

(No Model.)

A. DALMER.
BOW FACING OAR.

No. 603,398.

Patented May 3, 1898.

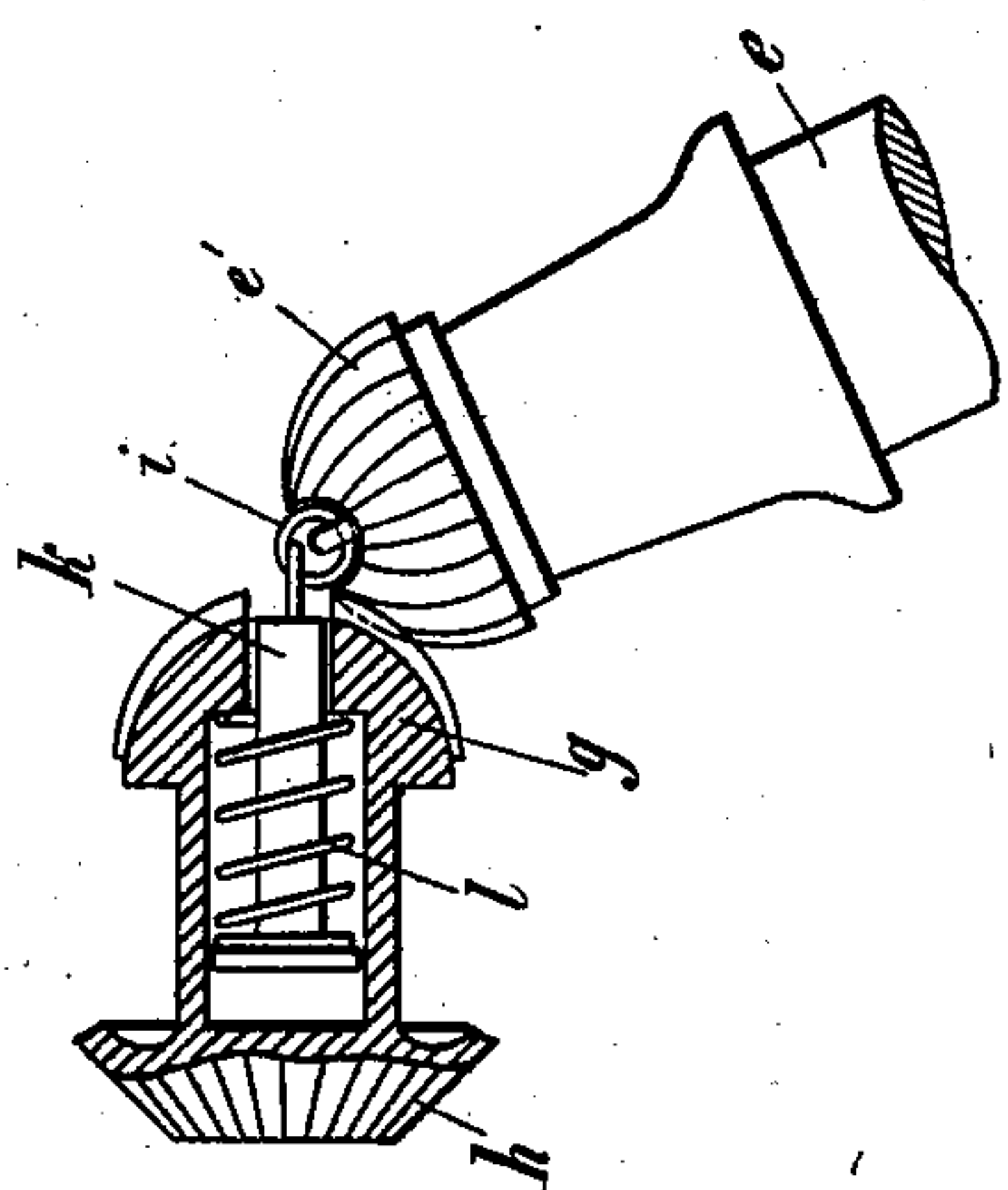


Fig. 2.

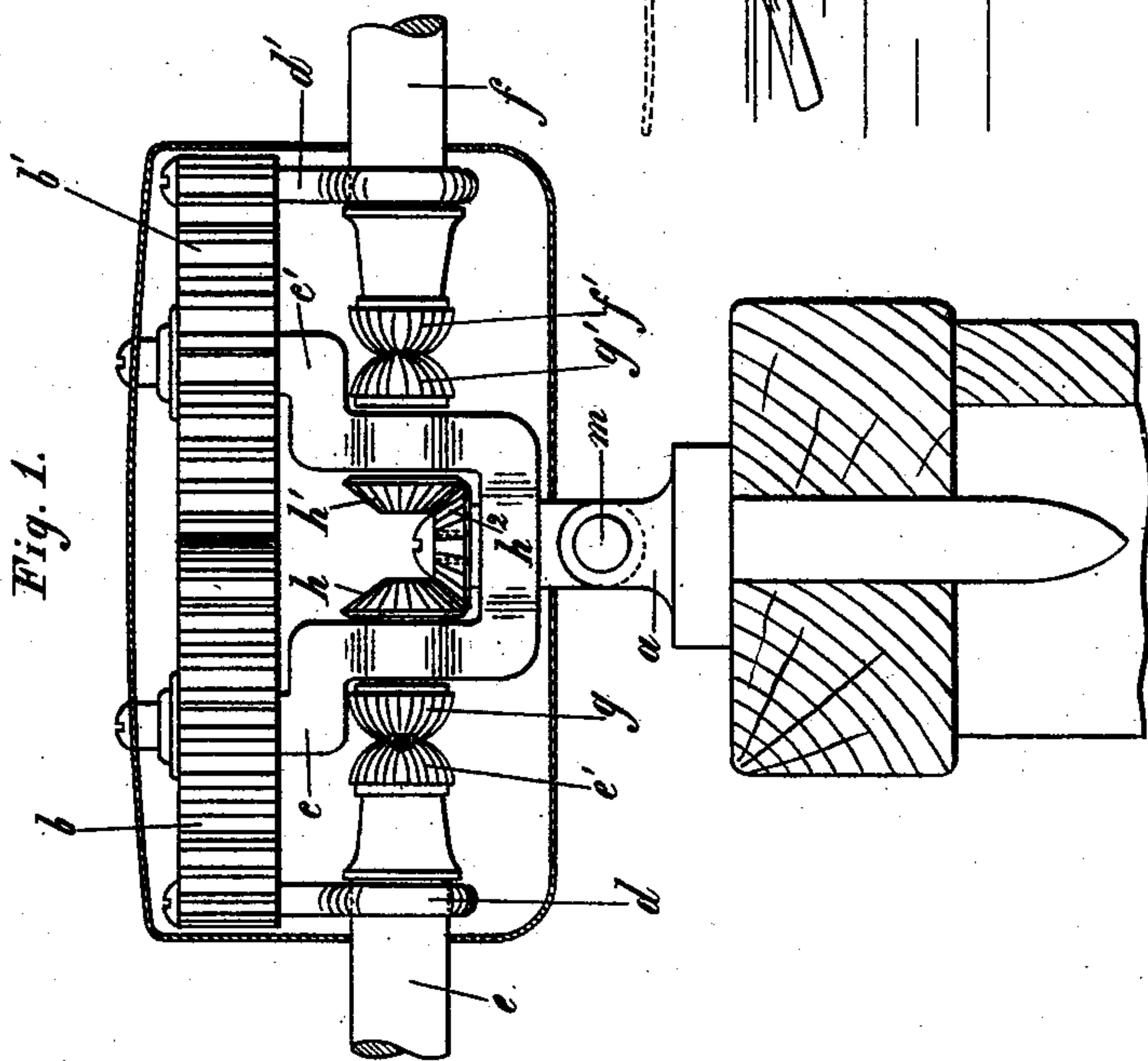
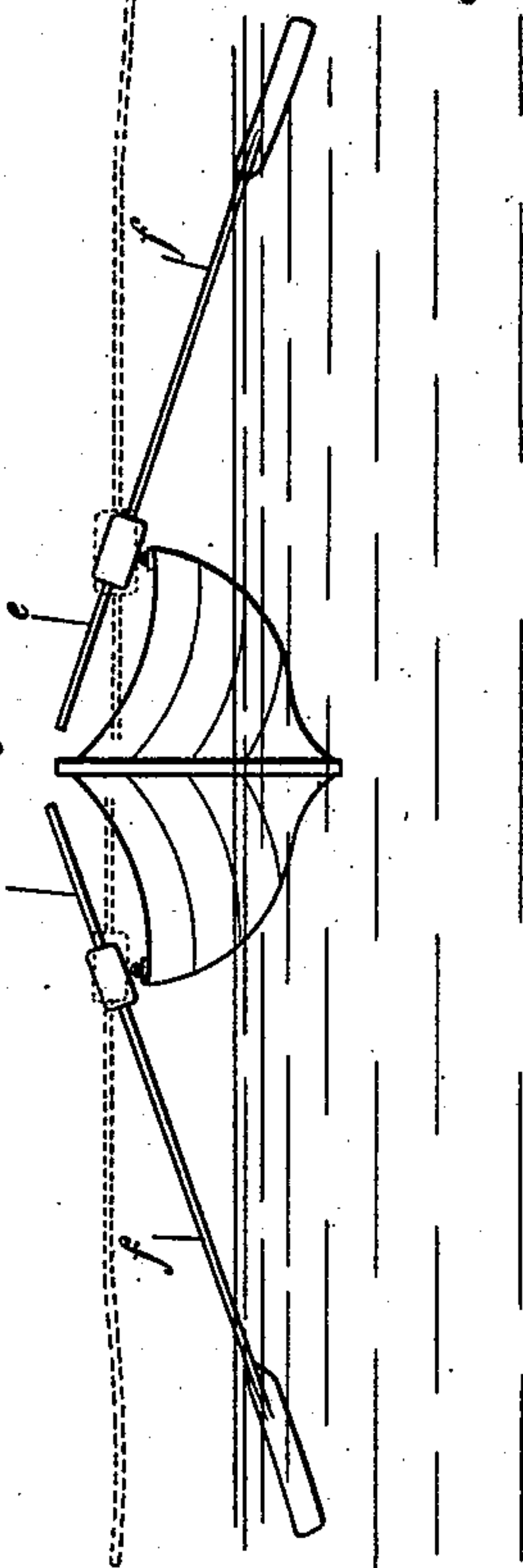


Fig. 1.

Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

ARTHUR DALMER, OF KIEL, GERMANY.

BOW-FACING OAR.

SPECIFICATION forming part of Letters Patent No. 603,398, dated May 3, 1898.

Application filed April 15, 1897. Serial No. 632,266. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR DALMER, of Kiel, in the Kingdom of Prussia and German Empire, have invented Improvements in Rowlocks and Oars or Sculls for Boats and the Like, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a new form of rowlocks and oars for boats, and is designed to enable the oarsman to face in the direction in which the boat is propelled, whereby accidents may be avoided and the services of a steersman rendered unnecessary in boats containing several persons, and at the same time to permit the oars to be operated in the usual manner and turned or feathered in the act of rowing.

In the drawings, Figure 1 is a front elevation of my improved rowlocks. Fig. 2 is a detail view of a portion of the same with part in section; and Fig. 3 is an illustrative view of a boat equipped with my improved oarlocks, illustrating the operation of the same.

The whole arrangement such as shown in Fig. 1 is fixed removably by a bolt to the gunwale of a boat, Fig. 3, and consists of two toothed segments b and b' , which gear together and are mounted on the fixed arms c and c' of a forked support, being connected at their outer ends by the connecting-rods d and d' with the handles e and the stems f of the oars, so as to turn freely thereon. When motion is imparted to the said handles e , the stems f are made to follow such motion through the gearing of the toothed wheels b and b' . To allow, moreover, the stem to turn while rowing—that is to say, to allow the blade to feather or lie flat on the water or parallel thereto, as shown in dotted lines in Fig. 3—the inner ends of the handles e and of the stems f are provided with spherical and ribbed segments or ends e' and f' , which are connected by a suspended piece with the similar and likewise-ribbed spherical segments g and g' , arranged opposite the former segments. The spherical segments g and g' are furnished with an extension passing through the sides of the forked support c and c' aforesaid and carry at their inner ends the vertical

bevel-gears h and h' . These two vertical gears gear in common with a third horizontal intermediate bevel-gear h^2 , whereby the turning motion of the oar-handle is communicated to the oar-blade for the purpose of laying the latter either flat or edgewise in the water. The construction of the spherical segments e' and g and g' and f , which are connected one with the other at each continuous parallel or angular position, is clearly shown in Fig. 2, wherein it will be seen that the segment e' carries in a semispherical cavity an eyelet or ring i , while the segment g , with its prolongation, carries a spring-hook k , engaging with a certain amount of play in the former ring or eyelet, this hook being drawn inwardly by the said spring and only slightly pulled out when the blade is made to beat the water.

From this improved arrangement of oars and rowlocks it will follow that when the oarsman sits with his face turned toward the front or stem of the boat and moves the handles e the stems and blades of the oars will move correspondingly and propel the boat forward. To enable the oars to be dipped in the water and lifted therefrom in the usual manner, the support c and c' is pivoted, as at m , to the pin a on an axis parallel to the gunwale.

A special advantage of this apparatus is that besides enabling the oarsman to face the bow of the boat it permits the oars to be turned freely or feathered in the act of rowing. The power-transmitting connections are shown inclosed in a protecting-casing o , whereby they are protected from the water and may be kept clean.

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

1. In oars and rowlocks for boats, the combination with the handle and oar-stem independent of one another, of gearing supported on bearings independent of said handle and stem, connections between said gearing and the handle and stem respectively, whereby the movements imparted to the handle will be transmitted to the gearing and thence to the oar-stem, and a working feathering connection, independent of said gearing, between the handle and stem, whereby the movements

imparted to the handle upon its axis will be transmitted to the oar-stem and the blade thereof may be turned or feathered.

2. In rowlocks and oars for boats, the combination with the handle and oar-stem independent of one another, of a frame, gears b , b' carried by said frame on bearings independent of the handle and stem, connections between the handle and stem and said gears b , b' respectively, with freedom for the handle and stem to turn therein, semispherical gearings on the ends of the handle and stem, and a working feathering connection between said semispherical gearings.

3. In rowlocks and oars for boats, the combination with the handle and oar-stem independent of one another, of a frame, gears b , b' carried by said frame on bearings independent of the handle and stem, connections between the handle and stem and said gears b , b' respectively, with freedom for the handles and stem to turn therein, the hemispherical gears e' , f' , on the ends of the handle and

stem respectively, the hemispherical gears g , g' meshing therewith, and a working feathering connection between the gears g , g' .

4. In rowlocks and oars for boats, the combination with the handle and oar-stem independent of one another, a frame, gears b , b' carried by said frame on bearings independent of the handle and stem, connections between the handle and stem and said gears b , b' respectively, with freedom for the handle and stem to turn therein, the hemispherical gears e' , f' , on the ends of the handle and stem respectively, the hemispherical gears g , g' meshing therewith and jointed thereto, and a working feathering connection between the gears g , g' .

In witness whereof I have hereunto set my hand in presence of two witnesses.

ARTHIUR DALMER.

Witnesses:

F. MULLER,
F. ROJKE.