

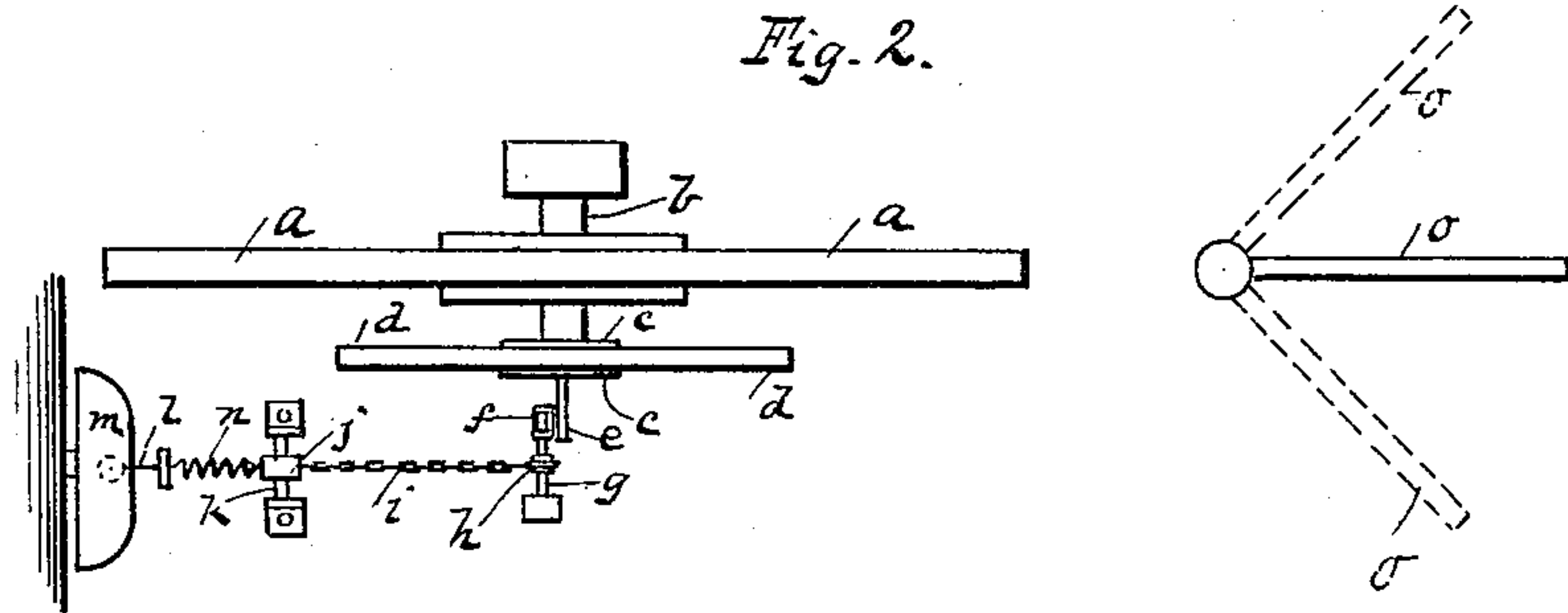
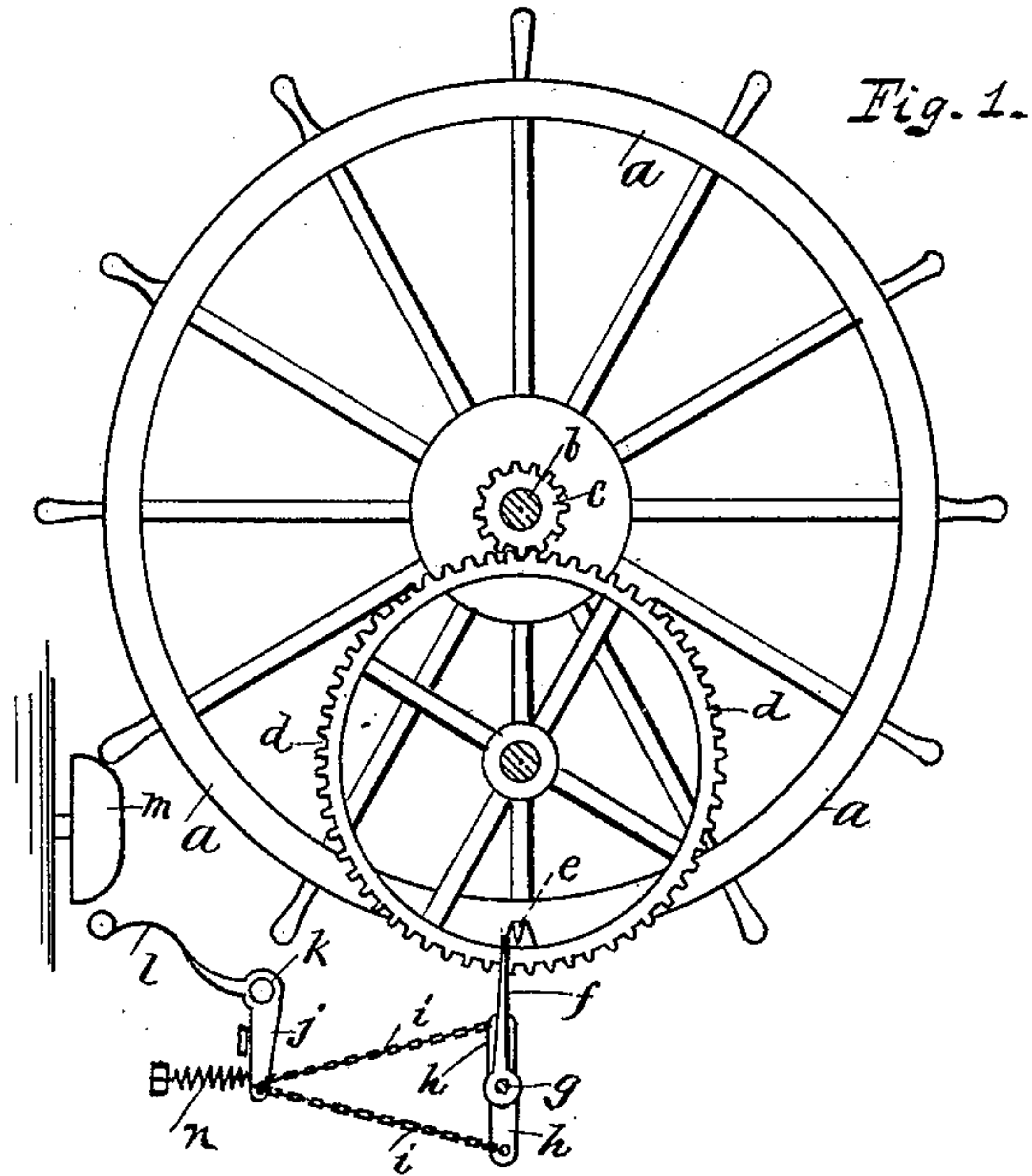
(No Model.)

T. FLAHERTY.

DEVICE FOR INDICATING THE POSITION OF BOAT RUDDERS.

No. 390,764.

Patented Oct. 9, 1888.



Witnesses:
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UNITED STATES PATENT OFFICE.

THOMAS FLAHERTY, OF PITTSBURG, PENNSYLVANIA.

DEVICE FOR INDICATING THE POSITION OF BOAT-RUDDERS.

SPECIFICATION forming part of Letters Patent No. 390,764, dated October 9, 1888.

Application filed January 14, 1888. Serial No. 260,775. (No model.)

To all whom it may concern:

Be it known that I, THOMAS FLAHERTY, a citizen of the United States, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented a certain new and useful Device for Indicating the Position of Boat-Rudders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to a device for ascertaining the position occupied by boat-rudders, the object being to provide a means whereby an alarm or signal may be given when the rudders of a boat are on the "dead center." This I accomplish by means of a combination of gear-wheels and levers so arranged as to sound an alarm when the rudders occupy a certain specified position, as will be fully set forth hereinafter.

In the accompanying drawings, Figure 1 is a side elevation of a pilot-wheel such as are now in common use, having attached thereto my device for indicating the position occupied by the rudders. Fig. 2 is a plan view of the same.

To put my invention into practice with a pilot-wheel, *a*, I attach to the shaft *b*, bearing the same, a small pinion, *c*, meshing with a large toothed wheel, *d*, mounted in proper bearings occupying a position immediately below the shaft *b*, supporting the pilot-wheel *a*. Projecting horizontally from the rim of this large toothed wheel *d* is a small trip, *e*, which engages with an upwardly-extending crank, *f*, mounted on a small shaft, *g*, fixed in a horizontal position. Mounted on this same shaft, *g*, is a double crank, *h*, to which are secured two short chains, *i*, leading to and attached to

one end of a crank, *j*, mounted on a suitable shaft, *k*. To this crank *j* is secured a flexible rod or bell-taper, *l*, one end of which is directly below an alarm or signal bell, *m*. A small spiral spring, *n*, serves to recover the several parts when disturbed by the trip *e* and keep the lever *f* in a vertical position. By revolving the pilot-wheel *a* it can be ascertained when the rudders *o* of the boat are on the dead-center or in a direct line with the length of the boat. By reference to Fig. 1 on the drawings it will be seen that by revolving the wheel *a* to the left the trip *e* engages with the vertical lever *f*. The crank *h* on the same shaft, *g*, operates the bell crank *j*, which, by the action of the spring *n*, sounds an alarm, which indicates that the rudders *o* are on the dead-center.

The advantages of this device are obvious. When about to start a boat, the pilot may with a few revolutions of the wheel ascertain when the rudders *o* are on the dead-center, thus enabling him to set the same to guide the boat in any direction desired.

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

In combination with the pilot-wheel of a boat and the shaft of said wheel, a pinion on said shaft, a gear-wheel meshing with said pinion and having its center directly below said shaft, a trip, *e*, on the rim of said pilot-wheel, a crank, *f*, extending upward directly below the centers of said wheels, and a signal connected to said crank in order that it may be operated by the action of said trip and said crank, substantially as shown and set forth.

THOMAS FLAHERTY.

Witnesses:

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