

J. Perkins.

Steering Apparatus.

No. 70255.

Patented. Oct. 29 1867.

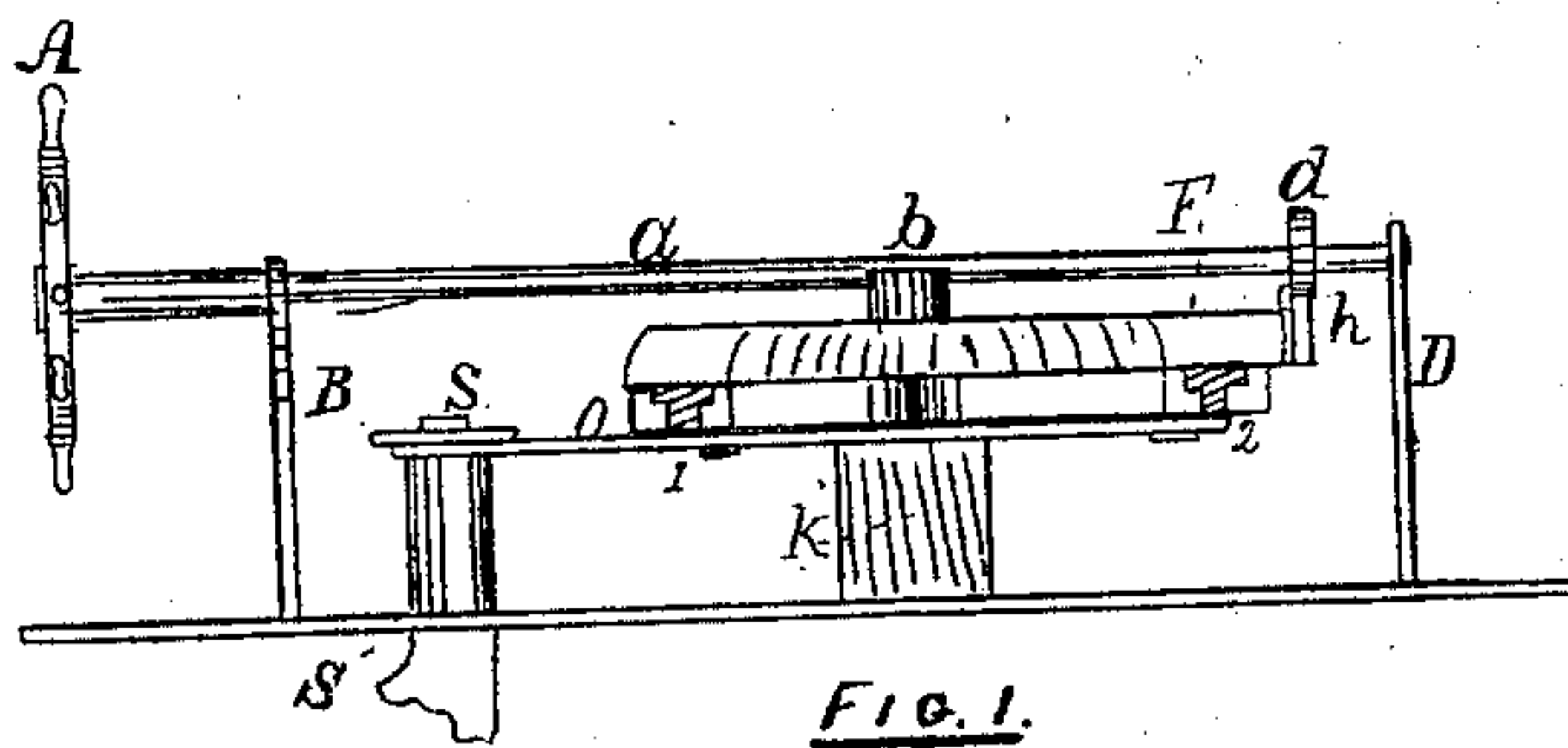


FIG. 1.

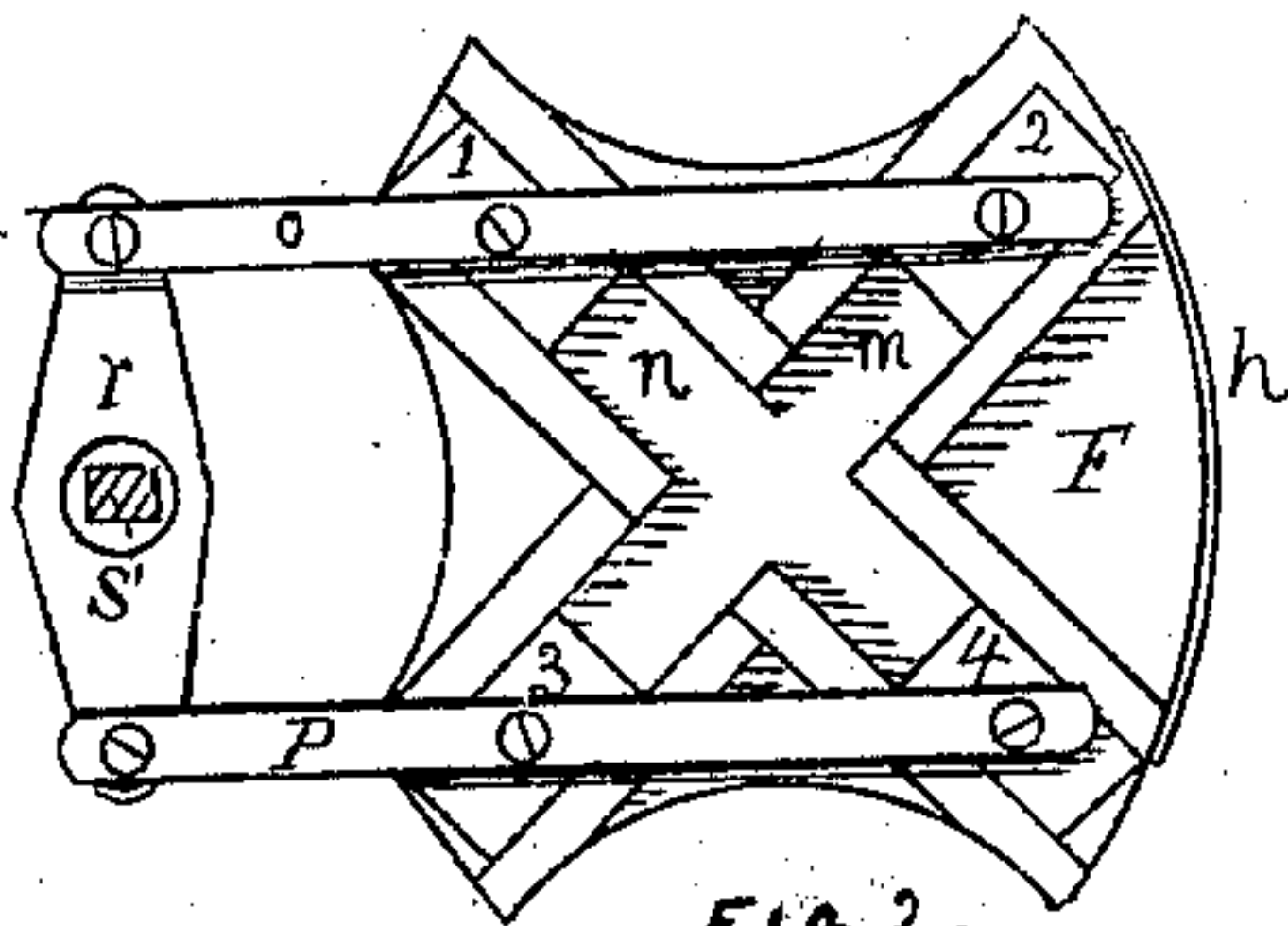


FIG. 2.

WITNESS

William H. Clifford
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INVENTOR

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JOSEPH PERKINS, OF SACO, MAINE.

Letters Patent No. 70,255, dated October 29, 1867.

IMPROVED STEERING APPARATUS.

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, JOSEPH PERKINS, of Saco, in the county of York, and State of Maine, have invented a new and useful improved Steering Apparatus; and I hereby declare the following to be a full, clear, and exact description thereof, which will enable others to make and use my invention, reference being had to the accompanying drawings forming part of this specification, in which—

Figure 1 shows a side elevation of my invention.

Figure 2 a bottom plan of the rotary table and its connecting-arms, by which the rudder-head is turned.

A shows the ship's wheel, B a standard supporting the shaft *a*, which shaft is also supported by the standard D. The shaft *a* also rests at its centre in a hollow on the post *b*. *d* is a gear, rigidly attached to the shaft *a*, and revolved by the wheel A. This gear *d* matches into a toothed rack, *h*, attached on the rear end of the rotary table F; this rack curved in form, so that the revolution of the gear *d* gives the table its motion on its standard *k*. The under side of the table F is seen in fig. 2, where it is represented as having two tracks or channels, crossing each other at right angles (see *m n*.) In these tracks or grooves move the shouldered slides 1 2 3 4. In fig. 1 the lips or shoulders, overlapped by shoulders on the sides of the tracks, are distinctly illustrated. The slides 1 2 are attached to the arm *o*, and 3 4 to the arm *p*. The arms *o p* are themselves attached to the rudder-head by being connected with the arm *r* by pivots, allowing of the necessary motion. *s* is the rudder-post or head. When the wheel A is turned, those two of the slides 1 2 3 4 which are attached to the same arm, *o* or *p*, move in contrary directions, that is, as one moves outward toward the edge of the table F, the other moves inward toward the centre. Furthermore, as the wheel A is turned, the table F is impelled by two forces, one a pushing and the other a drawing power, which secures strength, evenness, and steadiness to the motion. When the table F is moved the slides 1 2 move in opposite directions; the same is the case with 3 4. These slides, being connected with the arms *o p*, and these arms with the arm *r*, as the ship's wheel is revolved the rudder is turned as desired. A single revolution of A will put the rudder hard up or down. The table F is to be made of cast metal, cast with its grooves or channels, and the slides, also of metal, may then be fitted accurately in their places. This arrangement gives an easy control of the rudder. Instead of the rack and gear, a drum, placed at the rear end of the table on its upper face, may be substituted, to be used in case of accident by the breaking of the gears. In this case ropes might be employed to connect the rudder-head, or its arm *r*, with the table.

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

In combination with the wheel A, shaft *a*, and gear *d*, the table F, having the rack *h*, grooves *m n*, and slides 1 2 3 4, attached to the arms *o p*, all substantially as and for the purposes set forth.

Witnesses:

WILLIAM HENRY CLIFFORD
WM. FRANK SEAVEY.

JOSEPH PERKINS.