G. SWEANOR.

FOG-SIGNAL.

No. 180,674. Patented Aug. 1, 1876.

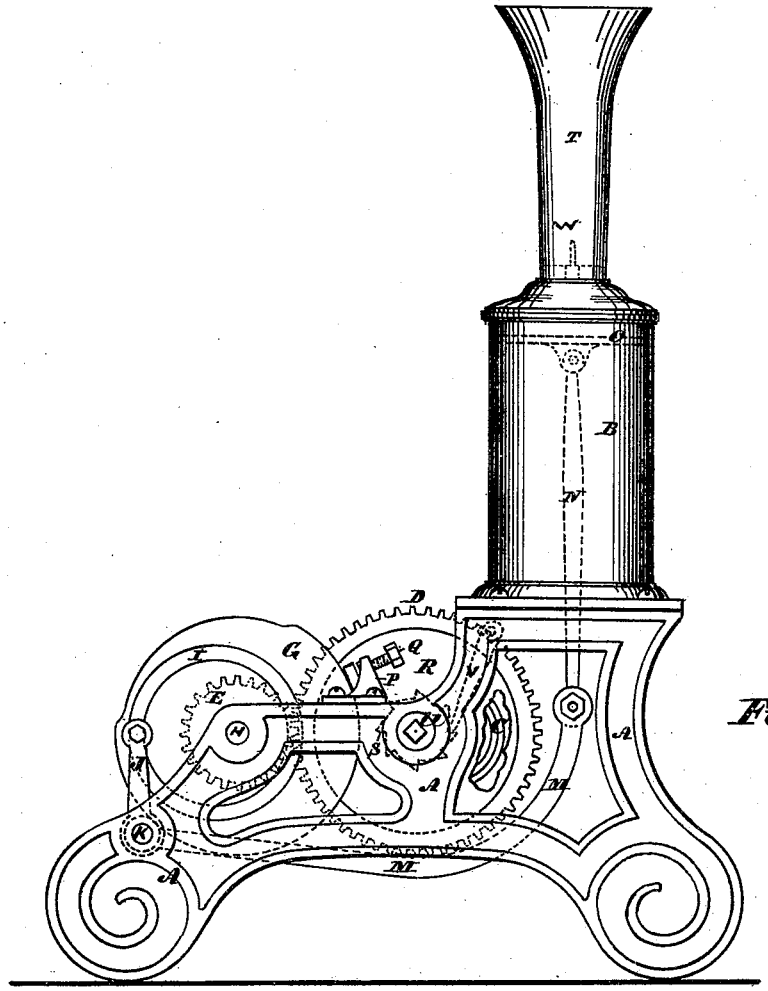

Fig. 1.

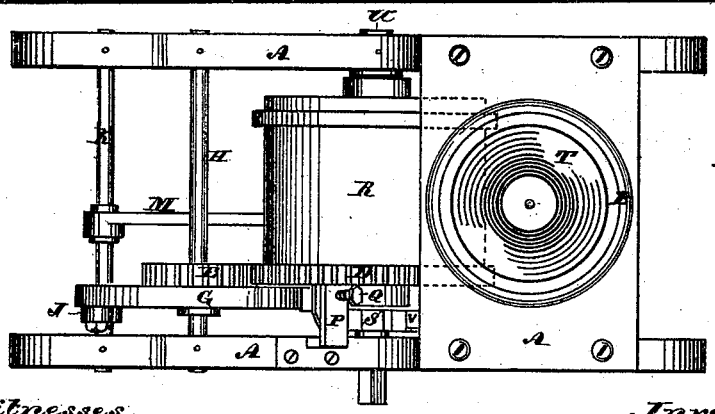

Fig. 2.

Witnesses.
John Grist,
John. S. Grist.

Inventor
George Sweanor
By Henry Grist
Attorney.

UNITED STATES PATENT OFFICE.

GEORGE SWEANOR, OF SHERBROOKE, QUEBEC, ASSIGNOR OF TWO THIRDS HIS RIGHT TO HORACE ROSS SEWELL, OF THE PROVINCE OF QUEBEC, CANADA.

IMPROVEMENT IN FOG-SIGNALS.

Specification forming part of Letters Patent No. 180,674, dated August 1, 1876; application filed May 15, 1876.

To all whom it may concern:

Be it known that I, GEORGE SWEANOR, of Sherbrooke, in the county of Sherbrooke, in the Province of Quebec, in the Dominion of Canada, have invented certain new and useful Improvements on Fog-Alarms; and I do hereby declare that the following is a full, clear, and exact description of the same.

The object of this invention is to sound intermittently an alarm by means of winding mechanism, operating a piston in an air-chamber to which a trumpet or whistle is attached; and it consists of an air-cylinder to which a trumpet or whistle is attached, operated by a winding gear and mechanism, giving a fast and a slow motion thereto, for uttering intermittently an alarm-sound automatically; also, in the combination, with train-wheels and a winding-drum, giving the motive power, of a wheel having an irregular eccentrical periphery, for frictional contact with an adjustable spring-brake and an eccentrical cam-groove, laterally, for operating an arm, rock-shaft, and lever connecting with the piston-rod, whereby a fast and a slow motion is imparted to the piston in the air-cylinder, for producing an intermittent sounding-alarm by trumpet or whistle connected to the air-cylinder.

Figure 1 is a side elevation of my fog-alarm. Fig. 2 is a plan of the same.

A is the frame of the machine, having a platform on which the air-cylinder D is mounted, and in which the driving mechanism has its bearings. R is the driving-drum, which is operated either by an internal coiled spring, C, or by a rope and weights from its periphery, as may be desirable. D is a cog-wheel secured to the end of drum R, meshing with a pinion, E, on the shaft H. S is a ratchet-wheel, keyed on the shaft U, passing through the drum R, engaging with a pawl, V, attached to the frame A, to prevent rotation of the shaft during the expansion of the coiled spring. G is a friction-wheel keyed on the shaft H of the pinion E, and said wheel has a periphery of eccentric curves, and in its side an eccentric groove, I, receiving a friction-roller having a wrist-pin connection with the end of the arm J, keyed on the rock-shaft K, journaled in the main frame A. Centrally is keyed to the rock-shaft K a lever, M, suitably bent under the drum R, and to the opposite end of the lever M is hinged the piston-rod N, having pivotal connection with the piston O, operating in the air-cylinder B, to the head of which is fixed a horn, T, provided with a reed, W, for trumpeting an alarm; or, instead of such horn, a whistle or other device may be employed for producing sound by a blast from the air-cylinder passing through the same. P is a brake-arm fixed to the frame A, having a spring-brake adjustable by a set-screw, Q, to the periphery of the wheel G, for partially arresting its motion by its eccentrical projections, increasing the frictional contact therewith, to give a slow motion to the operating gear when the piston is descending.

After the eccentrical projections have passed the brake, the periphery of the wheel being more concentrical, the friction becomes lessened, producing a fast motion to operate the piston when ascending, which fast motion compresses the air in the cylinder, and by means thereof a sound is produced by the air rushing through the trumpet or whistle.

If desired, two horns or whistles may be attached to the air-cylinder—one to give a shrill sound when the vessel is on the port tack, the other to utter a deep note when on the starboard tack, or vice versa, thus giving notice of the direction of sailing.

I claim as my invention—

1. In fog-alarms, an air-cylinder, B, having a piston, O, and piston-rod N, operated by winding mechanism, giving a fast and a slow motion to the piston, for intermittently sounding a trumpet or whistle connected to the cylinder, as set forth.

2. The combination, with a winding-drum and wheels, of the friction-wheel G, having an irregular eccentrical periphery, and laterally a cam-groove, I, the arm J, rock-shaft K, lever M, piston-rod N, and piston O, operating in an air-chamber, B, for sounding a trumpet or whistle attached thereto automatically and at intervals, the whole operating as set forth.

GEORGE SWEANOR.

Witnesses:

D. THOMAS,

E. R. CHILLAS.