

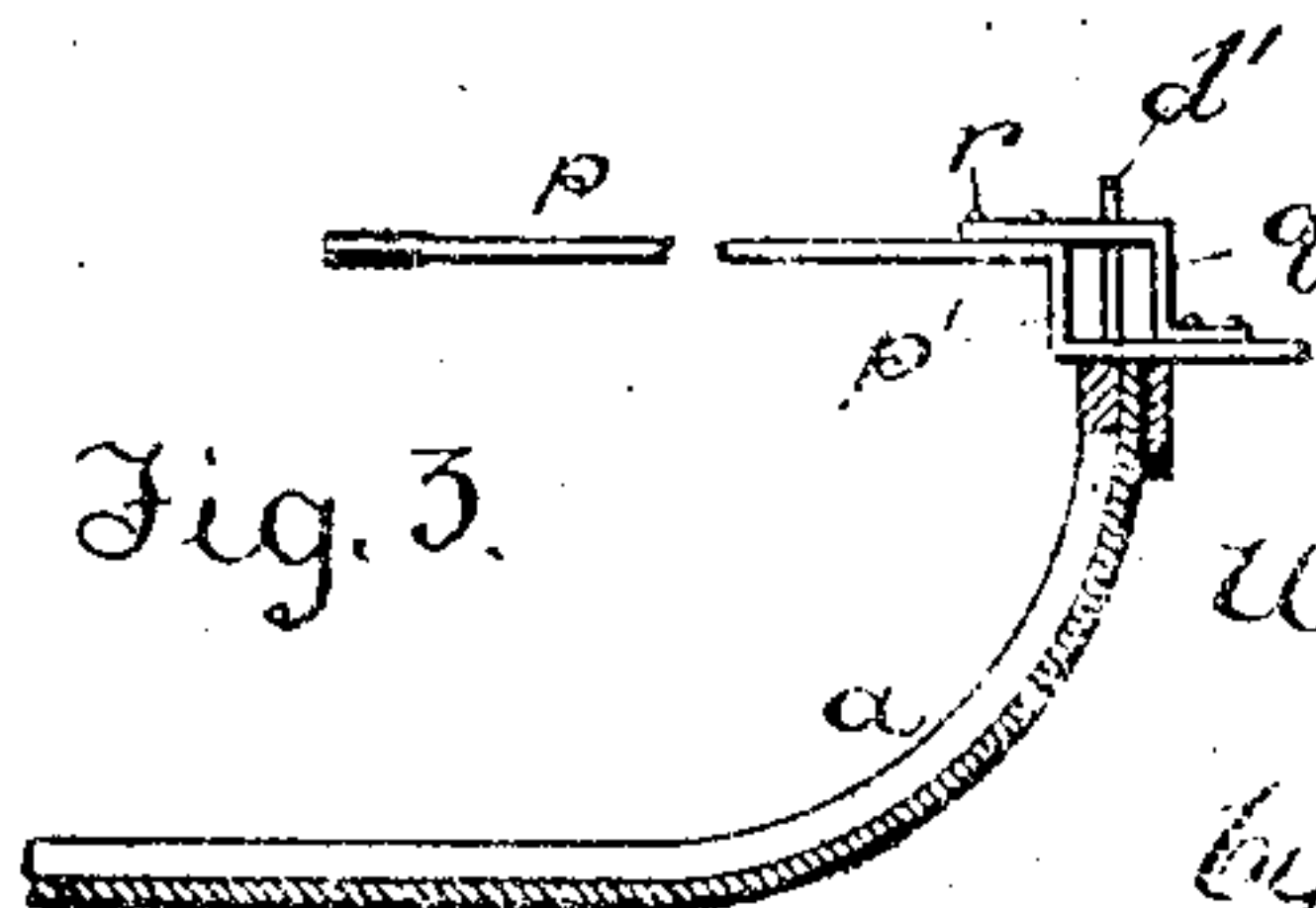
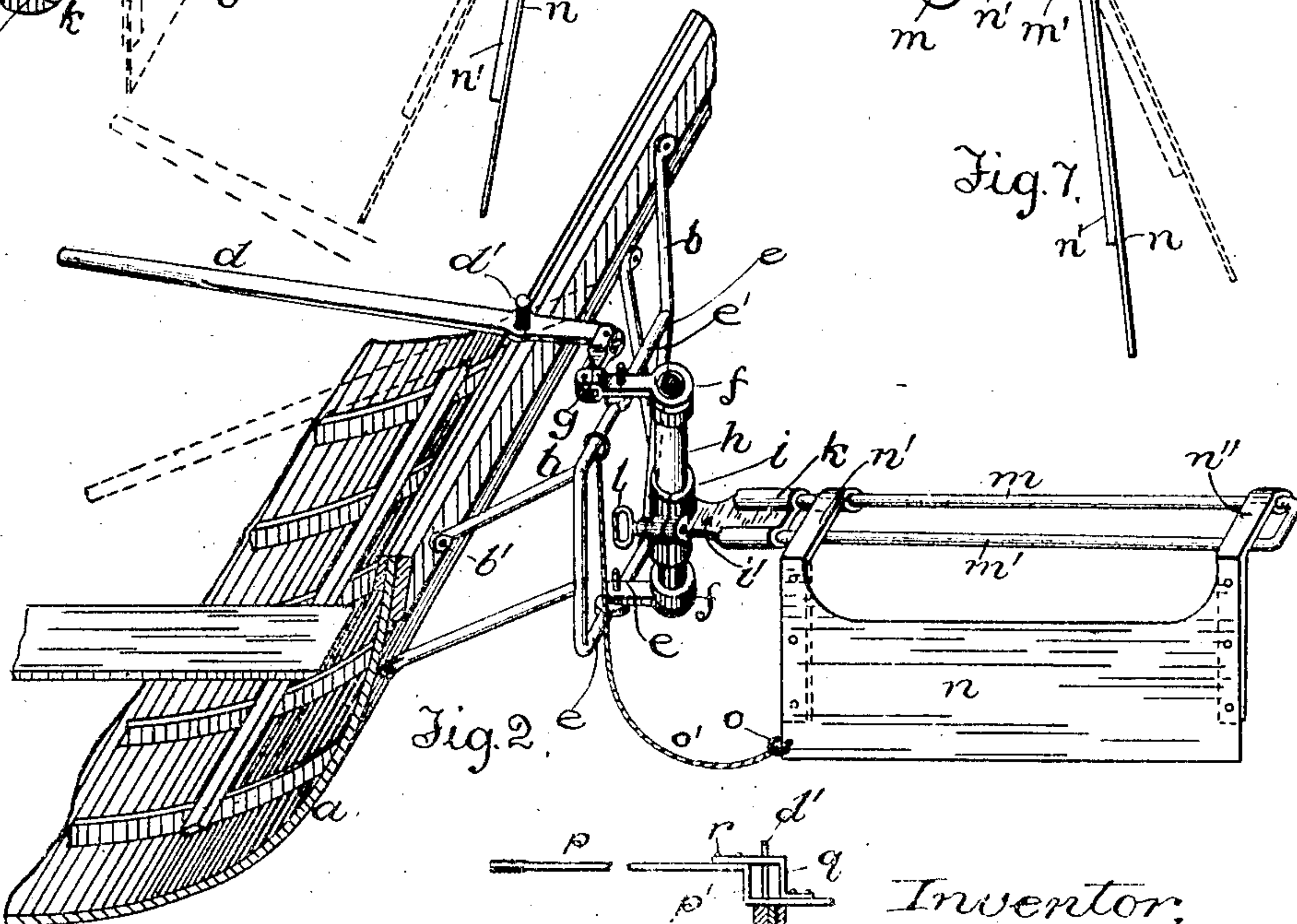
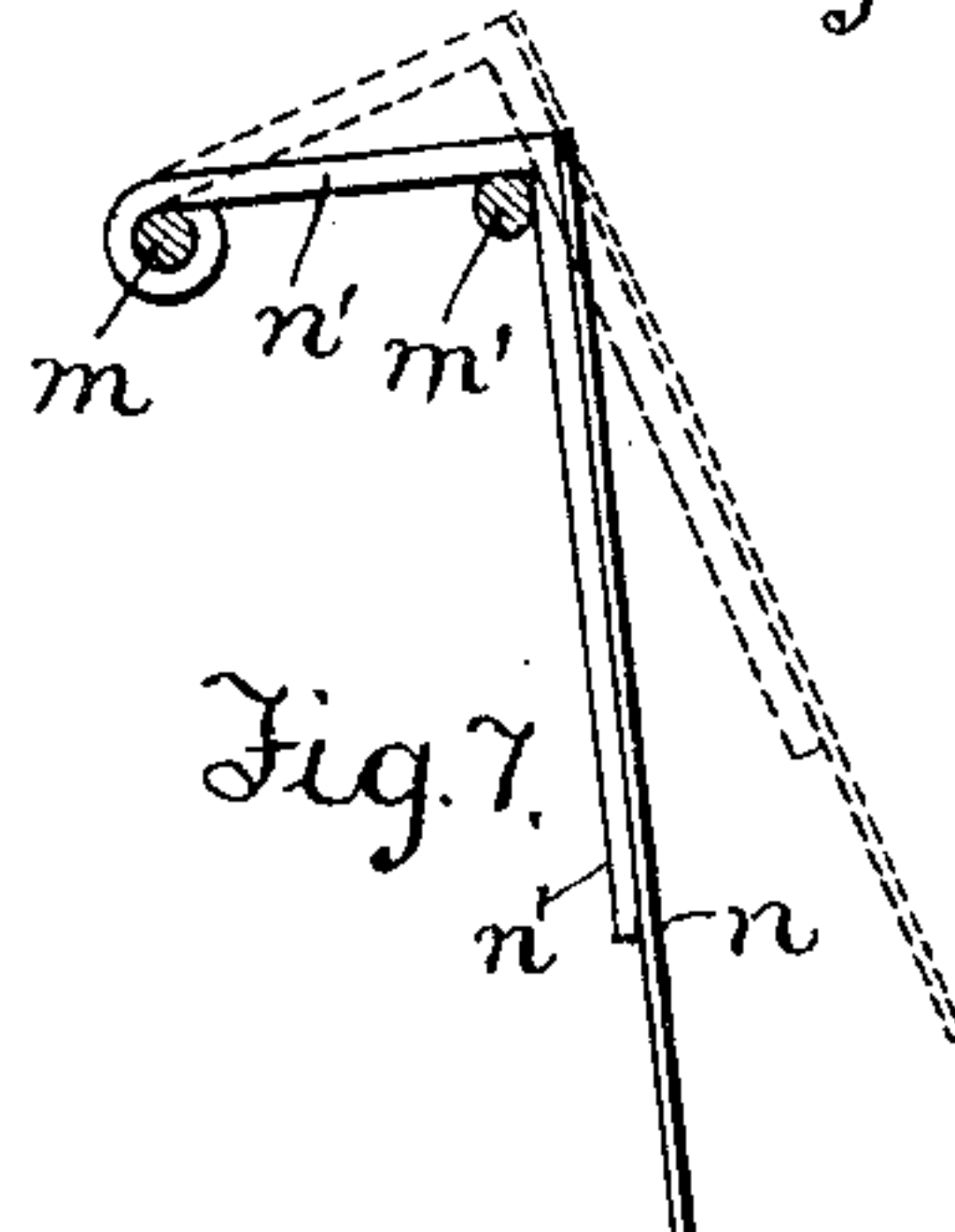
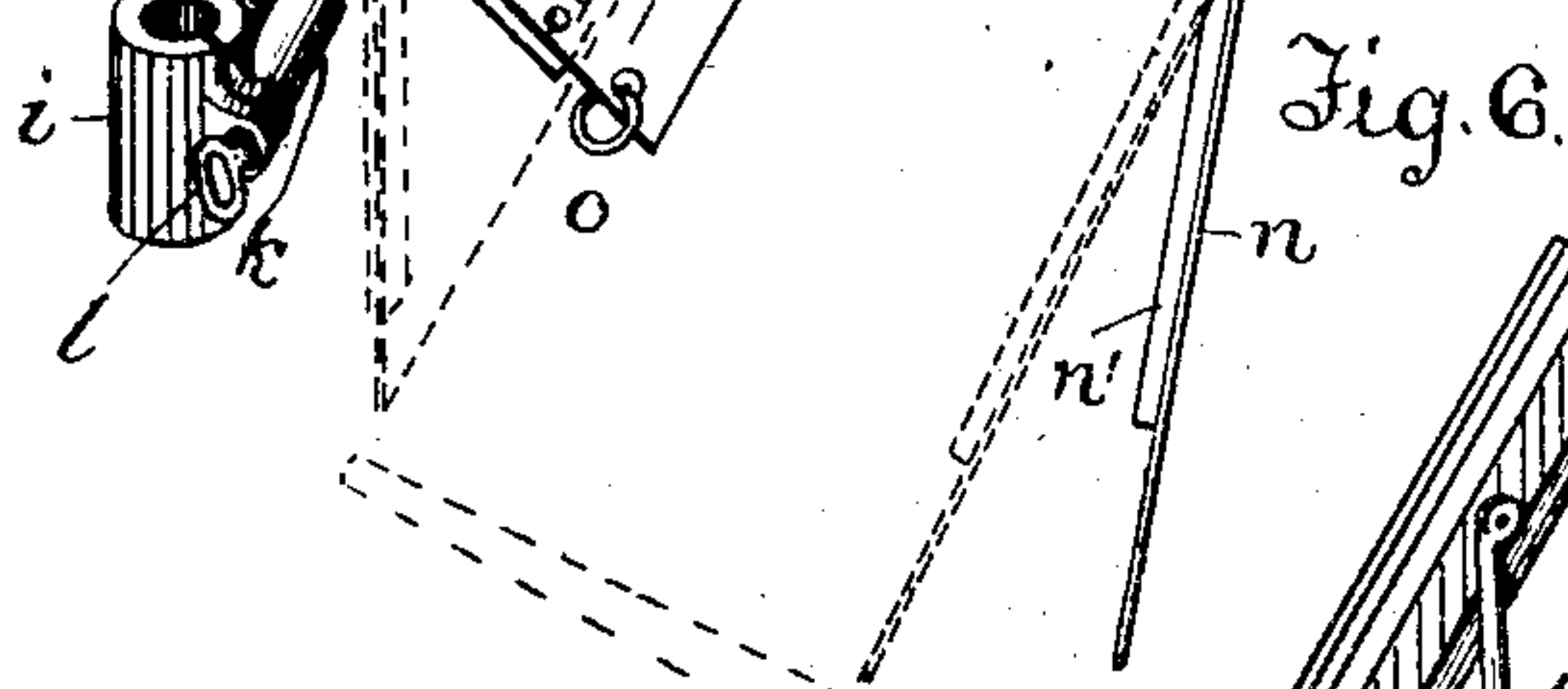
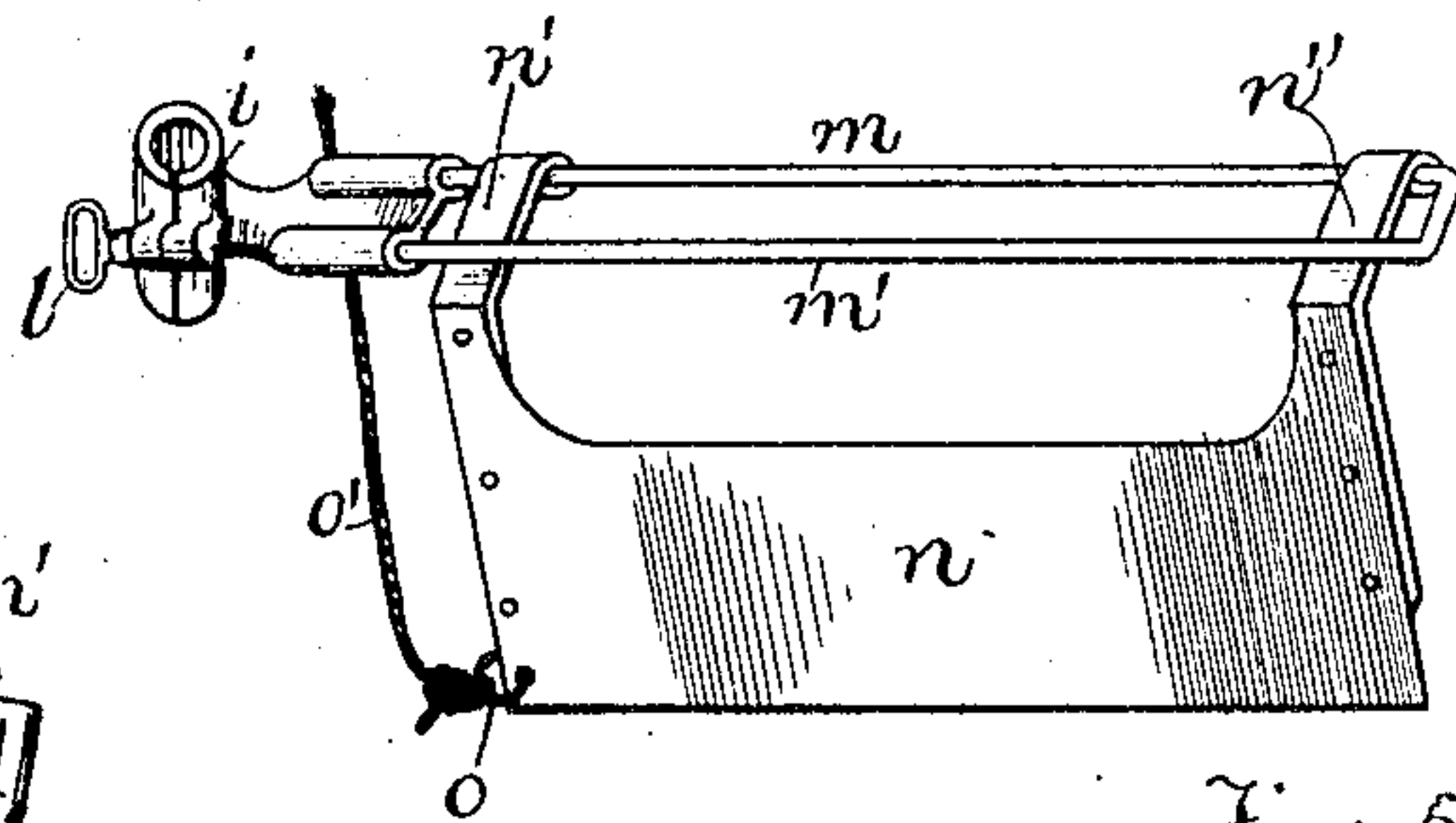
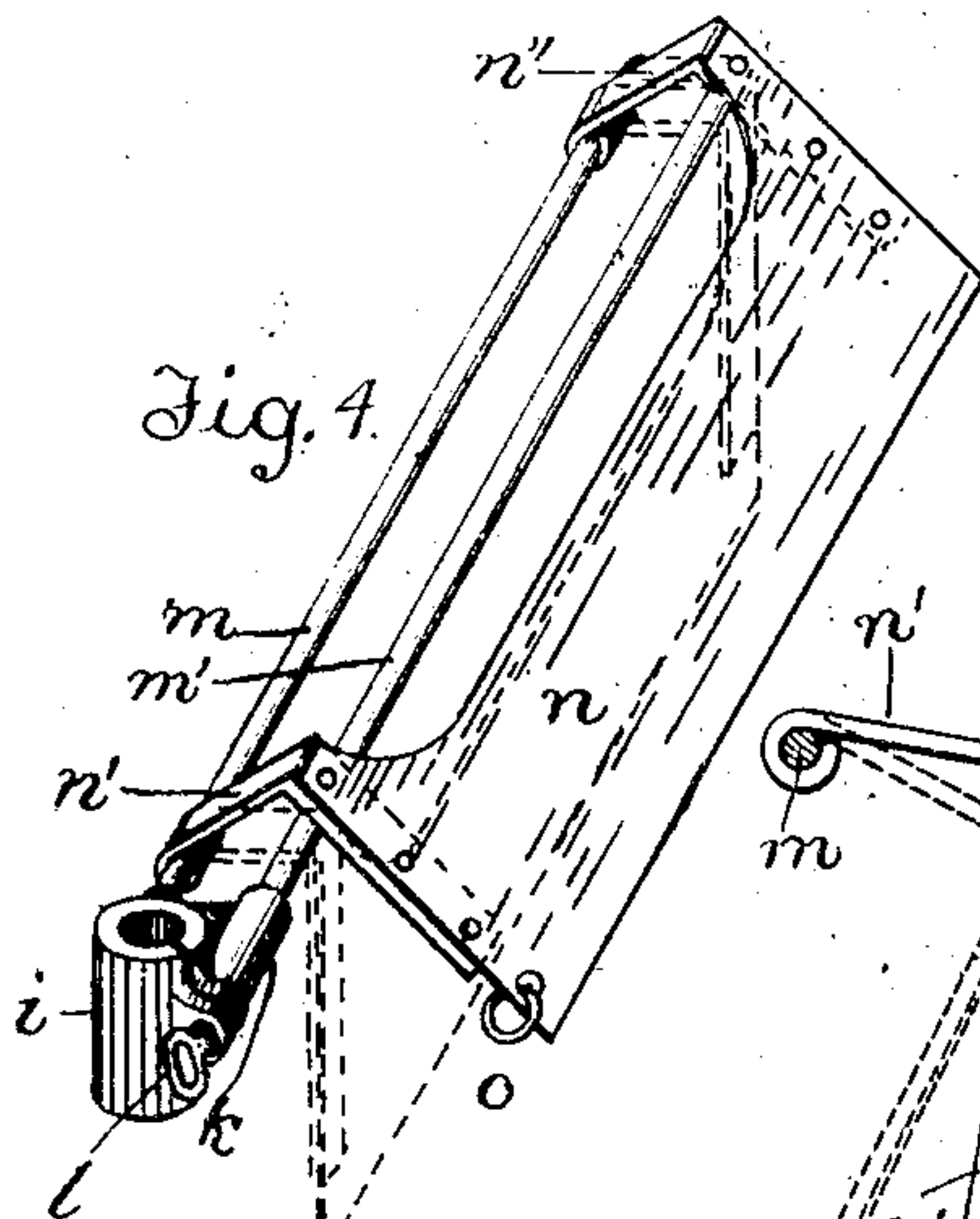
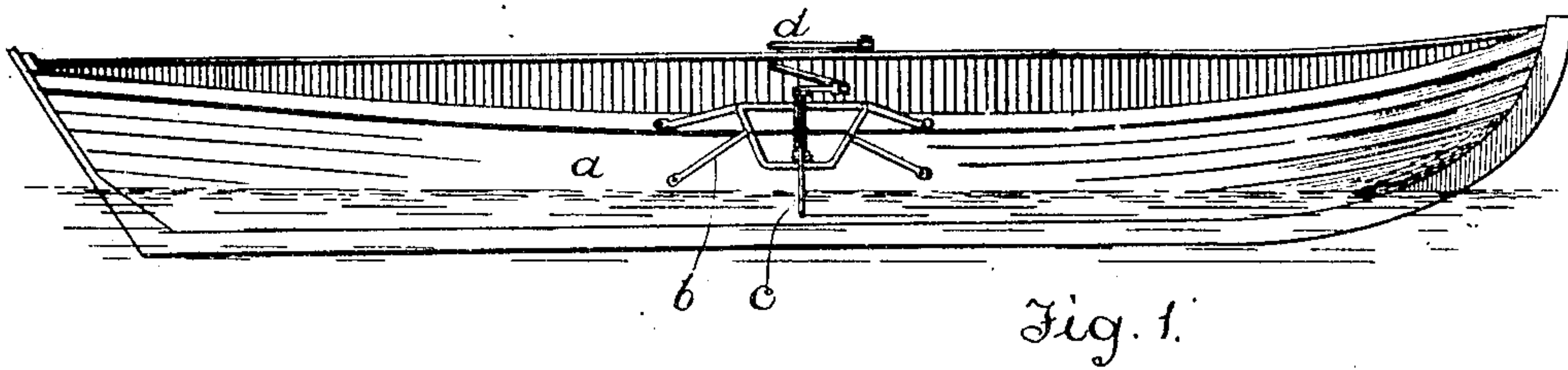
No. 878,469.

PATENTED FEB. 4, 1908.

W. RICKARDS.

FEATHERING PADDLE ATTACHMENT FOR SMALL BOATS.

APPLICATION FILED MAR. 24, 1906.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM RICKARDS, OF PORTLAND, OREGON.

FEATHERING PADDLE ATTACHMENT FOR SMALL BOATS.

No. 878,469.

Specification of Letters Patent.

Patented Feb. 4, 1908.

Application filed March 24, 1906. Serial No. 307,878.

To all whom it may concern:

Be it known that I, WILLIAM RICKARDS, a citizen of the United States, and a resident of Portland, in the county of Multnomah, State of Oregon, have invented a new and useful Improvement in Feathering Paddle Attachments for Small Boats, of which the following is a specification, reference being had to the accompanying drawings as constituting a part thereof.

This invention has for its object to provide a contrivance which is adapted to be readily attached to skiffs, row boats and other small vessels, for propelling the same by operating my attachment in a similar manner as one would operate the oars of a boat; and the paddle blade of my attachment is so contrived as to give an effective resistance on the forward stroke of my paddle, and to feather on the water, to minimize the resistance on the back stroke of the paddle.

An incidental great advantage and feature of my improvement, is that the person rowing is so seated as to look ahead, instead of pulling backwards, as with the old-style oars.

To this end my invention is of the construction, and is operated as shown in the drawings, in which

Figure 1 is a perspective elevation of a row boat with my attachment applied thereto, as in practice; Fig. 2 is an enlarged perspective detail showing a section of one side of a row boat having my invention applied thereto; Fig. 3 is a partial cross section illustrating a modified construction of the handle-part of my attachment; Fig. 4 is a detail in perspective of one of the blades of my attachment, and the support therefor provided on the side of the boat; Fig. 5 is a detail in its general character corresponding with that of Fig. 4, excepting that, in this instance, the blade of my attachment is arranged for rowing the boat backwards. Fig. 6 is a cross section corresponding to Fig. 5; and Fig. 7 is a cross section corresponding with Fig. 4.

The letters designate the parts described.

To the sides of a boat are affixed frames *b*, pivotally supporting paddles *e*, operated by handles *d* as shown in Fig. 1. The construction of the frames *b* is observable from Fig. 2. The same may be affixed in place by screw-bolts *b*; and it comprises members *e* provided with hinge-pins *e'* on which are removably hinged the arms *f* of a rod *h*. On the gunwale of the boat are provided pins *d''* on

which are pivoted the handle bars *d*, connected by a link *g* with the upper of the arms *f*. On the shaft *h* is movably mounted a slit-sleeve *i* arranged to be clamped on the rod *h* by a thumb-screw *l*. The sleeve *i* is made with an integral, projecting bracket *k*, supporting in horizontal position a frame comprising rod-members *m m'*. On the latter is hinged the blade *n* of the paddle, such blade being made with arms *n' n''*, whereby the blade is hinged to the member *m*. To the lower, inner corner of the blade *n* is affixed a ring *o* to which is attached a rope *o'*, the end of which is fastened to the frame *b* as shown in Fig. 2. The rope *o'* is provided as a convenience to reverse, or turn-over the blade *n* from its forward-stroke to its back-stroke position.

The paddle operating-mechanism is so arranged that the rower, sitting facing the bow, pulls on the handles *d* to cause the paddles to make their forward-stroke, and pushes such handles to feather the blades back to their initial position. In the forward stroke the blade *n* is arranged as shown in Figs. 4 and 7, for example, that is to say, the blade being supported in its perpendicular position by resting on the frame member *m'* as shown in Fig. 7. When so arranged, the blade *n*, during its forward stroke will be positioned as shown in solid lines in Fig. 7, and while making its return stroke, will be lifted to a feathering position, as indicated by the dotted outline in Fig. 7. Should it be desired to propel the boat backwards, the blades *n* would be turned over to the position shown thereof in Figs. 5 and 6, thus causing arms *n' n''* of blade *n* to bear up against the underside of the frame member *m'* while making the propelling stroke with the paddle, and causing the blade to assume the position thereof shown in the dotted outline in Fig. 6, while making the return stroke.

In Fig. 3 I have shown a modification in the construction of the bearing of the paddle-handle. In this instance the handle bar *p* is made with a bend *p'* and has affixed thereto an angle iron *q* by rivets *r*. The parts *p' q* are perforated so as to be placed on the pivot pin *d'* provided therefor on the gunwale of the boat. By the last described arrangement of the handle-bars, the same are raised to a level which may be found more convenient to the rower.

When the boat is not in use, my paddling-

attachment may be removed by lifting the same off the pivot-pins e' , and laid away in the boat house.

The bracket k is movable on the rod h so as to be able to adjust the position or dip of the blades in the water relatively to the boat when carrying a load.

I claim:

1. The combination with a boat, of a supporting frame affixed to the side thereof, a rod vertically pivoted in such frame, a bracket projecting horizontally from said rod, a dependent blade hinged to such bracket, means restraining the blade to a perpendicular position on the forward stroke of the paddle, and allowing the same to feather on the return stroke, a horizontal, pivoted handle-bar and means connecting the same with said pivoted rod, whereby the former is adapted to operate the paddle; the blade supporting-bracket being vertically movable on its supporting rod, so that the blade may be relatively adjusted to the depth of the boat in the water, and the parts being duplicated on both sides of the boat.

2. A paddle attachment for small boats, comprising a supporting frame adapted to be affixed to the side of a boat, a rod vertically pivoted in such frame, a bracket projecting horizontally from said rod, a dependent blade hinged to such bracket, means restraining the blade to a perpendicular position on the forward stroke of the paddle and allowing the same to feather on the return stroke; a handle-bar and a pivoted support therefor adapted to be affixed on the gunwale of the boat, and means connecting said handle-bar with said pivoted rod, whereby the former is adapted to operate the paddle, the blade-supporting bracket being adapted to be vertically movable on its supporting rod, so that the blade may be relatively adjusted to the depth of the boat in the water.

3. A paddle attachment for small boats, comprising a supporting frame, a rod made with arms f, f , whereby the same is pivoted in vertical position in said frame, a bracket horizontally supported on such rod and comprising members m, m' , a blade made

with right-angle arms $n' n''$, whereby such blade is hinged to the member m of the bracket, a handle-bar and a pivoted support therefor adapted to be affixed on the gunwale of the boat, and means connecting said handle-bar with said pivoted rod, whereby the former is adapted to operate the paddle.

4. A paddle attachment for small boats, comprising a supporting frame, a rod made with arms f, f , whereby the same is pivoted in vertical position in said frame, a bracket horizontally supported on such rod and comprising members m, m' , a blade made with right-angle arms n, n'' , whereby such blade is hinged to the member m of the bracket, a handle-bar and a pivoted support therefor adapted to be affixed on the gunwale of the boat, and means connecting said handle-bar with said pivoted rod, whereby the former is adapted to operate the paddle, said blade-supporting bracket being made with a slit-sleeve so as to be vertically adjustable on said rod, and having means for clamping said slit-sleeve in the position to which adjusted.

5. A paddle attachment for small boats, comprising a supporting frame, a rod made with arms f, f , whereby the same is pivoted in vertical position in said frame, a bracket horizontally supported on such rod and comprising members m, m' , a blade made with right-angle arms n, n'' , whereby such blade is hinged to the member m of the bracket, a handle-bar and a pivoted support therefor adapted to be affixed on the gunwale of the boat, and means connecting said handle-bar with said pivoted rod, whereby the former is adapted to operate the paddle, said blade-supporting bracket being made with a slit-sleeve so as to be vertically adjustable on said rod, and having means for clamping said slit-sleeve in the position to which adjusted, and a rope affixed to one of the lower corners of the blade for reversing the same, as described.

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Witnesses:

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