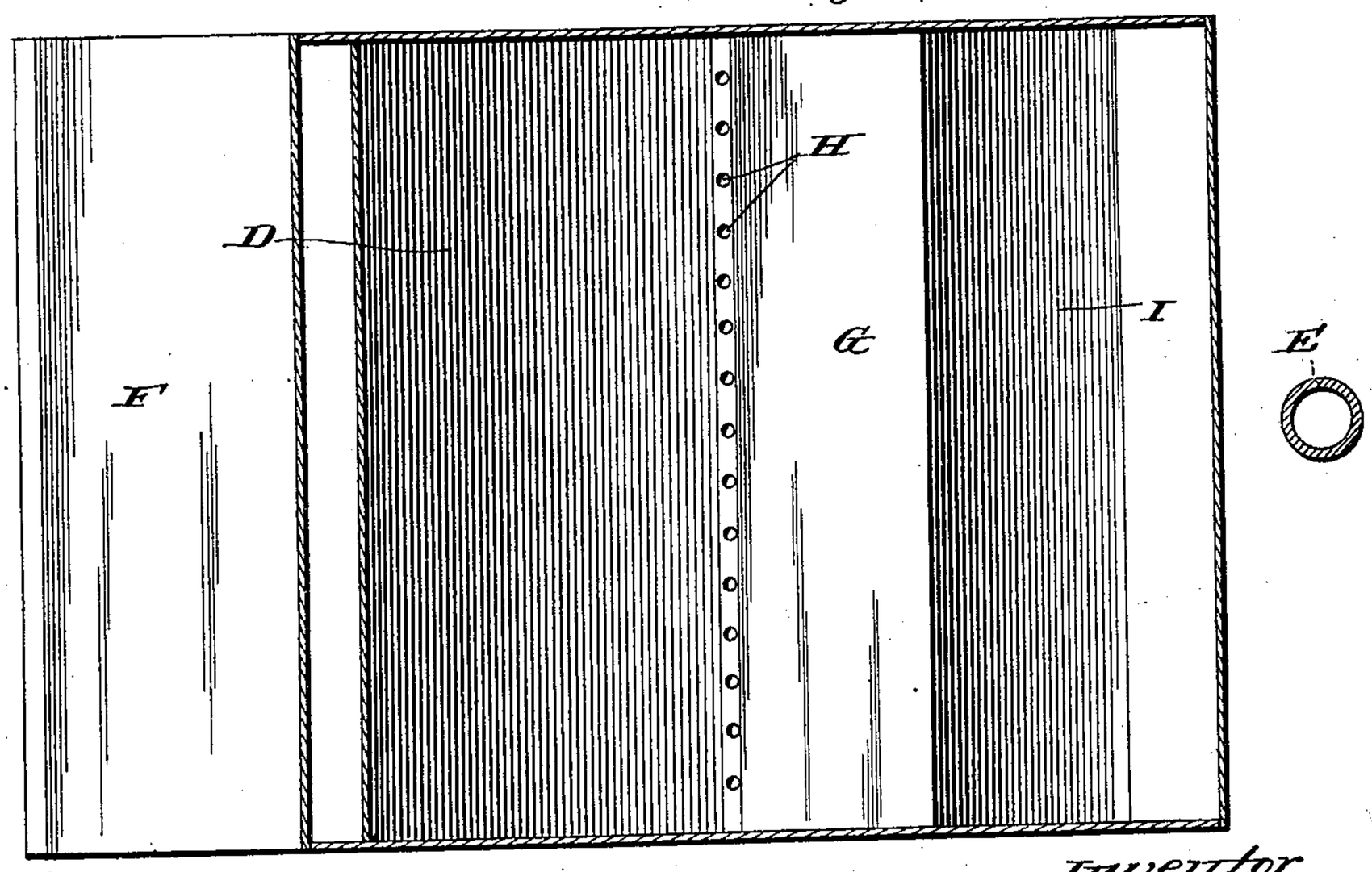


Fig. 3.



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3 Sheets—Sheet 3.

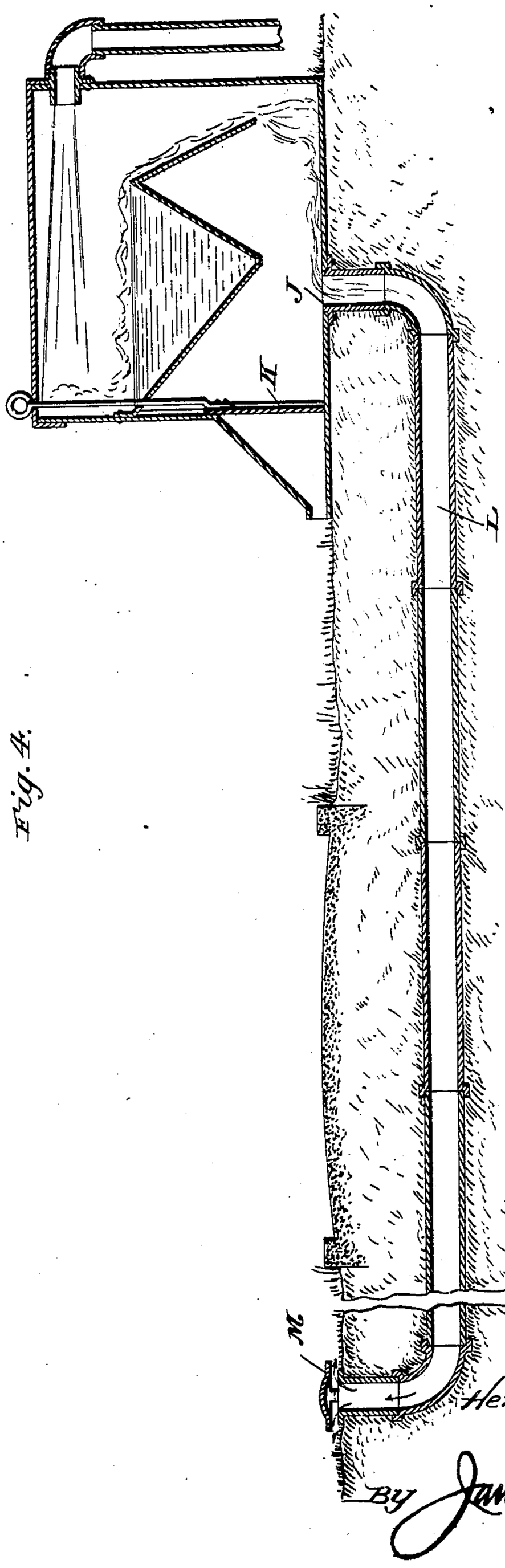

Fig. 4.

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UNITED STATES PATENT OFFICE.

HERMAN BLUEHER, OF ALBUQUERQUE, TERRITORY OF NEW MEXICO.

IRRIGATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 673,695, dated May 7, 1901.

Application filed December 27, 1900. Serial No. 41,222. (No model.)

To all whom it may concern:

Be it known that I, HERMAN BLUEHER, a citizen of the United States, residing at Albuquerque, in the county of Bernalillo and Territory of New Mexico, have invented new and useful Improvements in Irrigating Devices, of which the following is a specification.

My invention relates to improvements in means for effecting irrigation, and contemplates the provision of an irrigating device which is calculated to receive and check a head of water proceeding under great pressure from a well or other source of supply and deliver the same in a steady and placid stream on the tract of land to be irrigated, this with a view of effectually preventing the water from washing out or breaking up that portion of the surface of the tract at and adjacent to the device without interfering with the spread of the water over the surface.

The device is designed more especially for irrigating lawns and similar tracts of land, but may obviously be used to advantage in the irrigation of flower and truck gardens, as well as in other connections.

With the foregoing in mind the invention will be fully understood from the following description and claims when taken in conjunction with the accompanying drawings, in which—

Figure 1 is a perspective view illustrating my improved irrigating device in its proper operative position on a lawn. Fig. 2 is a vertical longitudinal central section of the device, showing the connection to the same of a conduit leading from a source of supply and also illustrating the manner in which the device operates to check or retard a strong head of water and rob it of its force precedent to delivering it to the surface to be irrigated. Fig. 3 is a horizontal section, taken in the plane indicated by the broken line 3 3 of Fig. 2, looking in the direction of the arrow at the left. Fig. 4 is a section illustrating a modification.

Similar letters of reference designate corresponding parts in all of the views of the drawings.

My improved irrigating device is preferably made of galvanized iron and in the shape illustrated, although it may be made of wood, cast-iron, or other material and in any shape suitable to the purpose which it is designed to effect without departing from the scope of my invention. It comprises a box or case A, which has an inlet B for a head of water and an outlet C for the discharge of the water on a lawn or other surface to be irrigated, the outlet being arranged in a plane below the inlet and preferably at an opposite point of the box or case with reference to the same, so that a head of water entering the box or case under pressure will strike one of the walls thereof and be thereby robbed of its force before it passes out through the discharge opening or outlet. The device also comprises a retarder or reducer D, which is arranged intermediate of the inlet B and outlet C, and has for its purpose to cause the water to pass through the outlet in a placid manner and prevent churning action of the water at the point of discharge. By virtue of the water being robbed of its head or force precedent to being discharged on the lawn or other tract of land to be irrigated it will be apparent that washing out or tearing up of that portion of the lawn at and adjacent to the device is obviated without interfering with the spread of the water over the lawn, and hence the appearance of the lawn is in no way marred by the irrigation thereof. The retarder or reducer D is not essential to the successful operation of my device; but it is preferably employed because by preventing the churning action of the water at the point of discharge it lessens the liability of the surface of the lawn adjacent to the device being worn away, broken up, or otherwise marred.

In the present and preferred embodiment of my invention the inlet B is arranged in one end wall of the box or case A at a point adjacent to the top wall thereof and communicates with a conduit E, which leads from a main or other source of supply and may be connected to the box or case after the manner shown or in any other preferred way. The outlet C is arranged at the outer end of a low extension F of that portion of the box opposite to the wall in which the inlet B is formed. Said outlet is oblong in form and extends the full width of the box or case, so as to deliver the water in a broad body to the lawn or other surface to be irrigated. It is also arranged immediately above the bottom

wall of the box or case, so that the discharged volume of water has no fall, but is ejected horizontally, and consequently spread over the lawn or other surface. The retarder or reducer D is connected at one end to the end wall of the box or case above the extension F and at its edges to the side walls of said box or case. It is preferably of the angular shape shown in order to afford a pocket G, which receives the water after the same strikes the forward wall of the box or case and tends to lessen churning of the water and contributes materially to the delivery of the same to the outlet C in a steady and placid stream. At its lowermost point the pocket G is provided with a transverse series of apertures H, which are adapted to drain the pocket when the device is not in use, and thereby prevent freezing of water in the device and the injury generally incident thereto.

In the practical operation of the preferred embodiment of my invention it will be seen that a head of water proceeding under great pressure from a source of supply enters the box or case A through the inlet B and brings up against the upper portion of the forward wall, which tends to rob it of considerable of its force and power. After striking the said forward wall the water is received in the pocket G of the retarder D, in which it settles to a certain extent, with the result that churning action of the water incident to its discharge through the outlet C is prevented. From the pocket G the water passes down the inclined end portion I of the retarder, which has its lower edge arranged adjacent to the rear wall of the box or case, as shown, and then passes in a steady and placid stream along the bottom of the box or case to the outlet C, through which it passes horizontally onto the lawn or other surface to be irrigated. From this it follows that the water will be spread over a considerable area of the lawn, and yet the portion of the lawn adjacent to the device will not be washed away, broken up, or otherwise marred.

The irrigating device shown in Fig. 4 is similar to that described in Figs. 1 to 3, with the exception that it is provided with an additional outlet J and also, by preference, with a valve or cut-off K, the former being designed to enable the device to discharge at a different point from the main outlet and the latter having for its purpose to lessen the discharge through the main outlet, so that a portion of the water will take through the additional outlet. A pipe L is preferably connected to the outlet J and may lead, for instance, under a walk to a point on the surface of a lawn or the like at the opposite side of the walk with reference to the device, where it is provided with a cap M, connected to and supported at about the proportional distance illustrated above its end, this with a view of adapting it to discharge the water horizontally and in a steady stream. The valve or cut-off K is preferably in the form of a vertical slide having a handle extended through the top wall of the device; but it may be of any other suitable construction.

By virtue of the construction shown in Fig. 4 it will be seen that the irrigating device may be placed on a lawn at one side of a walk and the portions of the lawn at opposite sides of the walk may be watered without wetting the walk; also, by regulating the valve or cut-off the amount of water delivered through the pipe L may be increased or diminished at pleasure, and when desirable all of the water entering the device may be delivered through said pipe. When it is desired to discharge water from the device shown in Fig. 4 through the outlet controlled by cut-off K alone, it is obvious that the outlet J may be closed by a cut-off or any other suitable means, which I have deemed it unnecessary to illustrate.

While the described arrangement of the pipe L is a preferable one, it is obvious that the said pipe may be arranged to discharge at any suitable point with reference to the device.

Notwithstanding its advantages as pointed out in the foregoing, it will be observed that my improved irrigating device is very simple and inexpensive in construction and embodies no parts that are likely to get out of order; also that the device is adapted to be readily placed on a lawn after the manner shown in Fig. 1 and connected to a conduit leading from a street-main or other source of supply and when in operation requires no attention.

I have entered into a detail description of the construction and relative arrangement of the parts comprised in the present and preferred embodiment of my invention in order to impart a full, clear, and exact understanding of the same. I do not desire, however, to be understood as confining myself to such specific construction and arrangement of parts, as such changes or modifications may be made in practice as fairly fall within the scope of my claims.

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

1. An irrigating device comprising a box having a flat bottom adapted to rest on the surface of the tract to be irrigated, a horizontally-disposed, oblong outlet or discharge in one of its upwardly-extending walls immediately above its bottom, and an inlet in its opposite upright wall in a plane above that of the outlet or discharge.

2. An irrigating device comprising a box having a flat bottom adapted to rest on the surface of the tract to be irrigated, a horizontally-disposed outlet or discharge in one of its upwardly-extending walls immediately above its bottom, an intlet in its opposite upright wall in a plane above that of the outlet or discharge, and a retarder or force-reducer intersecting the passage between the inlet and the outlet or discharge, and having

its lower end arranged adjacent to the bottom and rear wall of the box.

3. An irrigating device comprising a box having a flat bottom adapted to rest on the surface of the tract to be irrigated, a horizontally-disposed outlet or discharge in one of its upright walls immediately above its bottom, an inlet in its opposite upright wall in a plane above that of the outlet or discharge, and a retarder or force-reducer intersecting the passage between the inlet and the outlet or discharge, and provided at an intermediate point of its length with a pocket, and also provided with the inclined end portion I which extends to a point adjacent to the bottom and the rear wall of the box.

4. An irrigating device comprising a box having an inlet for water, and an outlet or discharge arranged in a plane below that of the inlet and at an opposite point with reference to said inlet, and a retarder or force-reducer which intersects the passage between the inlet and outlet, and is provided with a pocket and an inclined end portion extending downwardly therefrom, and also with apertures in the lowermost portion of the pocket.

5. The herein-described irrigating device, comprising a box having an inlet for water in its rear wall at a point above its bottom, and also having the lower forward extension provided with an oblong outlet or discharge arranged immediately above its bottom.

6. The herein-described irrigating device, comprising a box having an inlet for water in its rear wall at a point above its bottom, and also having the lower forward extension provided with an oblong outlet or discharge arranged immediately above its bottom, and the retarder or force-reducer contained in the box, and comprising a pocket, and an end portion inclined downwardly therefrom and terminating at a point adjacent to the rear wall of the box.

7. An irrigating device comprising a box having a flat bottom adapted to rest on the surface of the tract to be irrigated, an outlet for water in said bottom, an inlet for water arranged at a distance above its bottom, and a horizontally-disposed outlet or discharge for water arranged immediately above its bottom, means for controlling one of the outlets or discharges, and a conduit leading from the outlet in the bottom of the box to a suitable point of discharge.

8. An irrigating device comprising a box having a flat bottom adapted to rest on the surface of the tract to be irrigated, a horizontally-disposed oblong outlet or discharge in one of its upwardly-extending walls immediately above its bottom, an outlet or discharge in its bottom, and an inlet in its upright wall opposite to that in which the horizontally-disposed outlet or discharge is formed, and in a plane above that of said outlet or discharge, and a pipe connected to the outlet or discharge in the bottom of the box and having a cap disposed above and connected to its end.

9. An irrigating device comprising a box having an inlet for water and outlets or discharges arranged at different points and in a plane or planes below that of the inlet, and also having a retarder interposed between the inlet and the outlets or discharges, and a pipe connected to one outlet or discharge and terminating at a suitable distance from the box in an upwardly-extending portion having a horizontal cap supported above and connected to its end.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

HERMAN BLUEHER.

Witnesses:
GEO. P. HILL,
A. M. KRUGER.