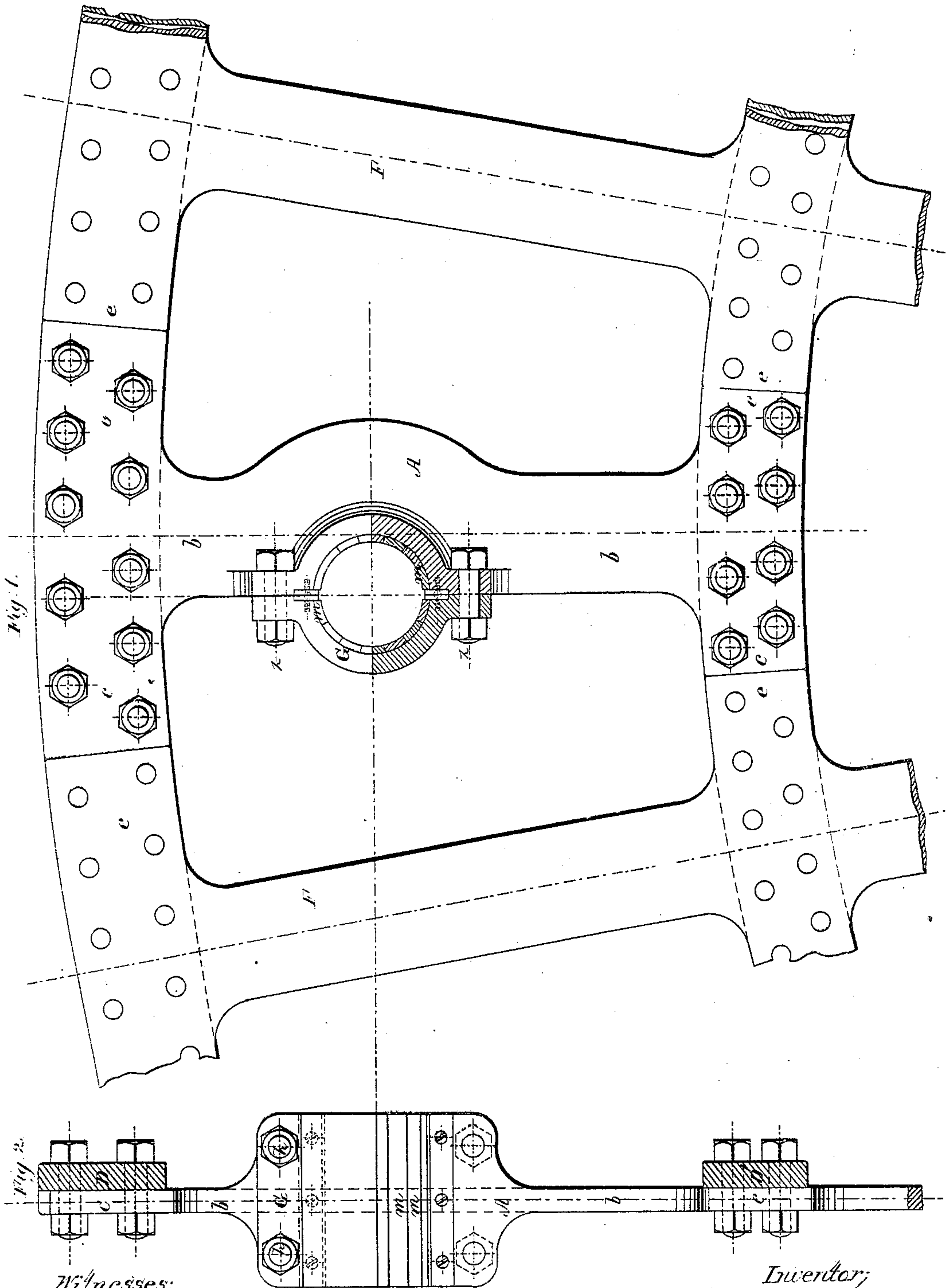


W. R. Manley.  
Paddle Wheel.

N<sup>o</sup> 87.860.

*Patented Mar 16, 1869.*



Witnesses;  
W. L. Barron.  
John Rastbom Jr

*Inventory;  
H. R. Manley  
by his attorney  
C. L. Perkins*

# United States Patent Office.

WILLIAM R. MANLEY, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF  
AND WILLIAM H. WEBB, OF SAME PLACE.

*Letters Patent No. 87,860, dated March 16, 1869.*

## IMPROVEMENT IN FEATHERING PADDLE-WHEELS.

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern:*

Be it known that I, WILLIAM R. MANLEY, of the city, county, and State of New York, have invented a new and useful Improvement in the Construction of Feathering Paddle-Wheels; and that the following is a full, clear, and exact description and specification of the said invention.

The object of the invention is to render the pillow-blocks of the rock-shafts of the paddles of feathering paddle-wheels, perfectly secure, without excessive cost. To this end,

My invention consists in constructing the stock of the pillow-block with arms, which may overlap adjacent portions of the frame-work of the wheel, and be firmly secured thereto by bolts or rivets.

The accompanying drawing represents the mode in which I have applied my invention—

Figure 1 representing a side view of a portion of the frame of a feathering paddle-wheel, with my improvement applied to it; and

Figure 2 representing an edge view of the same, with certain portions in section.

In this example, the stock A of the pillow-block is constructed with arms *b b*, which are branched at their ends, as at *c c*, the branches being concentric with the axis of the paddle-wheel.

The stock, thus constructed, is formed into the frame of the paddle-wheel, and the branches *c c*, of the arms,

overlap the ring-pieces D D' of the frame, and are firmly secured thereto by through-bolts.

The spaces between the stocks of adjacent pillow-blocks of the wheel are filled in by the projections *e* of the wheel-arms F, which have the forms of segments of the rings, so that the bolts of all the pillow-blocks unite in sustaining strains which tend to move any one pillow-block upon the wheel-frame.

The cap G of the pillow-block is secured to the stock by cap-bolts *h h*, and the pillow-block is bored out, and lined with staves of wood, *m*, to form a bearing, or box for the rock-shaft, or gudgeon of the paddle.

The pillow-block, with a stock constructed and applied, as above described, forms in substance a part of the frame of the paddle-wheel; and therefore is firmly secured in its place. Moreover, as the arms of the pillow-block stock are of no very great size, the article can be readily forged and swaged in dies to the required form.

What I claim as my invention, and desire to secure by Letters Patent, is—

The pillow-block stock, constructed with arms, substantially as before described.

In testimony whereof, I have hereto set my hand, this 22d day of September, A. D. 1868.

Witnesses:

WM. R. MANLEY.

W. L. BENNEM,

JOHN RATHBONE, Jr.