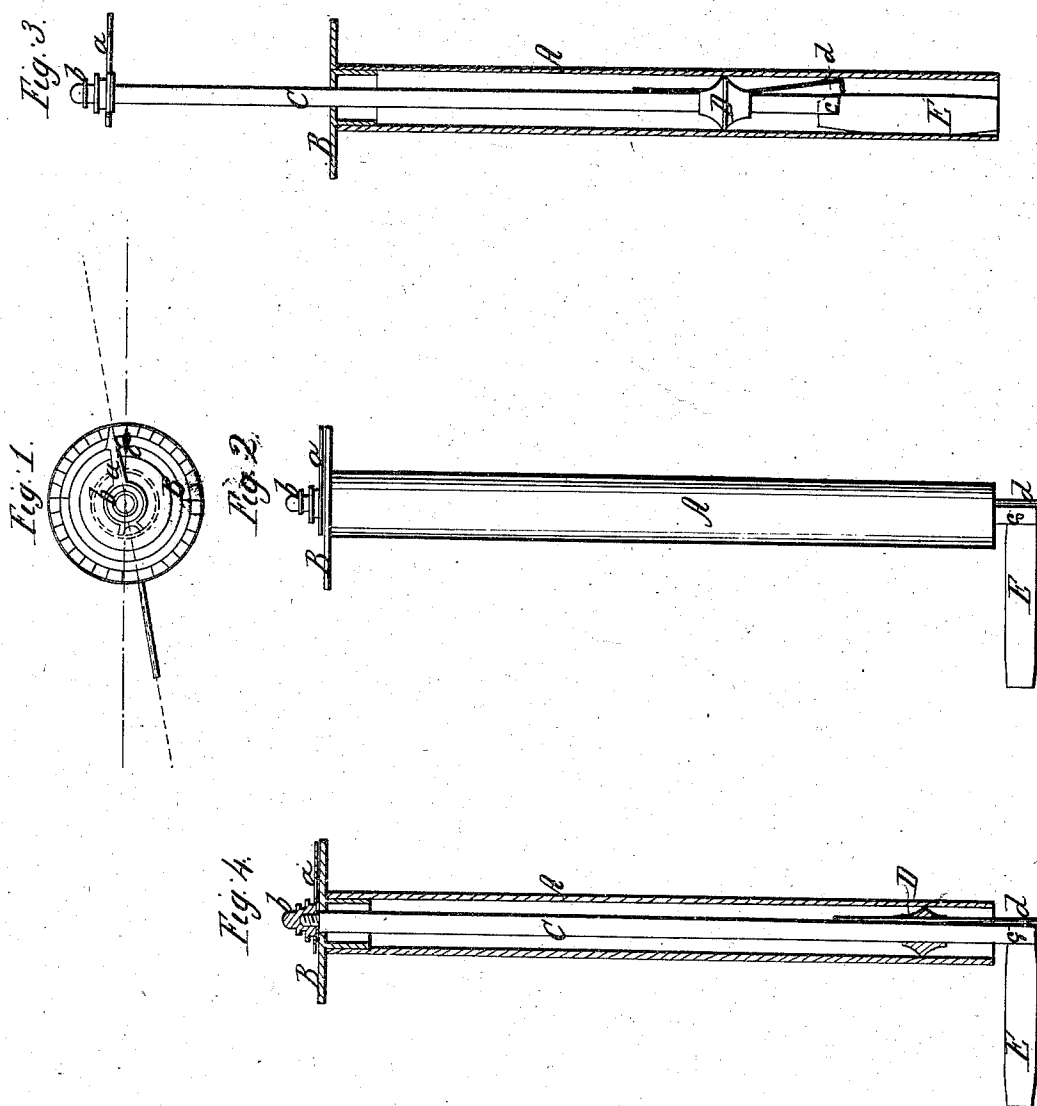


A. A. Wilder

Speed Measure.

N^o 7,912.

Patented Jan. 21, 1851.



UNITED STATES PATENT OFFICE.

A. A. WILDER, OF DETROIT, MICHIGAN.

LEEWAY-INDICATOR.

Specification of Letters Patent No. 7,912, dated January 21, 1851.

To all whom it may concern:

Be it known that I, A. A. WILDER, of Detroit, in the county of Wayne and State of Michigan, have invented a new and useful
5 Improvement in an Apparatus for Indicating the Leeway Made by Ships and other Vessels; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the
10 accompanying drawings, forming part of this specification, in which—

Figure 1, is a plan. Fig. 2 is a side elevation. Fig. 3, is a vertical section showing the vane drawn up when not required to be
15 used. Fig. 4 is a vertical section showing the vane lowered for operation.

Similar letters of reference indicate corresponding parts in each of the several figures.

20 My invention relates to an improvement in the manner of attaching and combining the vane which passes through the water, with the rod which communicates with, or carries the pointer showing its position,
25 above the deck or, inside the vessel, for the purpose of allowing the vane to be drawn up into the vessel when, passing over shoals or, from other causes, not requiring its use. The said improvement consists in attaching
30 the vane at one end, by a pin, to the bottom of the rod, so that it is capable of taking a position in line with the rod or at an angle to it, a spring of convenient form, hereafter described, being attached to one side of the
35 rod opposite to the direction the vane takes when in use, for the purposes, both of keeping the vane in position in line with the keel when in use, and holding it secure within or above the keel when not in use.

40 To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation.

A, is a tube of metal which is intended to pass through the keel of the vessel upward
45 to the binnacle, its lower end being flush with the keel, it is surmounted by a graduated circular dial plate B, which should stand close to the compass.

C, is a metal rod provided with a piston
50 D, fitting easily in the tube A, so as to turn in any direction; its upper end passes through the index plate B, and is provided

with a hand or pointer *a*, secured by a nut *b*; its lower end has a notch cut in it in which a vane E, of sheet metal is inserted 55 and secured by a pin or pivot *c*, upon which it hangs loosely, the vane must be precisely in line with the pointer *a*, but stands out on the other side of the rod; a flat steel spring *d*, is secured to the piston or to the rod C, on 60 the side opposite to which the vane stands, this spring is bent at its lower end at a right angle so as to fit closely under the end of the rod C; when the rod is lowered so that its end is a short distance below the 65 bottom of the tube, this spring fits close to the rod, against the back and under the bottom edge of the vane, holding the vane in a position nearly at right angles to the rod see Figs. 2, and 3, the rod hanging from the 70 index plate, but when the rod is drawn up to the position shown in Fig. 3, the top edge of the vane will be drawn against the lower edge of the tube, and will overcome the 75 power of the spring and throw it back, allowing the vane to be drawn back into the tube, where it is held by the spring, which causes its edge and one side of the piston, to bear on with sufficient pressure upon the interior surface of the tube to prevent its 80 descent by accident.

The operation of the indicator is the same, when in use, as that of other lee-way indicators, but the mode of attaching, and controlling the action of the vane, enables it to be 85 drawn up readily, to prevent injury by accident in shoal water.

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

Hanging the vane E, loose at the bottom 90 of the rod C, which carries or communicates with the pointer, and holding it either in position for operation, or secure within the vessel above the bottom of the keel by means of a spring *d*, or its equivalent operating 95 substantially as herein shown and for the purposes set forth.

In testimony whereof I have hereunto signed my name before two witnesses.

A. A. WILDER.

Witnesses:

O. D. MUNN,
S. H. WALES.