No. 871,326. PATENTED NOV. 19, 1907.

M. DAMZIN.

BOAT PROPELLING MECHANISM.

APPLICATION FILED JAN. 22, 1907.

Fig. 1.

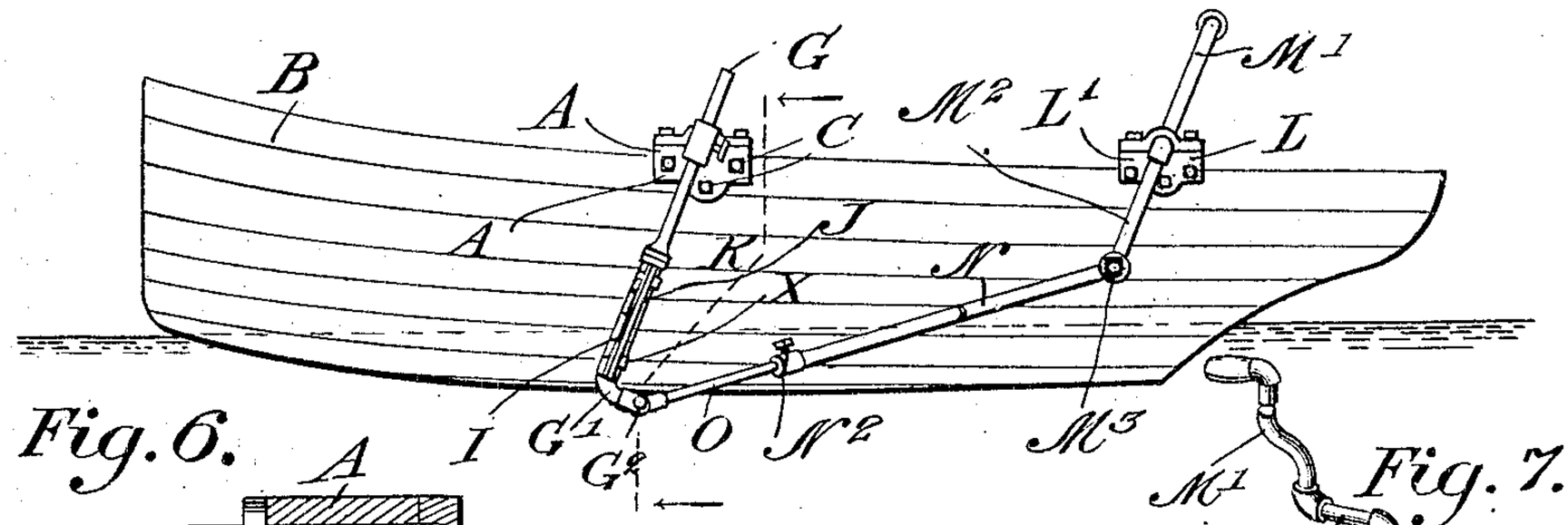

Fig. 6.

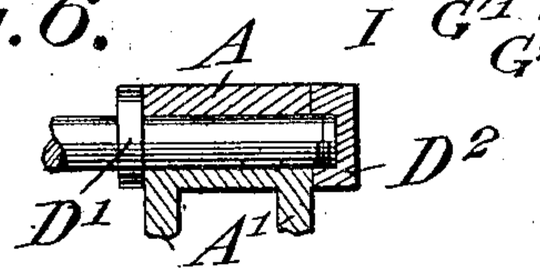

Fig. 2.

Fig. 7.

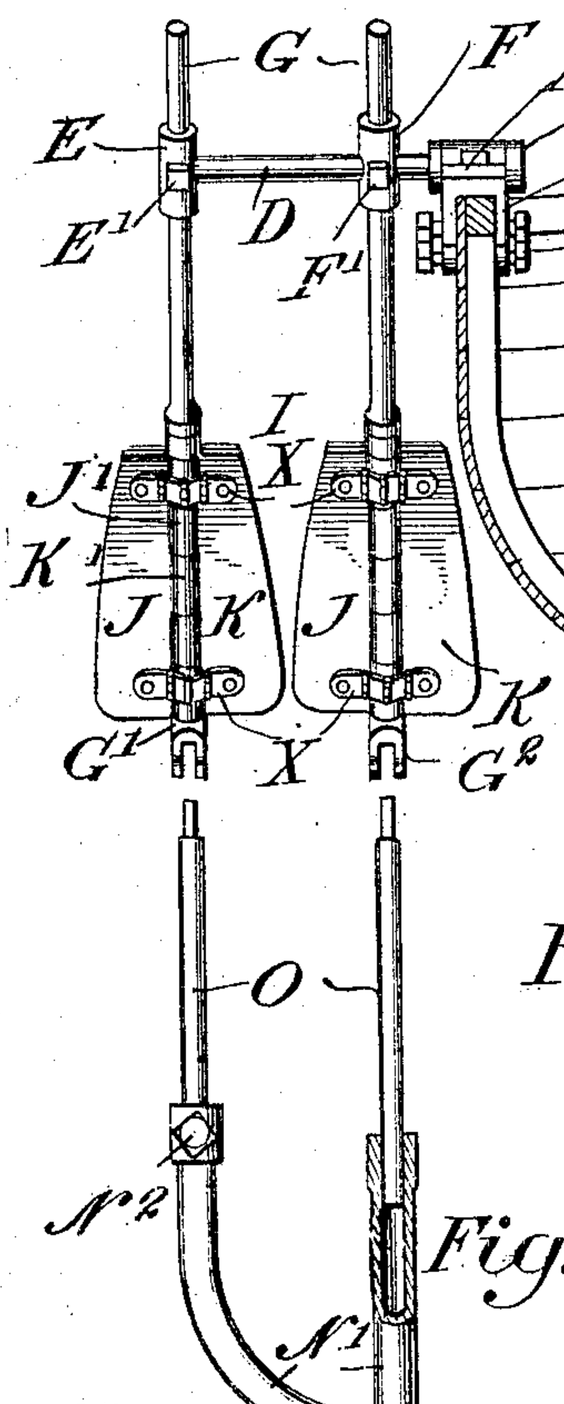

Fig. 3

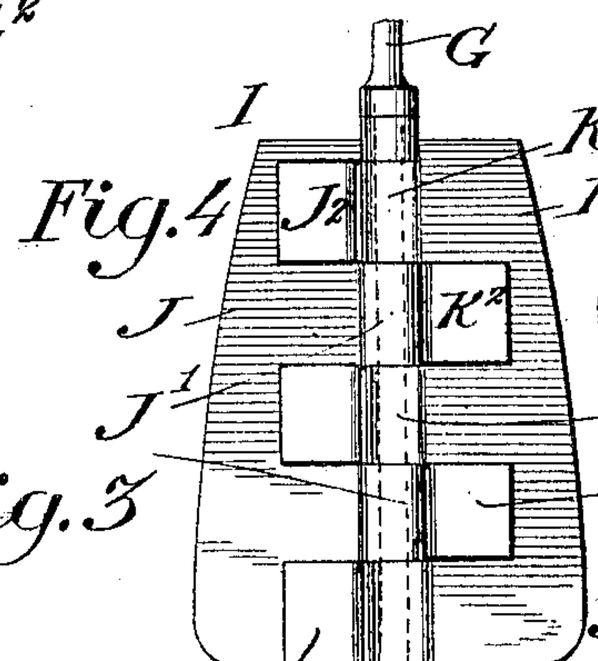

Fig. 4

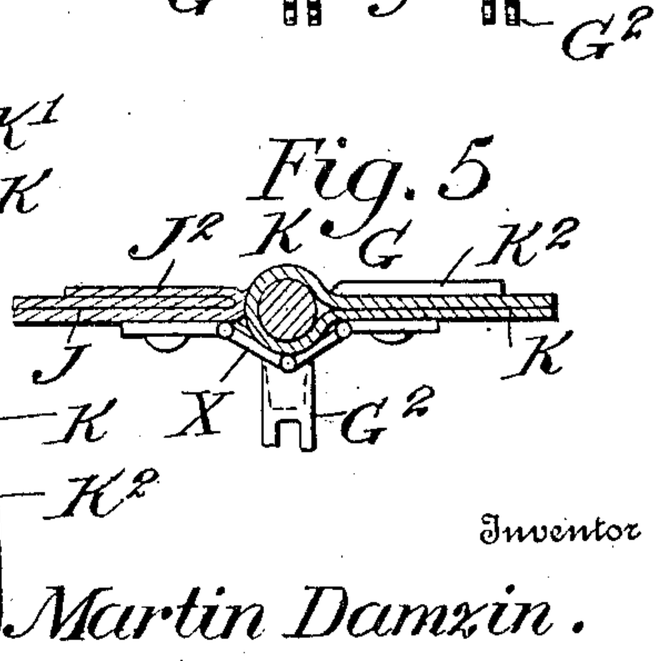

Fig. 5

Witnesses

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BOAT-PROPELLING MECHANISM.

No. 871,326. Specification of Letters Patent. Patented Nov. 19, 1907.

Application filed January 22, 1907. Serial No. 353,474.

To all whom it may concern:

Be it known that I, MARTIN DAMZIN, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented a new and useful Improvement in a Boat-Propelling Mechanism, of which the following is a specification.

This invention relates to boat propellers and more particularly to crank operated paddles for propelling small boats, the object being to provide means so that the crank and paddles can be easily and quickly attached to the gunwales of an ordinary row boat.

Another object of my invention is to provide a very novel paddle so constructed that it will feather on the return stroke.

With these and other objects in view, the invention consists in the novel features of construction, combination and arrangement of parts hereinafter fully described and pointed out in the claims.

In the drawing forming a part of this specification:—Figure 1 is a side elevational view of my improved boat propeller showing it attached to a boat. Fig. 2 is a section taken on line 2—2 of Fig. 1. Fig. 3 is a detail plan view of the operating arm partly broken away. Fig. 4 is a rear view of one of the paddles. Fig. 5 is a transverse section through one of the paddles. Fig. 6 is a detail sectional view of the journal block.

In the drawing A indicates the journal blocks provided with downwardly projecting sides A′ adapted to fit over the gunwales of a boat B, which may be of any suitable construction desired. The sides A′ are provided with threaded bores in which are mounted thumb-screws C adapted to engage the gunwale and securely clamp the blocks therein. Mounted on the journal blocks are the ends of the horizontal shafts D which are provided with a flange D′ and a threaded end over which are secured a cap D^2 which securely holds the shafts in the blocks. Sleeves E and F are formed on the shaft D in which are adjustably mounted the paddle-stem G by set-screws E′, F′. The lower portions of the stem G are reduced and the ends threaded, on which the blades I are adapted to be mounted, the description of one being sufficient for all, as they are formed exactly alike and consist of plates J and K having a series of square openings pushed out midway their width the plates being bent back upon themselves forming sleeves J′, K′ through which the sleeves are adapted to pass. The tongues J^2 K^2 formed by the openings are bent back upon the plates and securely holds the plates together. It is of course understood that the sleeves on one plate are formed so as to register with the notches formed by the openings on the other. The plates J and K are connected together adjacent their upper and lower ends by hinged plates X, which allow the plates to fold up when forced forward and limits the outwardly movement of the same when being pulled backwardly, thereby allowing the blades to feather as they work back and forth through the water. Caps G′ are secured on the threaded end of the stems and securely locks the paddle blades in place and are provided with apertured ears G^2 for the purpose hereinafter described.

Mounted on the gunwales of the boat, to the rear of the blocks, are journal blocks L which are provided with downwardly projecting sides carrying thumb-screws L′ which securely lock the blocks in place. Mounted in each of the blocks L are shafts M provided with crank-arms carrying handles M′ at one end and a crank arm M^2 at the other end, provided with a pin M^3 on which is mounted the apertured ends of an arm N which is provided with a forked end N′ having sockets formed therein, in which are secured rods O, by set-screws N^2. The outer ends of the rods O are reduced and apertured and are pivotally mounted between the ears of the caps, on pins.

From the foregoing description it will be readily seen that I have provided very novel propelling means which can be easily and quickly attached to an ordinary boat and one which will drive the boat at a moderate speed with little exertion.

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

1. In a boat propeller, the combination with journal-blocks provided with clamping means, of shafts mounted in said blocks provided with spaced sleeves, paddles mounted in said sleeves and operating means connected to the lower ends of said paddles, for the purpose described.

2. In a boat propeller, the combination with journal-blocks provided with clamping means, of shafts mounted in said blocks provided with sleeves carrying set-screws, paddles mounted in said sleeves crank arms

mounted on said gunwales and rods connected to the lower ends of said paddles connected to crank-arms, for the purpose described.

3. The combination with a boat, of shafts mounted on said boat, stems adjustably mounted on said shafts, blades pivotally mounted on said stems, caps secured on the lower ends of the stems and operating means adjustably connected to said caps for the purpose described.

4. The combination with a boat, of shafts mounted on the gunwales of said boat, paddles adjustably mounted on said shafts, cranks mounted on said gunwales and arms carried by said cranks, carrying adjustable rods connected to the lower ends of said paddles, for the purpose described.

5. The combination with a boat, of journal blocks secured to the gunwales of the boat, shafts mounted in said blocks provided with sleeves, stems adjustably mounted in said sleeves, feathering blades hinged on said stems and operating means connected to the lower end of the stems, for the purpose described.

6. The combination with a boat, of journal-blocks clamped to the gunwales of the boat, shafts mounted in the forward journal block provided with sleeves, shafts mounted in the rear block provided with cranks, paddles adjustably mounted in the sleeve of the shafts and arms mounted on the cranks connected to the lower ends of said paddles, for the purpose described.

7. The combination with a boat, of journal blocks clamped to the gunwales, of the boat, shafts mounted in said blocks, stems adjustably mounted on said shafts, feathering blades mounted on said stems, cranks carrying arms mounted on said boat, and rods adjustably mounted in said arms connected to the lower ends of said stem, for the purpose described.

8. In a boat propeller, the combination with a shaft carrying stems, of plates mounted on said stems connected together by hinged plates, caps mounted on the lower ends of said stems and operating means connected to said caps for the purpose described.

9. In a boat propeller, the combination with shafts carrying stems, of plates mounted on said stems, connected together by hinged plates, caps secured on the ends of the stems provided with apertured ears, rods mounted in said ears, cranks and arms carried by said cranks connected to said rods, for the purpose described.

10. The combination with a boat, of shafts mounted on said boat, stems carried by said shafts provided with feathering blades, caps secured on the ends of said stems, crank arms mounted on said boat, arms carried by said crank-arms, and rods adjustably mounted in said arms connected to said caps.

11. The combination with a boat, of shafts mounted on said boat provided with spaced sleeves, paddles secured in said sleeves provided with bifurcated caps at their lower ends, cranks mounted on said boat, forked arms carried by said cranks, and rods adjustably mounted in said arms and pivotally mounted in the bifurcated caps of the paddles, for the purpose described.

MARTIN DAMZIN.

Witnesses:
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