

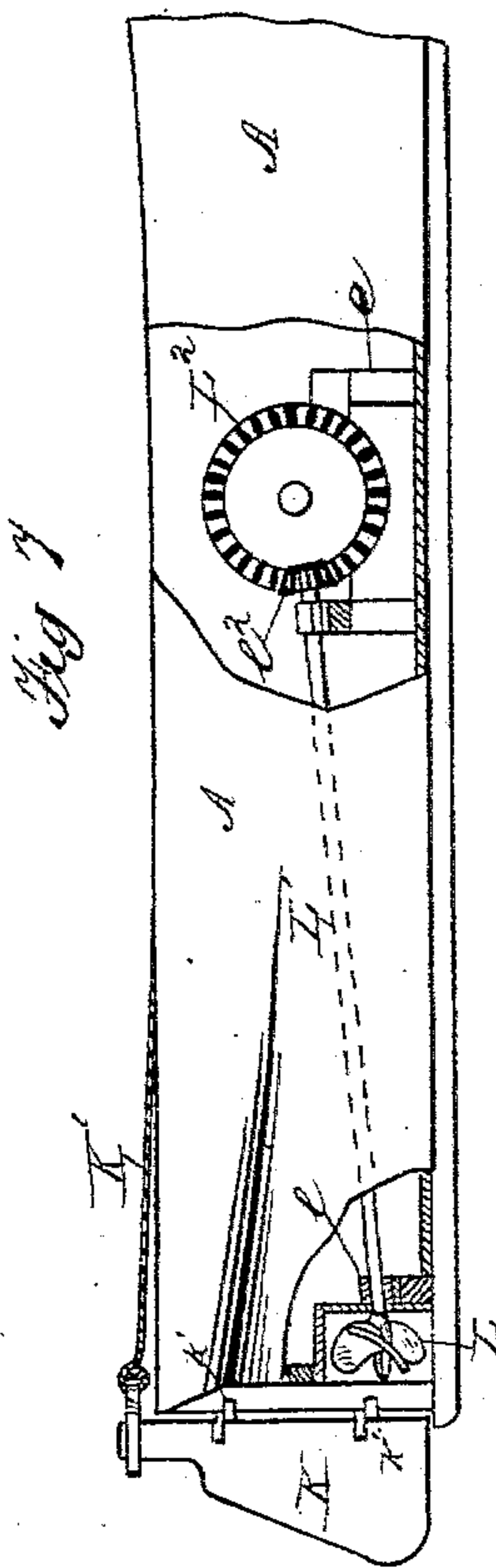
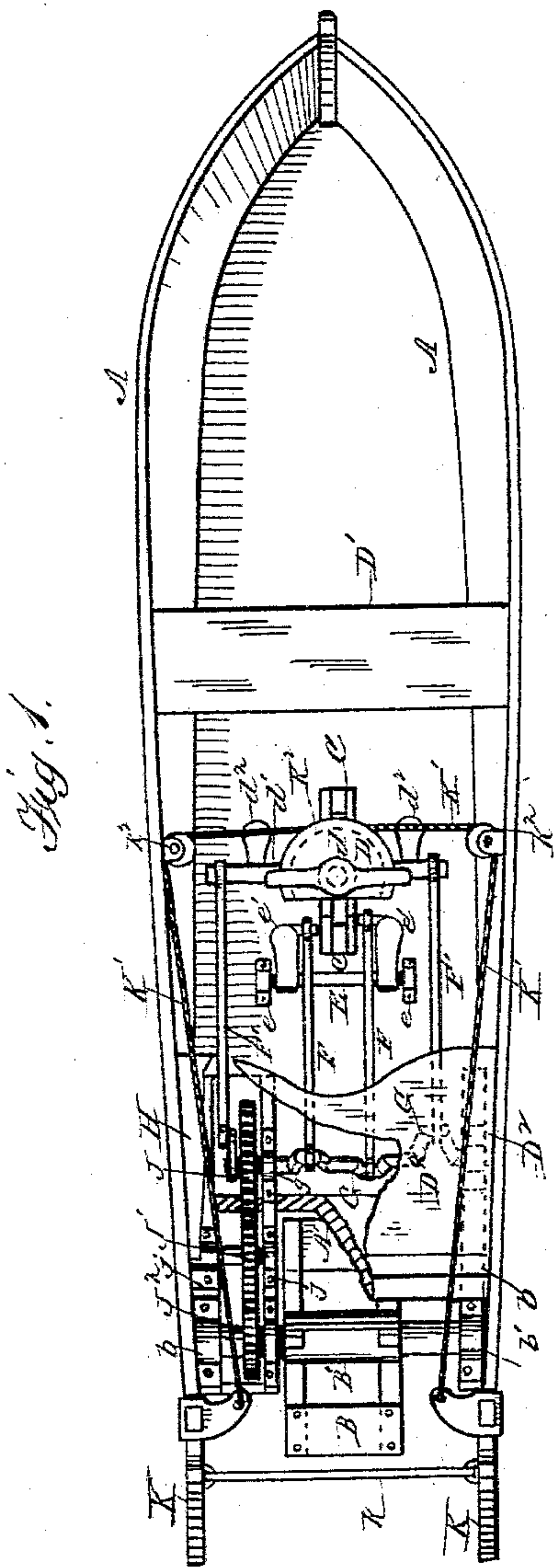
(No Model.)

3 Sheets—Sheet 1.

S. CURLIN.
MARINE VELOCIPED.

No. 315,743.

Patented Apr. 14, 1885.



Attest:
W. B. Burghard
A. L. Keaton

Inventor:
Seth Curlin
By his Attorney
Edson Bros

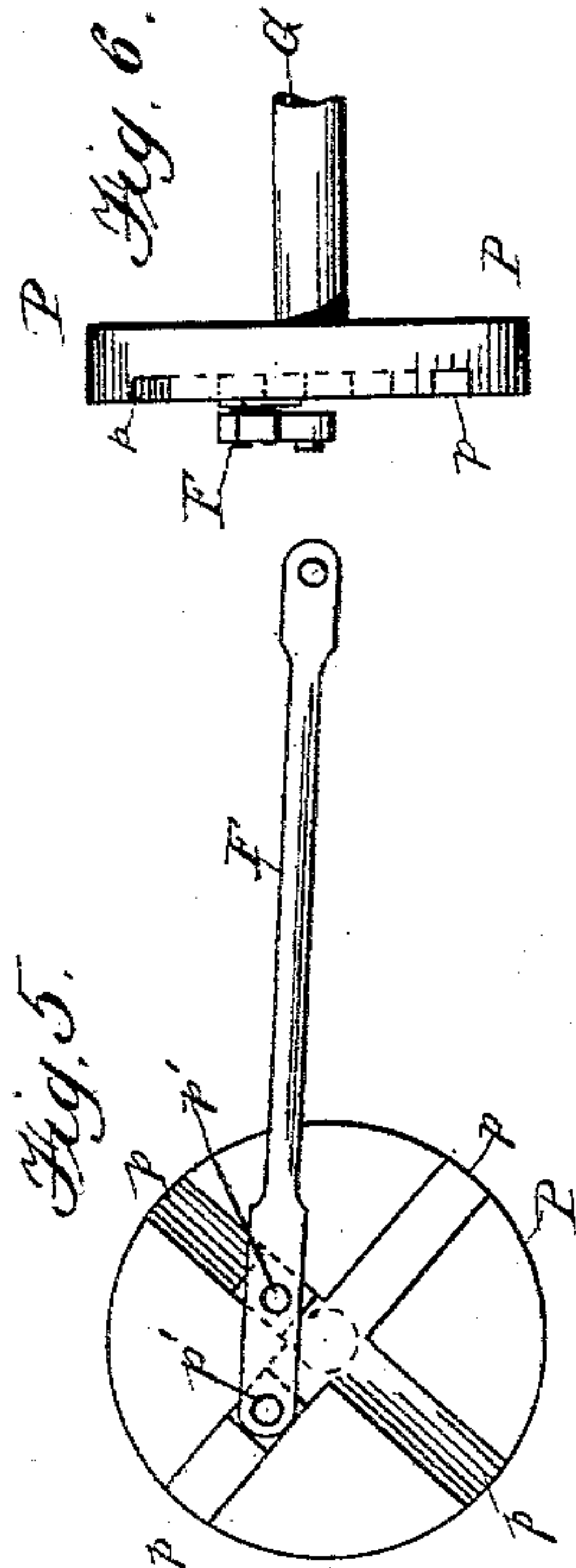
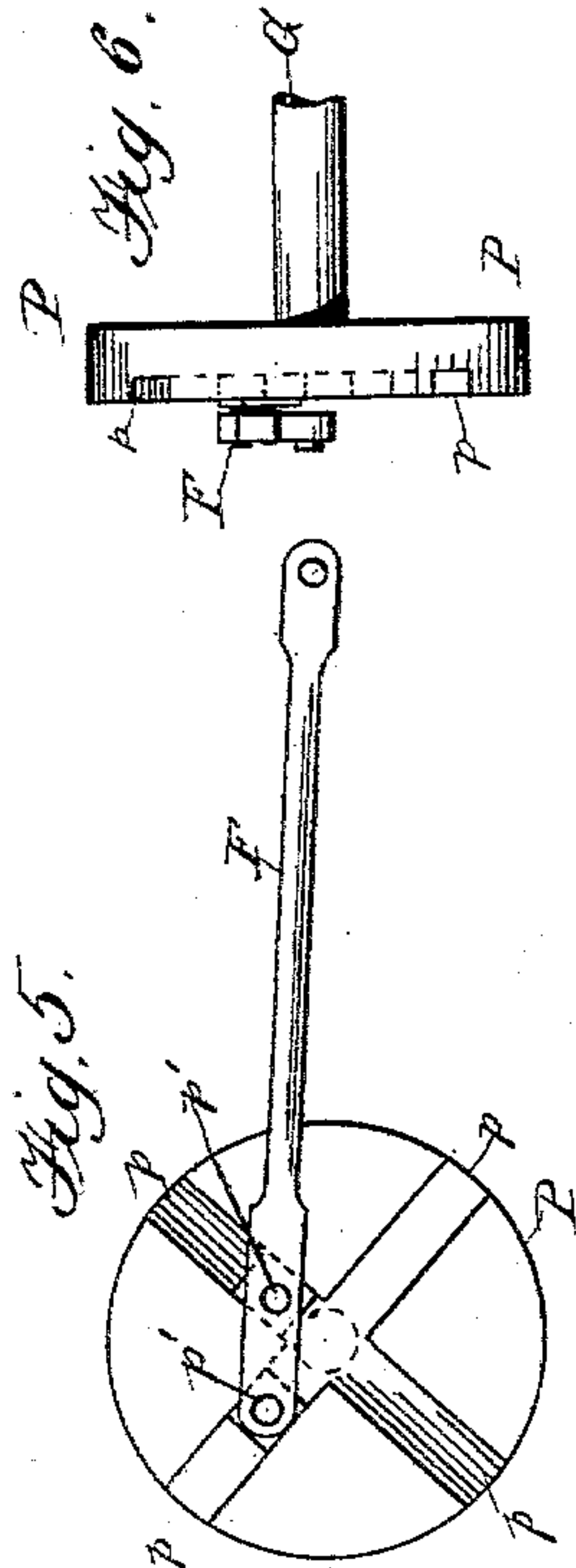
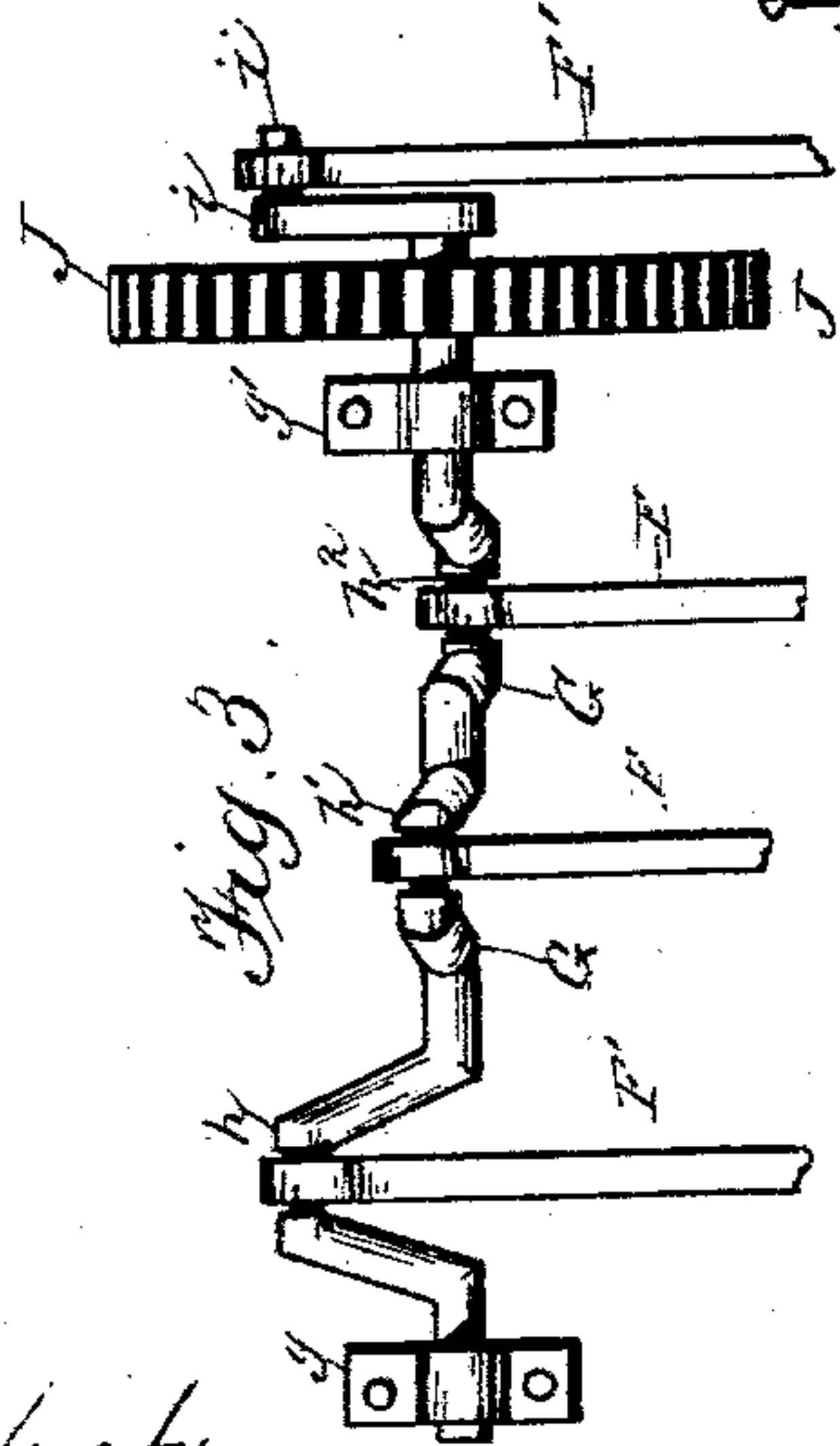
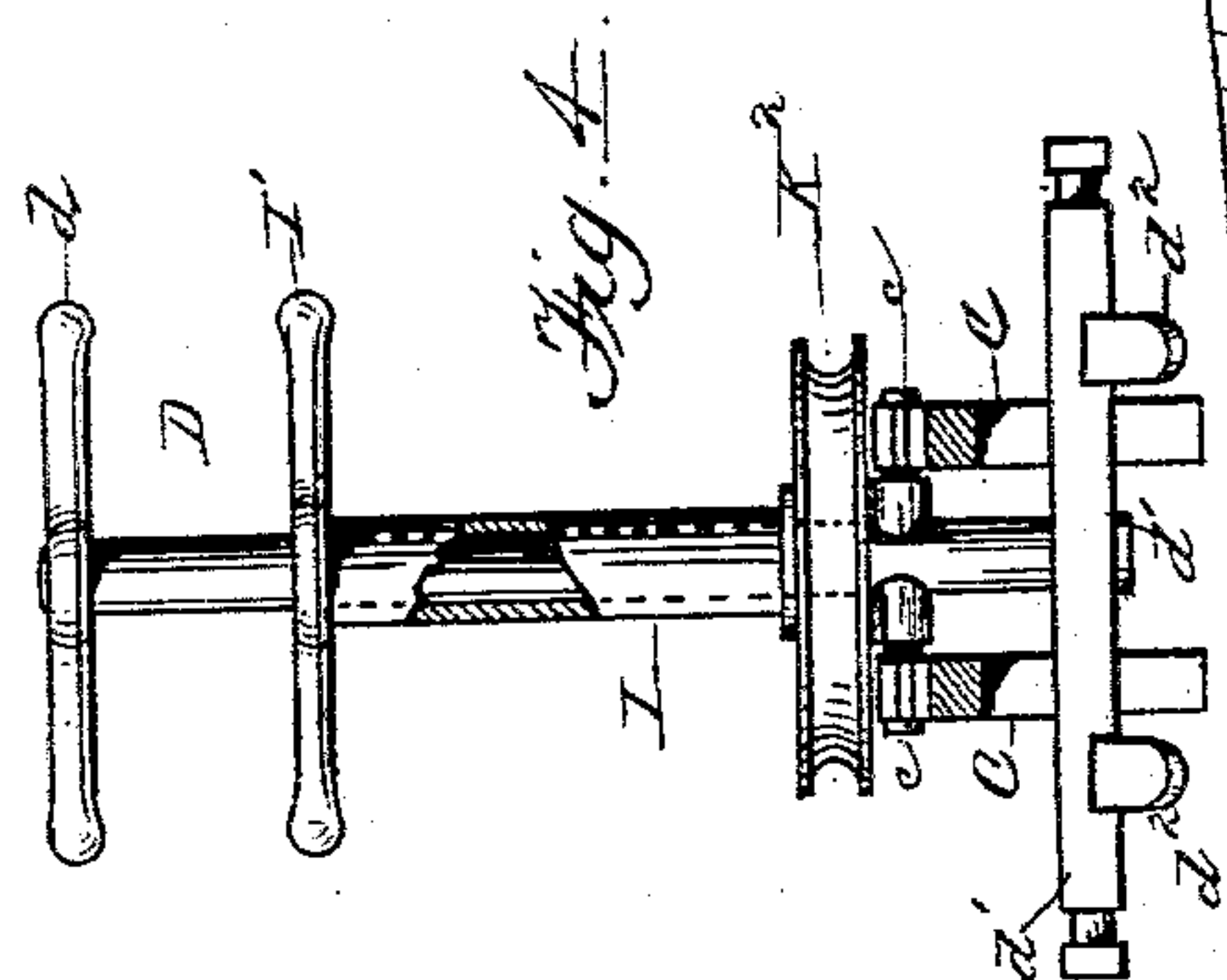
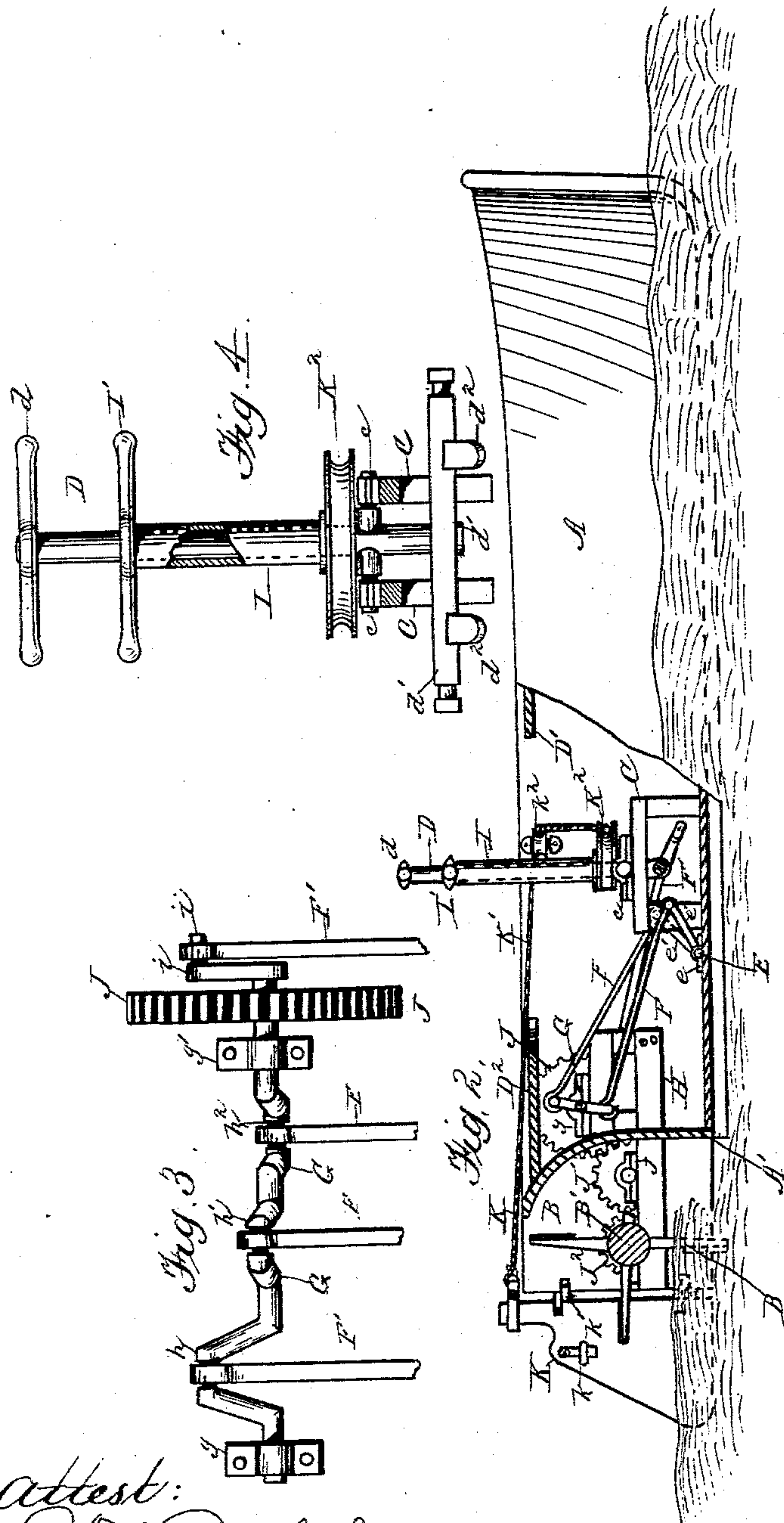
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3 Sheets—Sheet 2.

S. CURLIN.
MARINE VELOCIPEDE.

No. 315,743.

Patented Apr. 14, 1885.



Attest:
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Inventor:
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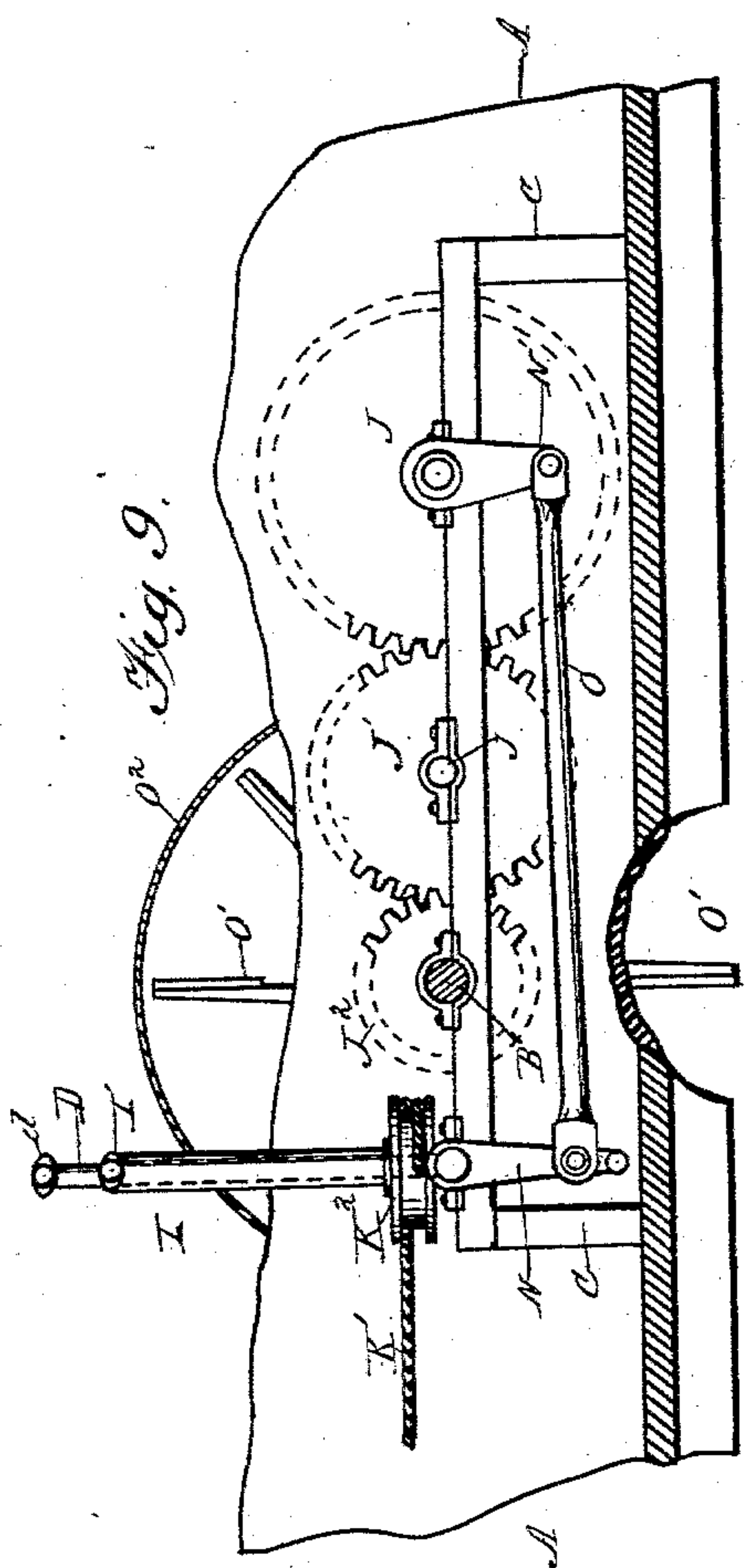
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3 Sheets—Sheet 3.

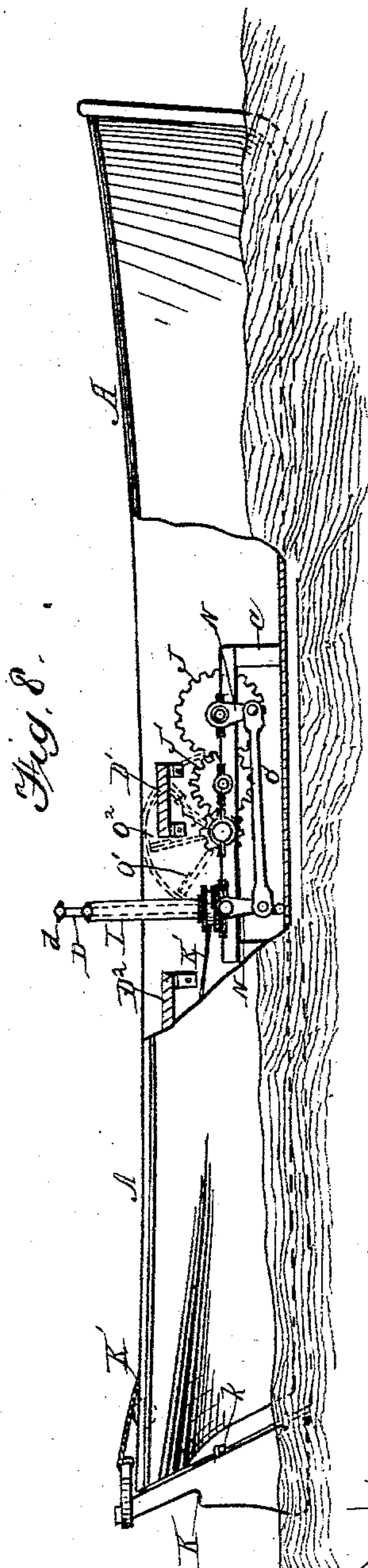
S. CURLIN.
MARINE VELOCIPÈDE.

No. 315,743.

Patented Apr. 14, 1885.



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UNITED STATES PATENT OFFICE.

SETH CURLIN, OF COVINGTON, TENNESSEE.

MARINE VELOCIPED.

SPECIFICATION forming part of Letters Patent No. 315,743, dated April 14, 1885.

Application filed January 8, 1885. (No model.)

To all whom it may concern:

Be it known that I, SETH CURLIN, a citizen of the United States, residing at Covington, in the county of Tipton and State of Tennessee, have invented certain new and useful Improvements in Marine Velocipedes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in marine velocipedes; and the novelty consists in the construction, combination, and arrangement of the various parts for service, substantially as hereinafter described and claimed.

My invention has for its object the provision of means whereby a light pleasure skiff or boat can be easily and rapidly propelled by persons unskilled in rowing, and to provide simple and effective means whereby both the feet and hands of the operator can be used in the propulsion of the boat, while at the same time the steering can be accomplished with ease and facility.

In the drawings, Figure 1 is a plan view of a skiff or boat provided with my improvements. Fig. 2 is a side elevation partly broken away to show the propelling, operating, and steering mechanism. Figs. 3, 4, 5, and 6 are detailed views of parts of my improvements. Fig. 7 is a modification thereof, showing the skiff having a screw-propeller; and Figs. 8 and 9 are views of a skiff having my improvements applied thereto and adapted to be operated by one person only.

Similar letters of reference in the several drawings denote like or corresponding parts.

Referring to the drawings, A designates a skiff or light boat of any preferred construction, having near its rear portion a curved partition, A', as shown in Fig. 2, said partition being slotted or cut away at one side to permit of a train of multiplying-gear, hereinafter described, to transmit motion to the paddle-wheel.

The shaft B' of the paddle-wheel B, of any preferred construction, is mounted in boxes b, one of which is supported in a beam, b', se-

cured to one side of the skiff-body, while the other box b is secured to a frame secured to the opposite side of the skiff and supports a train of gearing, hereinafter described.

C designates a frame secured to the bottom of the skiff, near the center thereof, to the horizontal piece of which is secured, in boxes c, an upright bar, D, having a cross-bar, d, at its upper end, which is grasped by one of the operators, and is further provided at its lower end with another cross-bar, d', having pedals d², on which are placed the feet of the operator who occupies the seat D'. 65

E designates a rock-bar mounted in boxes e, secured to the bottom of the skiff, and provided with pedals e' e', connected at their forward ends by a bar, e², to which are secured rods F F, connecting with a shaft, G, journaled in boxes g g', one secured to the bar or support b' and the other to the frame H. The shaft G has three cranks, h h' h², between the bearings g g' thereof, and an arm, i, having a wrist-pin, i', outside of its bearing g'. The rods F F connect with the cranks h' h², while rods F' F' connect the crank h and crank-arm i with the lower cross-bar, d', of the operating-bar D. 75

I designates a sleeve fitted over the bar D, and provided with a cross-bar, I', which is adapted to be grasped by a second operator seated on the platform or seat D², and having his feet resting on the pedals e' e', whereby two persons are enabled to simultaneously apply power to the paddle-wheel. 80

J designates a pinion mounted on the crank-shaft G, which meshes with a smaller pinion, J', mounted in boxes j, secured to frame H, said pinion J' gearing with a still smaller pinion, J², secured on the shaft B' of the paddle-wheel B. 90

It will be seen from the above description that the motion of the operating-bars D and I and pedals d² and e' is transmitted through the connecting-rods to the crank-shaft, and thence through the train of multiplying-gears to the shaft of the paddle-wheel, which is thereby revolved. 95

K K designate the rudders, of which there are two, preferably connected together for simultaneous movement by a rod, k, pivoted to the same, said rudders being pivoted to the skiff, as at k', as usual, and connected by 100

chains, cords, or ropes K' to a drum, K^2 , on the sleeve I , said cord passing over a pulley or rollers k^2 , pivoted to the sides of the skiff, as shown.

5 In the device shown in Fig. 7, which is specially adapted for deep waters, I provide a chamber in the bottom of the skiff, at the stern thereof, in which is placed a screw-propeller, L , secured to a shaft, L' , journaled in a box, l , within the wall of the chamber, said shaft
10 extending forward to about the center of the skiff and having a bevel gear-pinion, l^2 , which meshes with a larger bevel gear-wheel, L^2 , which is adapted to be rotated by the hereinbefore-described mechanism $D E d^2 e'$.

In Figs. 8 and 9 I illustrate another form of my invention, which is especially adapted to be operated by one person only, although it will be understood that the constructions here-
20 inbefore described are also capable of manipulation by one operator. In this latter arrangement I mount on the frame C the train of multiplying-gear $J J' J^2$, and the operating-bars $D I$, with their appliances and connections $K' K^2$, and provide the bar D and pinion J with crank-arms $N N'$, respectively, which are connected by a rod, O .

It will be seen that in lieu of the stern-wheel B , I employ propelling-wheels O' , mount-
30 ed on the axis of the pinion J^2 , which are located at the sides of the boat, and are similar in construction, said wheels having a casing, O^2 , which protects them from injury. In this arrangement I dispense with the crank-shaft and its connections, and thus provide a simple and effective means for propelling the boat, the motion of the operating-bar being transmitted through the connecting-rod O to the pinion J , and thence through the train of
40 gear to the side paddle-wheels, as is obvious. The arm N is extended below the pivot of the rod O , at which point it is provided with pedals for use by the operator, who can occupy the seat D' , located immediately above the
45 train of gear.

In lieu of the crank-arm i of the shaft G , I may use the device shown in Figs. 5 and 6, which consists of a wheel, P , having grooves $p p$ formed in one of its faces and extending at
50 right angles to each other, in which are adapted to slide blocks $p' p'$, pivoted to one of the connecting rods F' , thereby dispensing with a fly-wheel and securing a steady and uniform revolution of the crank-shaft.

55 Modifications in details of construction and form and proportion of parts, herein shown and described as an embodiment of my invention, may be made without departing from the principle or sacrificing the advantages thereof, and I would therefore have it under-
60 stood that I hold myself at liberty to make such changes and alterations as fairly fall within the scope of my invention.

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

1. In a marine velocipede, the combination of a pivoted operating-bar, a sleeve having a handle, bar, and a drum, and also serving as an operating-bar fitted over said internal op- 70
erating-bar, a train of multiplying-gear, means, substantially as described, for connecting said operating-bars with said gearing, a rudder, and a cord or rope connected with said rudder and drum, substantially as and for the 75 purpose described.

2. In a marine velocipede, the combination of a pivoted operating-bar, a sleeve fitted over said bar and moving with it, and provided with a handle and drum, a crank-shaft having 80
a pinion, a paddle-wheel mounted on a shaft in the stern of the skiff and provided with a smaller pinion, an intermediate pinion, rudders pivoted to the skiff and connected by a rod, operating-rods $F F'$, connecting with cross- 85
bar d' and pedals e' , and cords or chains connecting the rudders to the said drum, substantially as and for the purpose set forth.

3. In a marine velocipede, the combination of a pivoted operating-bar having pedals at 90
its lower end, a sleeve fitted to said bar and having a handle at its upper end in a plane below the handle of said operating-bar, a rock-shaft having pedals, a crank-shaft, rods connecting said bar and shafts, a train of multi- 95
plying-gear, and a propelling-wheel, substantially as shown and described.

4. In a marine velocipede, the combination of the operating-bar D , sleeve I , fitted over said bar, crank-shaft G , connected to said sleeve 100
and bar by means of rods $F F'$, pinions $J J' J^2$, and propelling-wheel B , substantially as and for the purpose set forth.

5. The combination of the operating-bar D , having pedals d^2 at its lower end, sleeve I , 105
fitted over said bar and turning freely thereon, shaft E , having pedals e' from which and the operating-bar power is communicated to the shaft C , having cranks $h h' h^2$ and $i i'$, by means of connecting-rods $F F'$, pinions $J J' J^2$, and 110
paddle-wheel B , as and for the purpose set forth.

6. The combination, in a marine velocipede, of a pivoted operating-bar, D , having cross- 115
bar d' at its lower end, provided with pedals d^2 , a sleeve, I , fitting loosely over said operating-bar, and having a drum, K^2 , rigidly secured thereon, rock-shaft E , having pedals e' , shaft G , having cranks $h h' h^2 i i'$, connecting- 120
rods $F F'$, by means of which power is communicated from the pedals and operating-bar to the crank-shaft G , pinions $J J' J^2$, paddle-wheel B , rudders K , connected by rod k , and cords or ropes K' , whereby the rudders are 125
simultaneously operated from said drum, substantially as shown and described.

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

SETH CURLIN.

Witnesses:

H. T. BERNHARD,
JOS. FORREST.