

(No Model.)

W. J. BRASSINGTON.

Apparatus for Trimming Side Wheel Steamboat.

No. 232,931.

Patented Oct. 5, 1880.

FIG. 1.

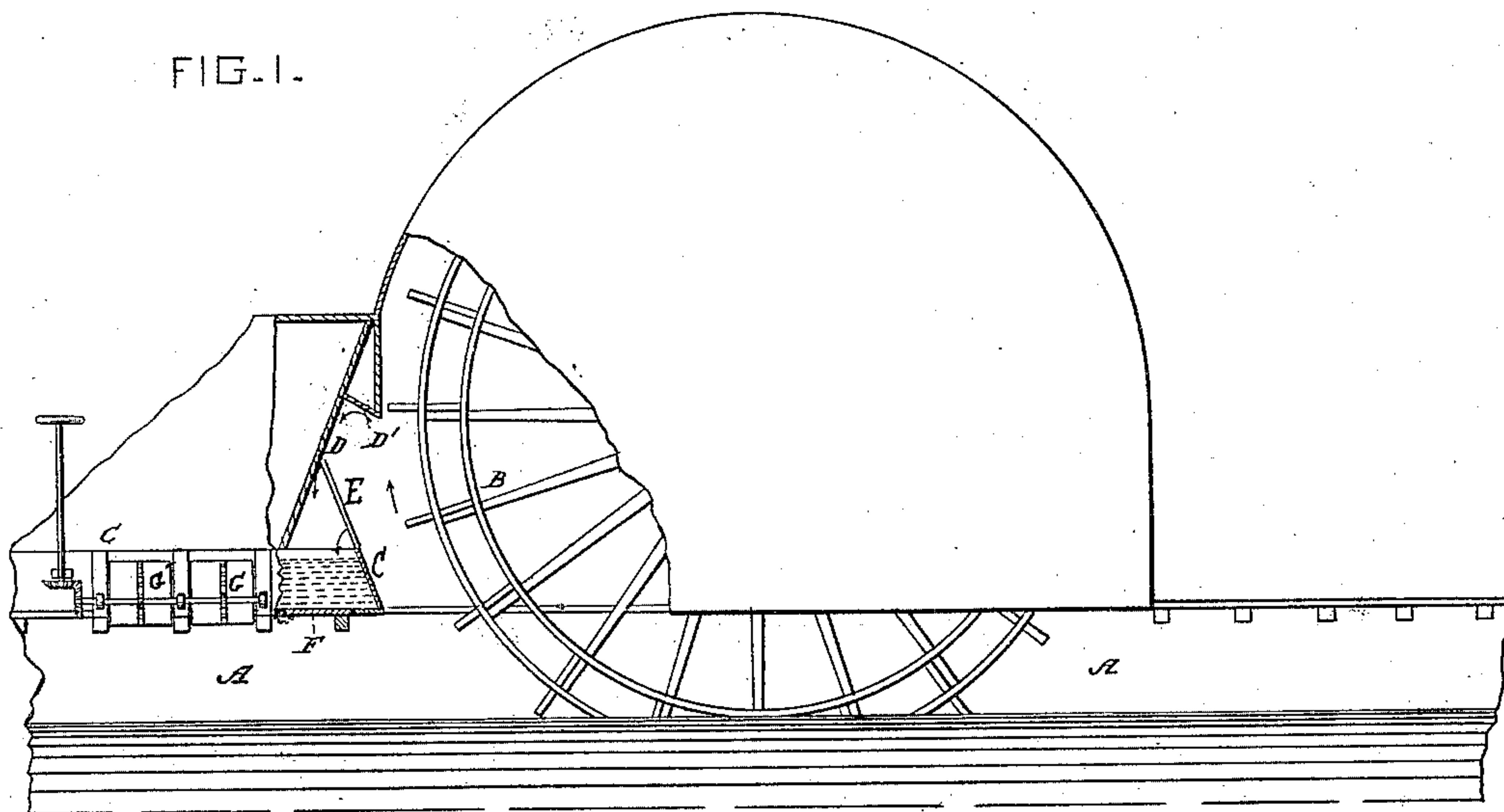


FIG. 2.

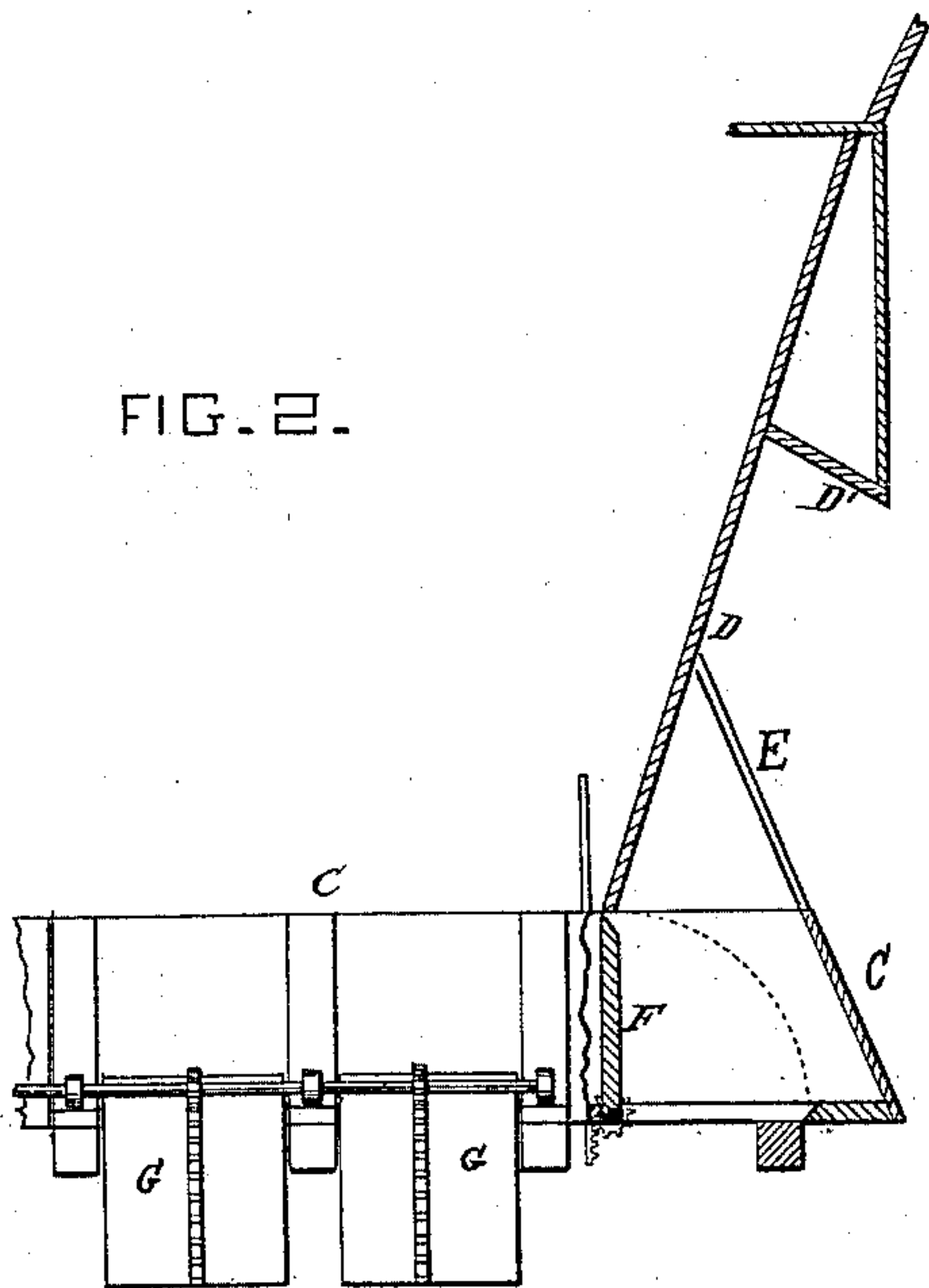
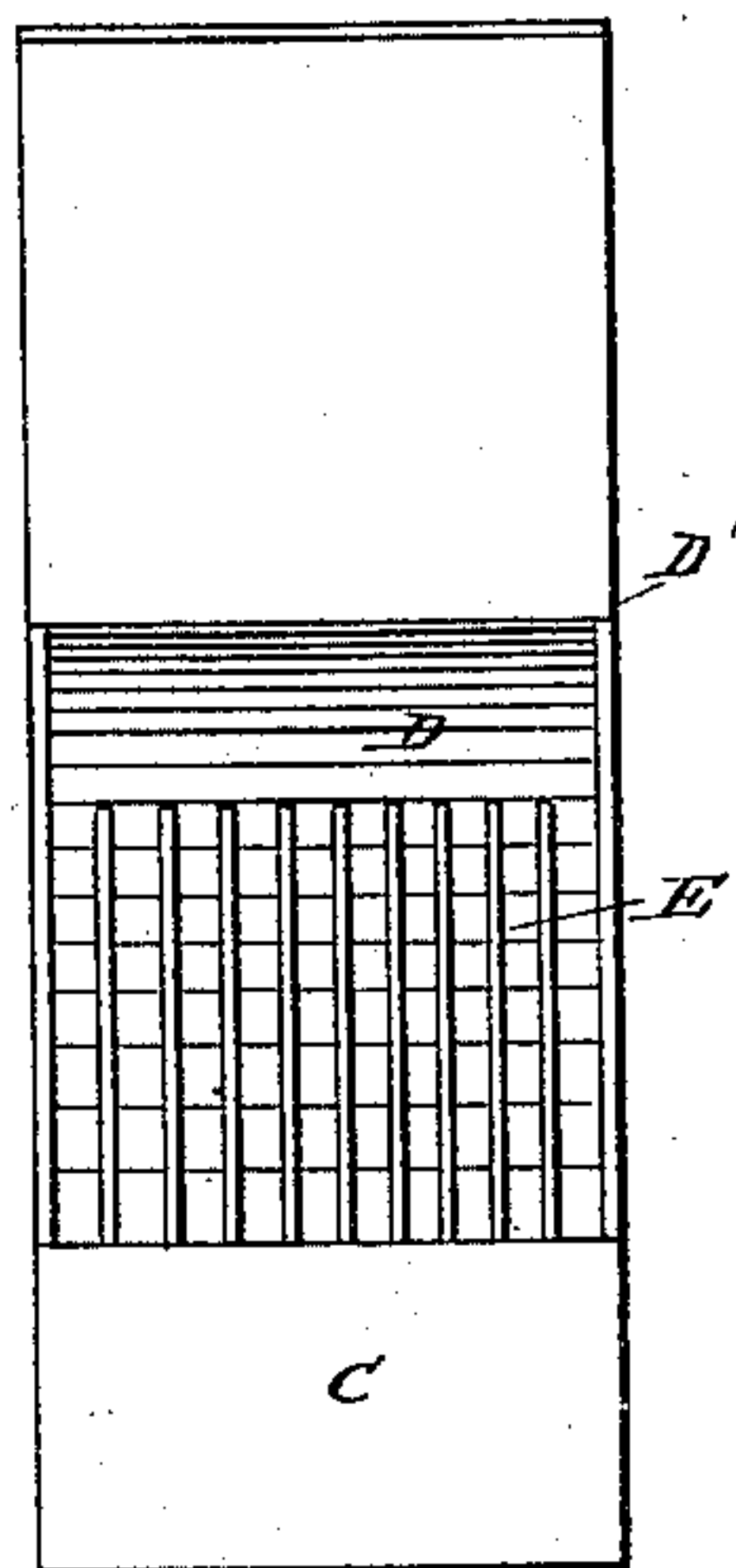


FIG. 3.



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UNITED STATES PATENT OFFICE.

WALTER J. BRASSINGTON, OF WATKINS, NEW YORK, ASSIGNOR OF THREE-FOURTHS OF HIS RIGHT TO AMOS J. MICHENER, OF PHILADELPHIA, PENNSYLVANIA, AND WILLIAM L. BRASSINGTON AND JOHN D. BRASSINGTON, OF BROOKLYN, NEW YORK.

APPARATUS FOR TRIMMING SIDE-WHEEL STEAMBOATS.

SPECIFICATION forming part of Letters Patent No. 232,931, dated October 5, 1880.

Application filed June 18, 1880. (No model.)

To all whom it may concern:

Be it known that I, WALTER J. BRASSINGTON, of Watkins, Schuyler county, New York, have invented a new and useful Improvement in Apparatus for Trimming Side-Wheel Steamboats or Steamships; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a method of trimming such vessels by means of the water lifted or thrown upward by the paddle-wheels; and in general terms it may be said to consist in tanks placed one on each side of the hull of the vessel in relation with the wheels to receive and retain water so thrown up or lifted, and means for retaining or discharging from each tank so much of the water received and retained by it as may be needful to bring the vessel into trim.

Automatic devices may be employed for regulating the discharge. I do not, however, confine myself to automatic devices, and for the purposes of this specification I only describe one method in which the regulation of this discharge is performed by hand.

I also employ, in connection with the apparatus, a grating for preventing ice from entering the tanks, which, in combination with the tanks, is a part of my invention, as is also a deflector for checking the upward motion of the water raised by the wheel.

In the drawings, Figure 1 represents a vertical section through a portion of a boat having my invention thereunto attached; and Fig. 2 shows a vertical section of the detached apparatus enlarged, the better to show the several parts. Fig. 3 is a front view.

A represents the hull of the boat; B, the paddle-wheel.

C is a tank, which is preferably placed aft of the paddle-wheel and permanently attached to the boat in such manner as to receive water lifted or thrown upward by the wheel. One or more of these tanks are placed on each side

of the boat in the relation specified; but in some cases the tanks may be placed forward of the wheels, as the water carried over by the wheels is considerable and would soon accumulate sufficient water to trim the boat. I therefore reserve, broadly, the right to place the tanks in any position so long as they are in such relation with the wheels as to receive water lifted by or thrown from said wheels.

Superimposed above each tank C is an apron, D, against which the water thrown up by the wheel impinges, and which serves to direct the water into the tank. I do not confine myself to any exact form of this apron, and reserve the right to use any form or any equivalent means for directing the water into the tank. At some suitable point along the under surface of said apron I place a deflector, D', which checks the passage of the water upward and causes it to fall back into the tank. A collateral advantage secured by this arrangement is that much of the water is prevented from passing up along the under side of the roof of the paddle-box to fall back upon the wheel. The action of the water so falling back in the ordinary way is opposed to the direction of rotation of the wheel, and consequently absorbs considerable power, which is saved by this feature of my invention.

I also place gratings E between the wheel and the entrances to the tanks to prevent the accumulation of lumps of ice, sticks, and other floating bodies in the tanks, and in cold weather I may use steam-pipes in or around said tanks to prevent freezing in them.

I also provide means for letting all the water out of, preventing the entrance of water into, and regulating the quantity of water retained by, said tanks. I do not limit myself to any particular means for accomplishing these objects, but illustrate my invention by showing one method of carrying out each.

To prevent the water from entering into the tank, I pivot to the bottom of the tank, under the apron D, a swinging gate or trap-door, F, which, when raised into the position shown in

Fig. 2, shuts out the water from the main part of the tank, and when lowered into the position shown in Fig. 1 admits the water to the tank.

For letting all the water out of the tank, or
 5 letting out a part and retaining the remainder, I use side gates, G, sliding vertically in ways formed in or attached to the side of the tank. These gates may be operated by hand-wheels acting through intermediate shafts, bevel-gear-
 10 ing, racks, and pinions upon said gates, as indicated, or in any other suitable manner; or they may be connected to automatic devices, an example of which I will briefly describe. A pendulum placed over the keel of the vessel,
 15 having its plane of oscillation at right angles with the keel and provided with a heavy bob, is connected with valve mechanism which inducts and educts steam to and from steam-cylinders whose pistons are connected by in-
 20 termediate mechanism with the aforesaid gates, to raise or lower or wholly or partially open or close them.

There are indeed many ways in which these gates may be operated and arranged, and I
 25 do not limit myself to any precise arrangement or mode of operation.

What I claim as my invention is—

1. The combination, with the side wheels of a steam-vessel, of tanks arranged one or more
 30 on each side of the hull and above the water-line, deflectors or their equivalents for directing the water raised by the wheels into the tanks, means, substantially as set forth, for preventing the water raised by the wheels from
 35 entering the tanks or allowing the water to enter therein, and valves or their equivalents for discharging the water from each tank, substantially as specified.

2. The combination, with the paddle-wheel
 40 B and tank C, of a grating, E, arranged be-

tween the paddle-wheel and the interior of the tank, substantially as and for the purposes specified.

3. The combination, with the side wheels of a steam-vessel, of tanks arranged one or more
 45 on each side of the hull, means, substantially as described, for directing the water raised by the wheels into the tanks, a grating to prevent the ingress of ice or foreign matter into the tanks, and means, substantially as set forth,
 50 for discharging the water from each tank, substantially as specified.

4. The combination, with the side wheels of a steam-vessel, of aprons D and tanks C, ar-
 55 ranged one or more on each side of the hull, and each provided with a swinging gate, F, in its bottom, substantially as described, and for the purpose set forth.

5. The combination, with the side wheels, B, of a steam-vessel, of aprons D and tanks C, ar-
 60 ranged as set forth, and provided each with a swinging gate, F, in its bottom and discharging-gates G, substantially as described.

6. The combination, with the side wheels, B, of aprons D, deflectors D', and tanks C, ar-
 65 ranged as set forth, and each provided with a swinging gate, F, in its bottom and discharging-gates G, substantially as described, and for the purpose set forth.

7. The combination, with the side wheel, B,
 70 of the tank C, arranged as set forth, and provided with the swinging gate F in its bottom and vertically-sliding gates G G in its sides, substantially as described, and for the purpose set forth.

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Witnesses:

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