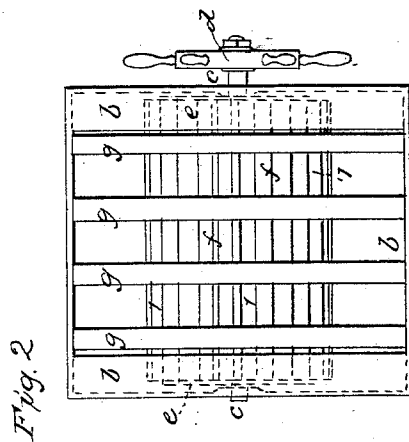
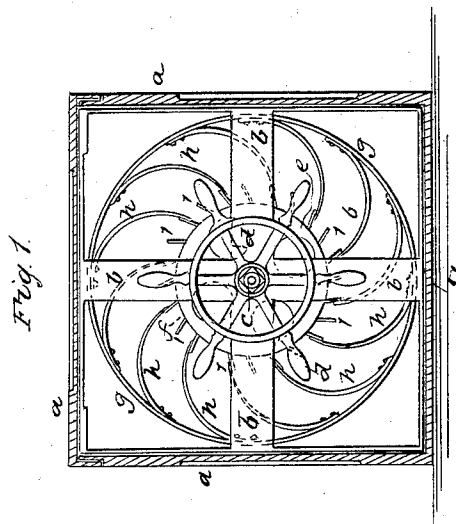


Marine Alarm.

Patented May 25, 1858.



witnesses
 Lemuel W. Serrell
 Thomas. J. Heagold

Inventor
Leon "Lewenberg"

UNITED STATES PATENT OFFICE.

L. LEWENBERG, OF NEW YORK, N. Y.

MARINE ALARM AND FOG-SIGNAL.

Specification of Letters Patent No. 20,354, dated May 25, 1858.

To all whom it may concern:

Be it known that I, LEON LEWENBERG, of the city, county, and State of New York, have invented, made, and applied to use a new and useful Apparatus which I denominate a "Marine Alarm or Fog-Signal;" and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing, making part of this specification, wherein—

Figure 1, is a front, and Fig. 2, a side elevation of my improved apparatus for giving alarms and signals.

Similar marks of reference refer to the same parts.

The nature of my said invention consists in the arrangement of metallic springs within a series of rings in such a manner that said springs shall be operated on by a hollow metallic drum with plates or ribs along its surface, parallel or nearly so to the axis of the said drum, thereby the vibration of the metallic springs and drum when the said drum is rotated by hand or otherwise, produces a sharp and powerful sound, and one that will extend a great distance and arrest attention, thereby acting as an alarm and signal for use at night and in fogs to prevent collision of vessels, or the same may be used in lighthouses or similar structures as a signal for marine purposes or for rail roads, &c., and the cost of the same being very little compared with the amount of noise produced, and the compactness of the apparatus and ease of working render the same peculiarly applicable for marine purposes.

In the drawing *a*, represents a box or casing in which for convenience the apparatus may be inclosed and the same should be provided with doors and a lid in any convenient manner so as to allow the free escape of sound when the apparatus is in use, and as this casing will not be required under all circumstances, the same is not shown in Fig. 2.

b, b, are metallic bars or strips crossing each other and also forming a square or

nearly square framework carrying the parts. *c*, is a cross center shaft supported in suitable journals in the framing *b*, and rotated when required by the hand wheel *d*, or other competent means.

e, e, are heads, with openings for passing out sound, attached to the shaft *c*, and carrying between them the cylinder or drum *f*, having ribs or plates *1, 1*, running along its surface parallel or nearly so to the shaft *c*.

g, g, are metallic rings attached to the frame *b*, and having metallic springs *h, h*, attached to their inner surface, and curved in such a form that their points are taken by the ribs *1, 1*, as the shaft *c*, and its cylinder or drum *f* are rotated, thereby I am enabled to obtain a very large amount of vibrating surface, for both the cylinder *f* and springs *h, h*, vibrate, producing a very loud and sharp sound that will be heard a great distance, and will act to great advantage as a signal for marine purposes, and for preventing collisions in fogs or at night, saving great loss of life and property; and my apparatus being very light is better adapted for general use as a signal than the ponderous bells that have heretofore been employed.

I do not claim a spring or springs acted on by a ratchet wheel for producing sound as this has before been made use of, but

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

The hollow cylinder or drum *f* open at the ends and fitted with the ribs or plates *1*, when arranged to act on and within the circular ranges of metallic springs *h*, attached to the rings *g*, for the purposes and as specified.

In witness whereof I have hereunto set my signature this seventh day of January A. D. 1856.

LEON LEWENBERG.

Witnesses:

LEMUEL W. SERRELL,
THOMAS G. HAROLD.