

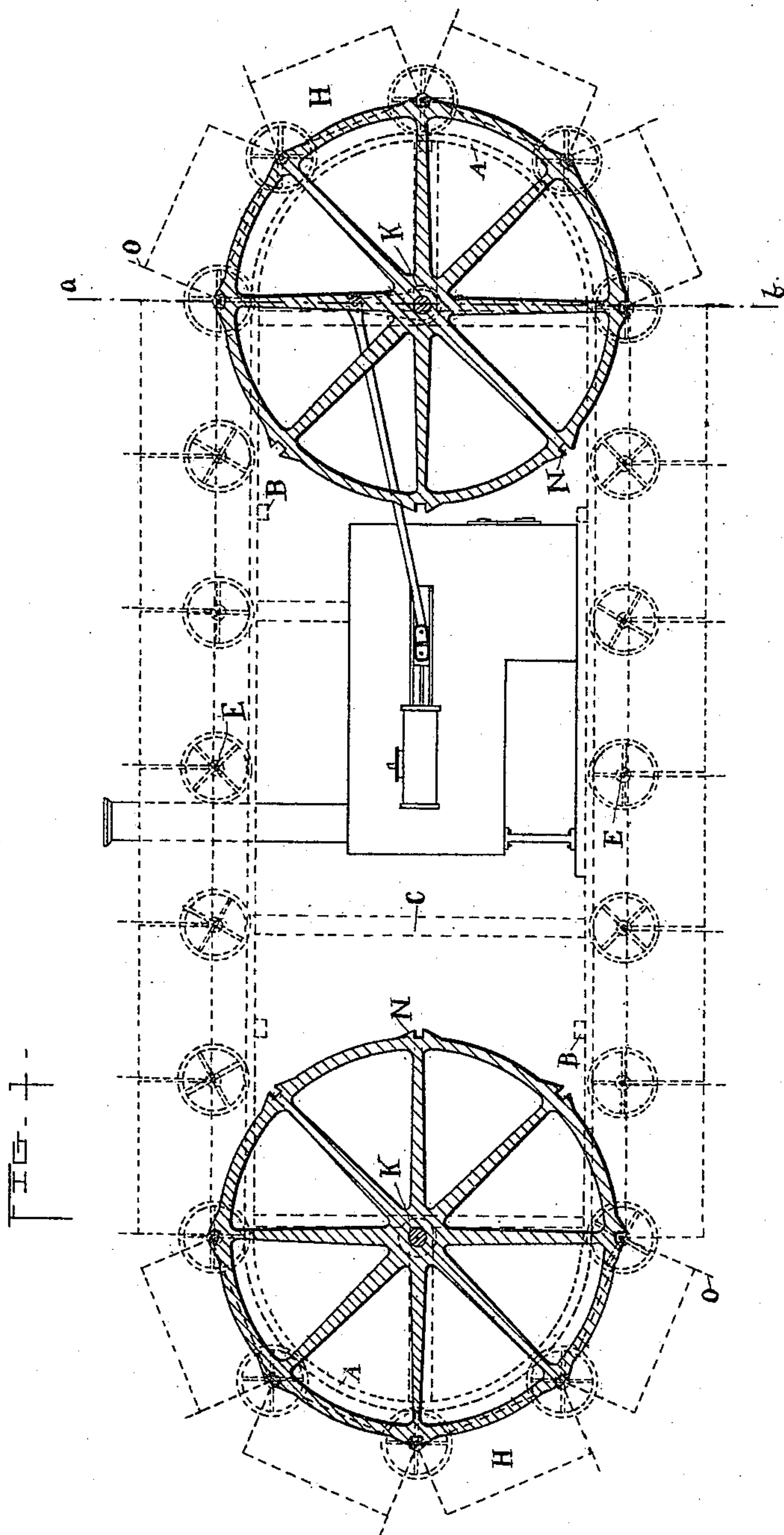
(No Model.)

2 Sheets—Sheet 1.

G. H. POND.
WATER LOCOMOTIVE.

No. 441,327.

Patented Nov. 25, 1890.



Witnesses
Archie M. Catlin.

Edward Leachman.

Inventor
Goldsbury H. Pond

By his Attorney Benj. R. Catlin

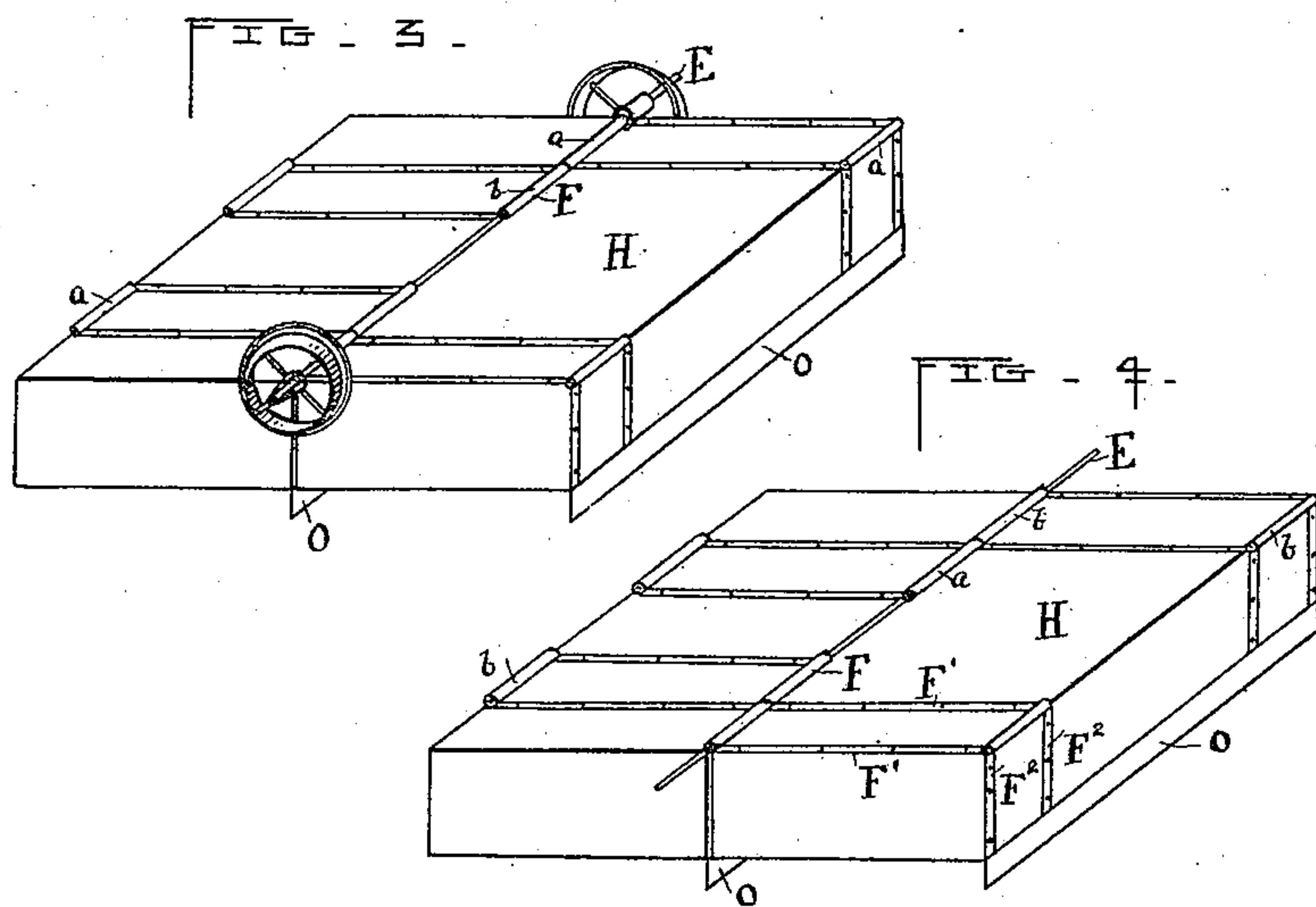
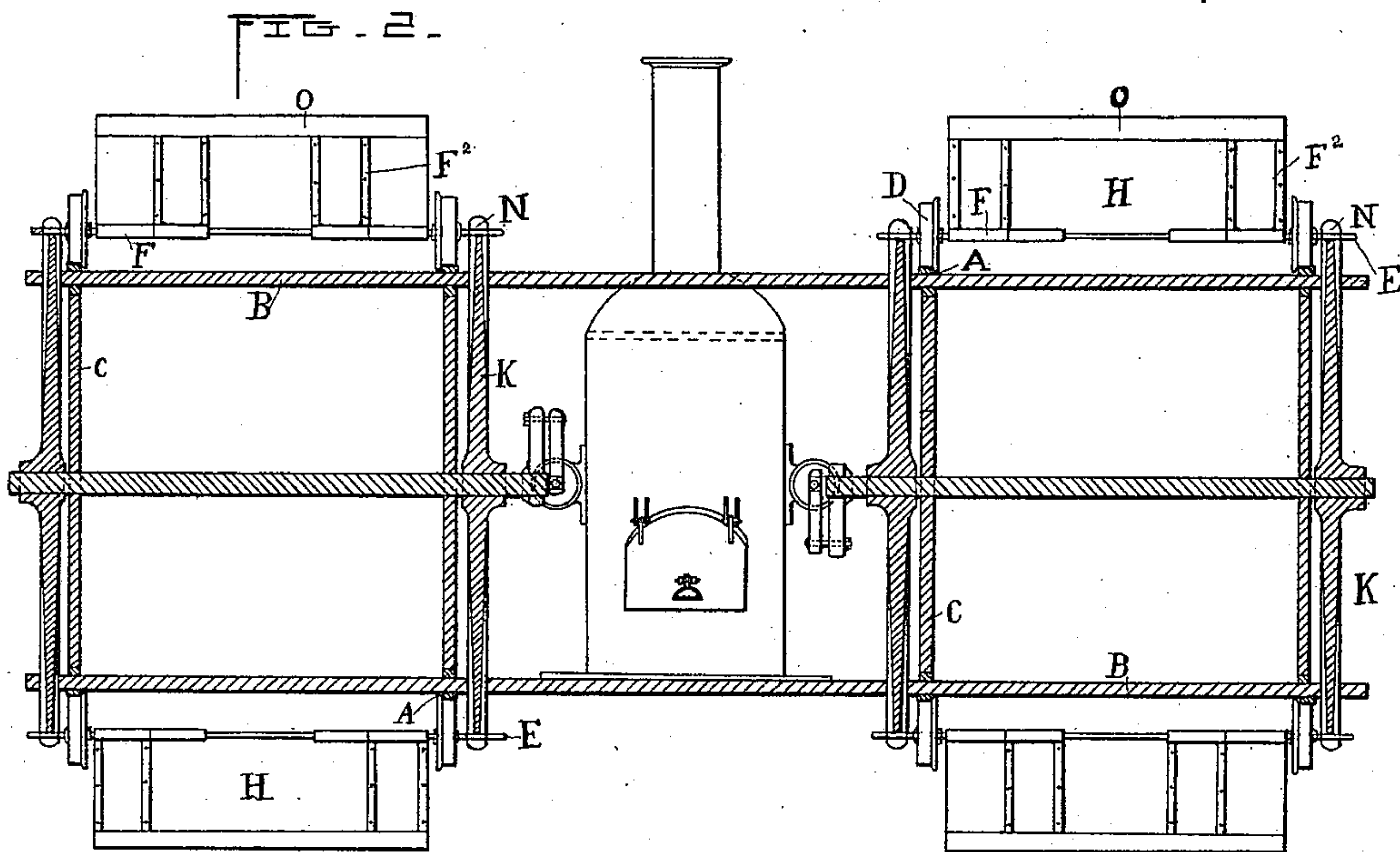
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UNITED STATES PATENT OFFICE.

GOLDSBURY HARDEN POND, OF GLENS FALLS, NEW YORK.

WATER-LOCOMOTIVE.

SPECIFICATION forming part of Letters Patent No. 441,327, dated November 25, 1890.

Application filed March 14, 1890. Serial No. 343,950. (No model.)

To all whom it may concern:

Be it known that I, GOLDSBURY HARDEN POND, a citizen of the United States, residing at Glens Falls, in the county of Warren and State of New York, have invented new and useful Improvements in Water-Locomotives, of which the following is a specification.

My invention relates to improvements in locomotion on water with an endless railway provided with and resting upon an endless series of pontoons connected with hinges, each ponton having wheels on which the endless railway moves instead of moving in or through the water.

The object of my improvement is to attain a high speed over the surface of water (without moving through it) and to move an endless-railway track and the load thereon over the water without contact with it, being supported on the periphery of a series of flanged wheels, thus avoiding a great expenditure and loss of propelling-power caused by the resistance and friction of the water. I obtain these objects by the mechanism illustrated in the accompanying drawings.

Figure 1 is a side view of the water-locomotive with its endless railway, endless series of pontoons around it, the flanged wheels, and the driving-wheels, showing the application of the power and the mode of imparting a forward or backward motion. Fig. 2 is a sectional end elevation of the same through the line *a b* in Fig. 1, illustrating the mode of holding one or more endless-railway tracks together with ties. Fig. 3 is a perspective view of the pontoons with the interlocking hinges and the bolt therein projecting out far enough from the side of the hinge for the axle of the wheels and the bands for holding the hinges securely to the pontoons. Fig. 4 is a perspective view of the pontoons with interlocking hinges and projecting axles with the wheels thereon.

Similar letters refer to similar parts in the several views.

The endless rails *A* are held together by the ties *B* and kept in line by the post *C*. These pieces securely fastened together constitute the frame-work of the machine and a complete endless-railway track.

On the endless rails *A* the flanged wheels *D* move in either direction, turning on the

axles *E*, which are also the bolts of the hinges *F*. These hinges, being securely fastened to the pontoons *H* by the hinge-straps *F'* *F*², hold them side by side and adapt them for moving easily over the rails *A* and around the driving-wheels *K*. Said straps are secured to the hinge or made integral therewith on both sides thereof, and straps *F'* are extended to the corresponding hinge of the adjoining float and are attached thereto.

The pontoons *H* can be made of any material; but I prefer iron, riveting the seams and locking or soldering them when the metal is thin and making them air and water tight. They can be of any size or shape, according to the load to be carried or the fancy of the builder.

It should be understood that the pontoons or floats are buoyant because of contained air or gas, and that they are hinged together in endless series, such series being indicated in dotted lines in Fig. 1. The under or inner side of two of these floats is shown in Figs. 3 and 4. These floats have hinges *F* secured to them by means of straps or in any usual way, and the rods which pass through the hinges at their outer ends form axles for supporting-wheels. These wheels are shown in Fig. 3, but are omitted in Fig. 4 to give a better view of the axles themselves. Opposite sides or edges of the floats are shown in Fig. 2.

When made rectangular, the hinges *F* are placed on each corner of one side of the ponton and interlocking and do not permit end motion of the ponton. Each hinge has one half of it on different pontoons, as shown at *a*, Fig. 3, and *b*, Fig. 4. When these halves of the hinges are brought together, the openings in them coincide, and the bolt *E* is inserted, thus fastening the pontoons or floats together.

The hinges *F* are securely fastened to the pontoons by the bands *L*. The bolt *E* projects from each hinge far enough to form the axle of a wheel. The center of motion of both the pontoons and the flanged wheels is the bolt *E*, and each wheel supports the corner of two pontoons when on the endless-railway track.

The pontoons *H* fill the whole space above the water under the endless-railway track *A*, making an extremely-buoyant support, capable of carrying a very large load.

The pontoons *H*, with the hinges securely

fastened thereon, holding the bolt or axle E rigidly in place, form a very solid railway-truck, keeping the flanged wheels D perfectly in line with the rails without any lateral vibration.

5 The driving-wheels K are at each end of the railway, and the power can be applied to either or both in usual manner with crank and connecting rods. Driving-wheels K are provided
10 with sprocket-teeth or projections N, arranged on their periphery.

As power is applied to the driving-wheels K, it is transmitted to the flanged wheels D and to the pontons H on the ends and upper
15 sections of the endless railway A, moving them over it, raising the pontons H out of the water at the stern, rolling them forward on the flanged wheels D, over the upper section of the endless railway A, over the forward end,
20 and down into the water, where they remain motionless until the upper series of pontons and the endless railway have passed over them, and so on continuously without moving through the water.

25 Each ponton H is provided with a bucket or paddle O to prevent it from slipping in either direction in the water, so that the motion of the endless railway either forward or backward will be equal to the circumferen-
30 tial motion of the driving-wheels K.

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

35 1. In a water-locomotive, the endless railway provided with an endless series of pontons arranged side by side and held each to the other by interlocking hinges, each secured on the bodies of two pontons at their adja-

cent edges, as and for the purpose herein set forth and described.

2. In a water-locomotive, the combination
40 of an endless railway with an endless series of pontons having interlocking hinges and with the axles and flanged wheels adapted to move and turn easily in either direction on
45 said endless railway, as and for the purpose herein described and set forth.

3. In a water-locomotive, an endless series of air and water tight pontons having interlocking hinges, provided each with a bolt on
50 which it turns, said bolt projecting from the hinge and constituting an axle for a wheel, as and for the purpose herein described and set forth.

4. In a water-locomotive, the endless series
55 of air and water tight pontons side by side and provided with hinges and the flanged wheels and axles adapted to hold said pontons in line on the endless railway and adapt them for moving and turning round the end
60 forward or backward over the endless railway, substantially as herein set forth and described.

5. In a water-locomotive, the combination of the endless railway A, with an endless series of pontons H, provided with buckets O,
65 wheels D, axles E, hinges F, and driving-wheels K, with projections N on the peripheries, as and for the purpose herein set forth and described.

In testimony whereof I affix my signature in
70 presence of two witnesses.

GOLDSBURY HARDEN POND.

Witnesses:

JAS. W. HALE,
H. M. POND.