

(No Model.)

2 Sheets—Sheet 1.

H. BAUMOTTE.  
HYDRAULIC MOTOR.

No. 286,374.

Patented Oct. 9, 1883.

Fig. 1.

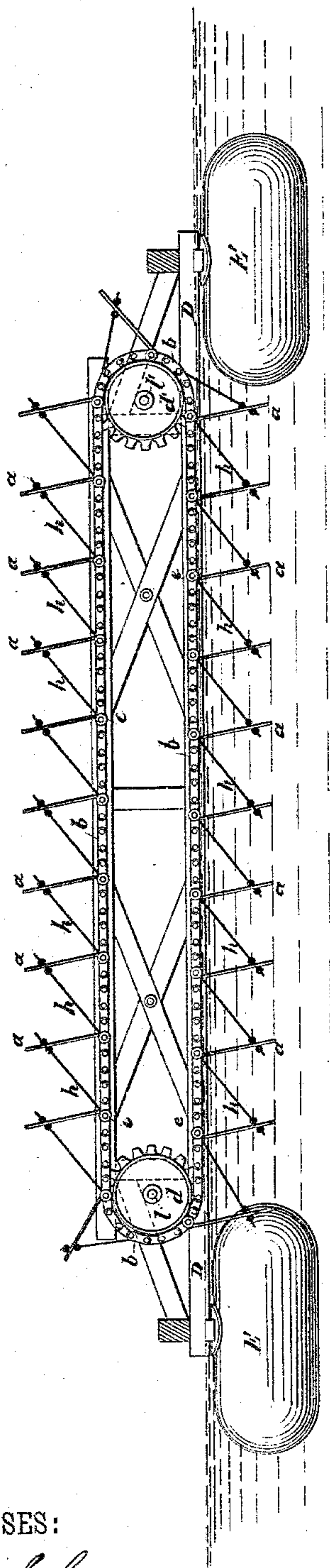
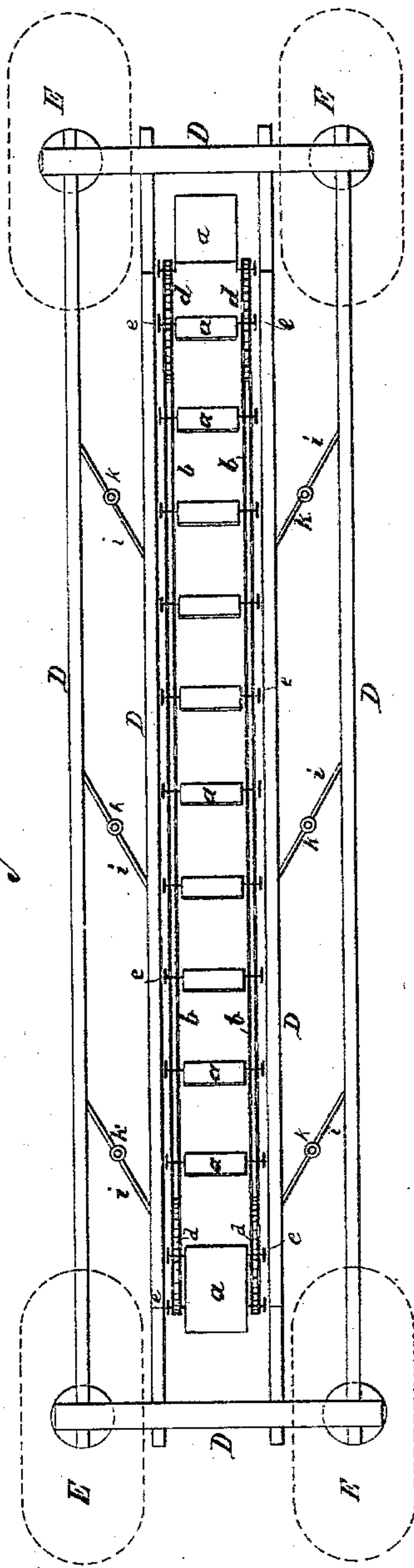


Fig. 2.



WITNESSES:

*A. Schehl.*  
*Carl Kapp*

INVENTOR

*Hermann Baumotte*

BY *Georg Riegner*

ATTORNEYS.

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H. BAUMOTTE.

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*Fig: 3.*

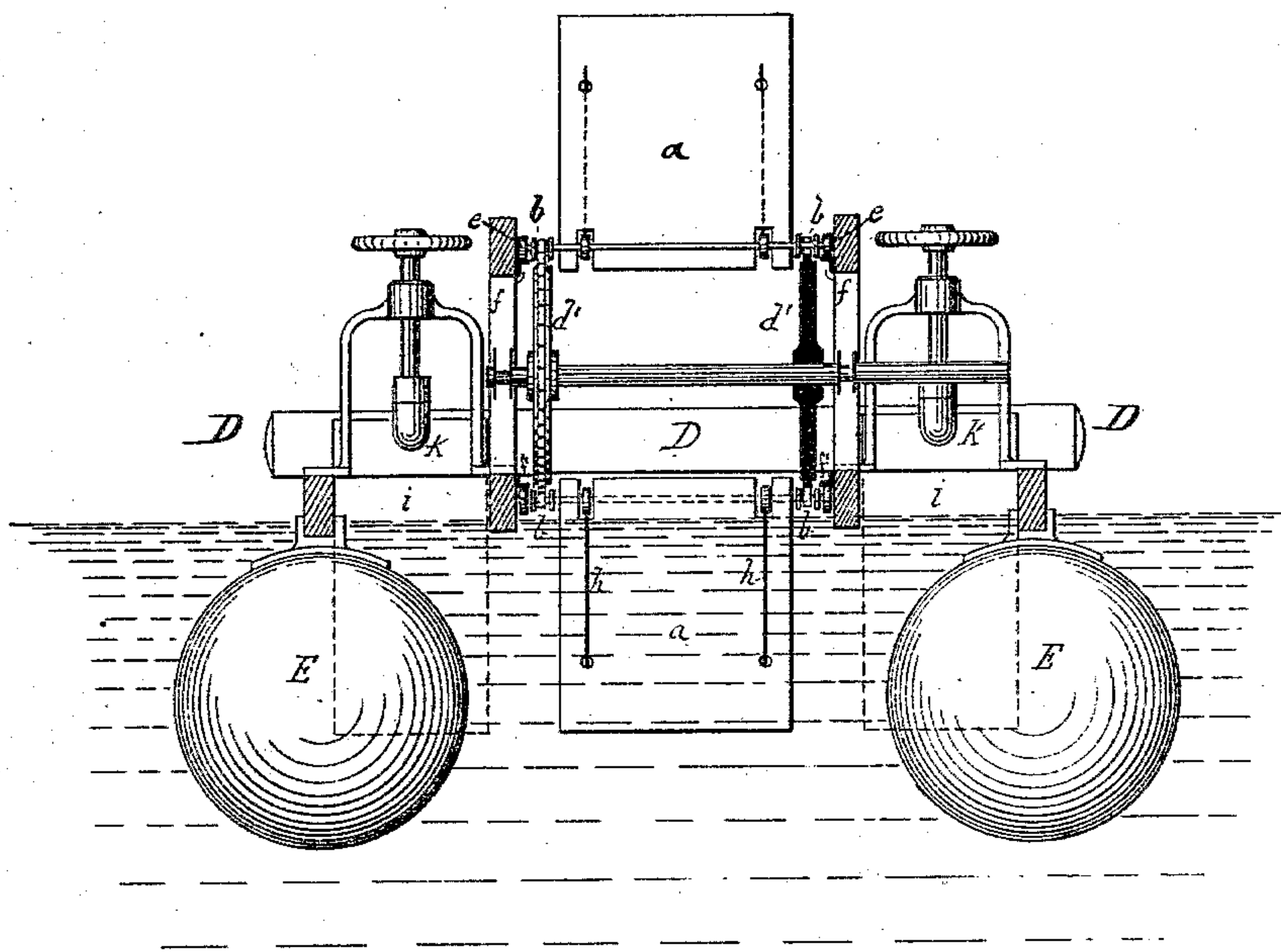
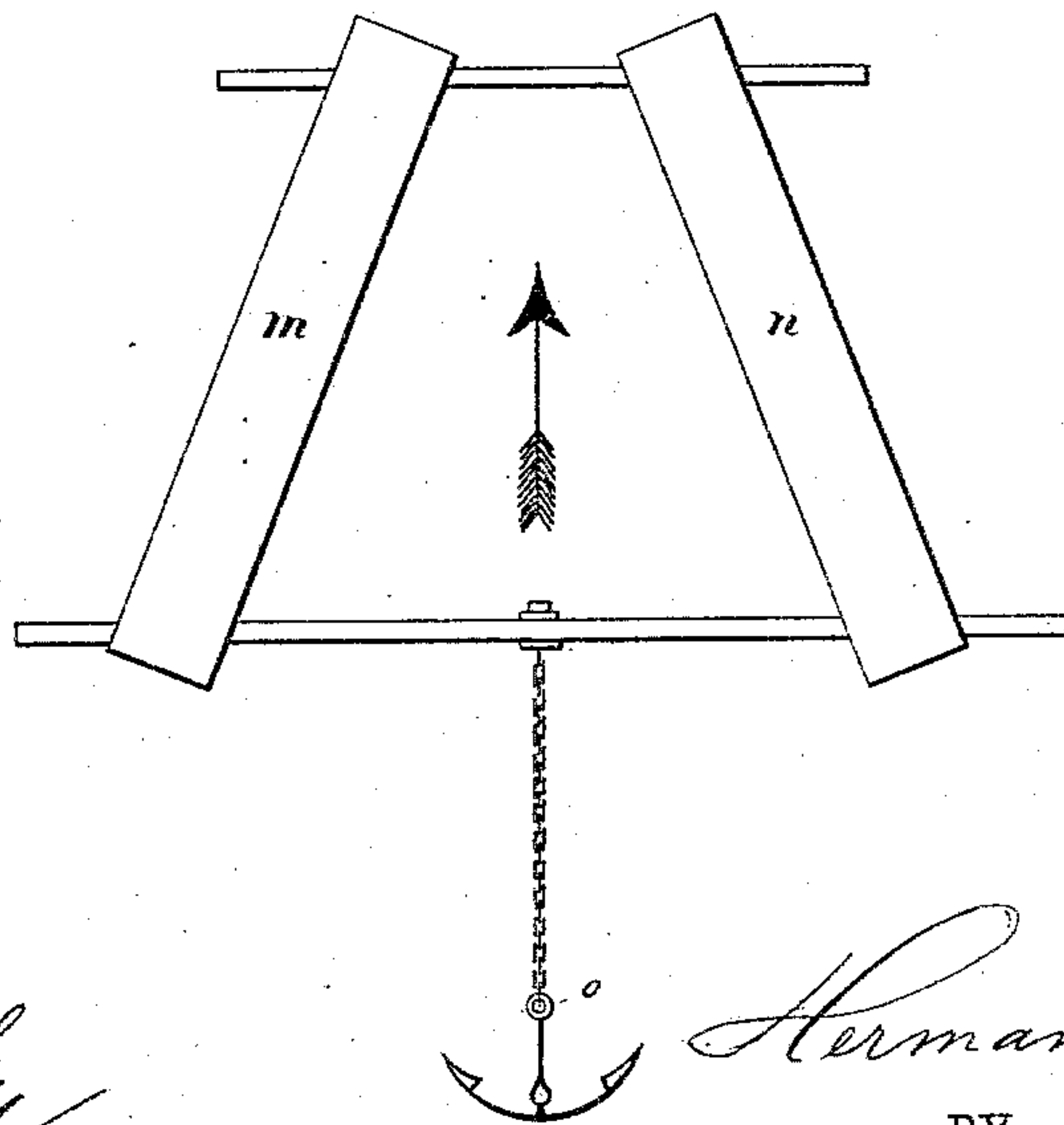


Fig. 4.



WITNESSES:

A. Schehl.  
Lebanon, Kasir

INVENTOR

INVENTOR  
Hermann Baumotte  
BY Goppel & Raegenner  
ATTORNEYS.



# UNITED STATES PATENT OFFICE.

HERMANN BAUMOTTE, OF VOSSNAIKEN, NEAR KUPFERDREH, PRUSSIA, GERMANY, ASSIGNOR TO HIMSELF AND RUDOLPH NÖGGERATH, OF ST. JOHANN ON THE SAAR.

## HYDRAULIC MOTOR.

SPECIFICATION forming part of Letters Patent No. 286,374, dated October 9, 1883.

Application filed May 28, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, HERMANN BAUMOTTE, a subject of the Kingdom of Prussia, German Empire, residing at the city of Vossnaiken, near Kupferdreh, in the Kingdom of Prussia, German Empire, have invented certain new and useful Improvements in Hydraulic Motors, of which the following is a specification.

This invention has reference to an improved hydraulic motor, by which the currents of rivers and the motions of the tides may be used without the erection of permanent structures; and the invention consists of an endless paddle-chain that is stretched over sprocket-wheels, the shafts of which turn in bearings of a vertical frame supported on floats. At both sides of the endless paddle-chain are arranged vertical and laterally-adjustable gates, by which the current is directed onto the paddles.

In the accompanying drawings, Figure 1 represents a side elevation, partly in section, of my improved hydraulic motor. Fig. 2 is a plan; Fig. 3, a vertical transverse section; and Fig. 4, a plan of two motors coupled together in one system.

Similar letters of reference indicate corresponding parts.

In the drawings, *a a* represent a number of paddles that are applied to an endless chain, *b*, which is guided over sprocket-wheels *d d'*, that engage the individual links of the endless chain *b*. The endless chain *b* is made of any desired length, and supported by guide-rollers *e e*, applied to the ends of the paddle-shafts, on the upper and lower ways *f f* of a supporting-frame, *D*. The guide-rollers *e e* of the paddle-chain *b* are guided on projecting ways *f* of the upper longitudinal beams of the supporting-frame *D*, while the lower part of the chain is guided between two ways, *f' f'*, of angle-irons, whereby the rising of the chain by the pressure of the water is prevented. The shafts of the guiding and stretching sprocket-wheels *d d'* are supported in bearings of the frame *D*, which is applied to floats or pontoons *E*, of sufficient size, that keep the entire motor afloat. The floats *E* are anchored

in such a manner, either to the shore or to the bottom of the river, that they adapt themselves to the varying level of the water.

The paddles *a* are made to turn on their shafts, which are extended beyond the links of the endless chain *b*, and carry at their outer ends the guide-rollers *e e*. Each paddle is braced by rods *h*, which are connected by eyes to the next preceding paddle-shaft, and so connected to the paddle that they have play thereon. This has the advantage that the paddles do not only resist the pressure of the water, but exert, furthermore, a tension upon the next following paddles, and consequently, upon the entire system of the same.

At both sides of the paddle-chain *a b* are arranged vertical gates *i*, which are laterally-adjustable to different angles of inclination toward the longitudinal axis of the frame *D*, and also vertically higher or lower by screws *k*, having hand-wheels and turning in yokes of frame *D*, as shown in Fig. 2. By the proper adjustment of the guide-paddles *i*, the water is compelled to exert its full pressure upon all the paddles, so that a high effective capacity is obtained.

The motor may be arranged at an angle of inclination to the direction of the current, or preferably two arranged in a symmetrical position thereto, as shown in Fig. 4, in which the two motors *m* and *n* are made to converge toward each other and are centrally anchored, as shown at *o*, the current entering at the ends of the motors which are farther away from each other.

A motor combined in this manner will adjust itself automatically in the most favorable position to the current and utilize in a high degree the motive power of the same. The power is transmitted by the paddle-chain to the shafts *l l'* of the sprocket-wheels *d d'*, and from the same, in the usual manner, by belts and pulleys, or other means for transmitting the power to the place of use.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a hydraulic motor, the combination



of an endless paddle-chain, mounted on sprocket-wheels and guided by rollers on ways of the supporting-frame, with vertical and laterally-adjustable gates at both sides of the paddle-chain, substantially as and for the purpose set forth.

2. In a hydraulic motor, the combination of the supporting-frame D, having guideways *f* *f'*, an endless chain, *b*, mounted on sprocket-wheels *d d'*, paddles *a a*, applied to transverse shafts, having outer guide-rollers, *ee*, and brace-

rods *h h*, by which the paddles are connected to the shafts of the next adjoining paddles, substantially as set forth.

In testimony whereof I have signed my name 15 to this specification in the presence of two subscribing witnesses.

HERMANN BAUMOTTE.

Witnesses:

GERARD VON NAUROCKI,  
B. ROE.