No. 607,137. Patented July 12, 1898.

E. E. ROUSSEL.

LIFE PRESERVER, &c.

(Application filed Sept. 8, 1897.

(No Model.)

FIG. 1

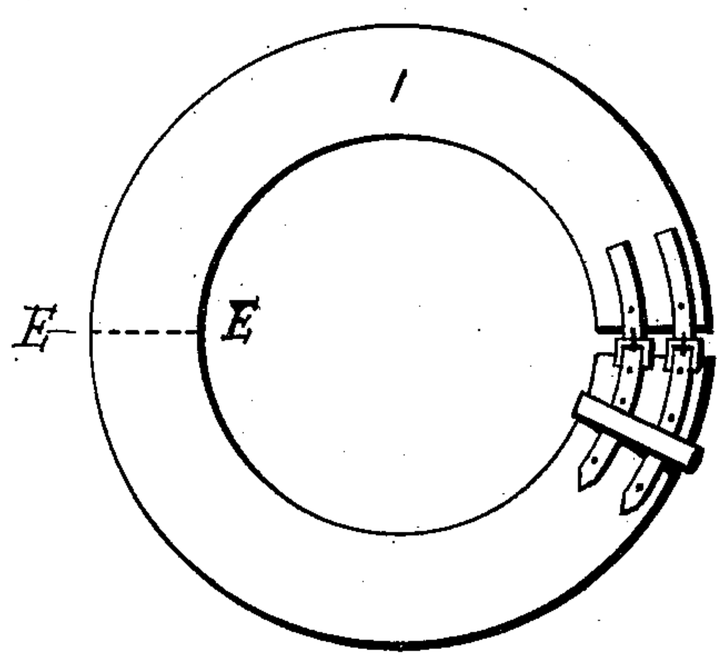


FIG. 2

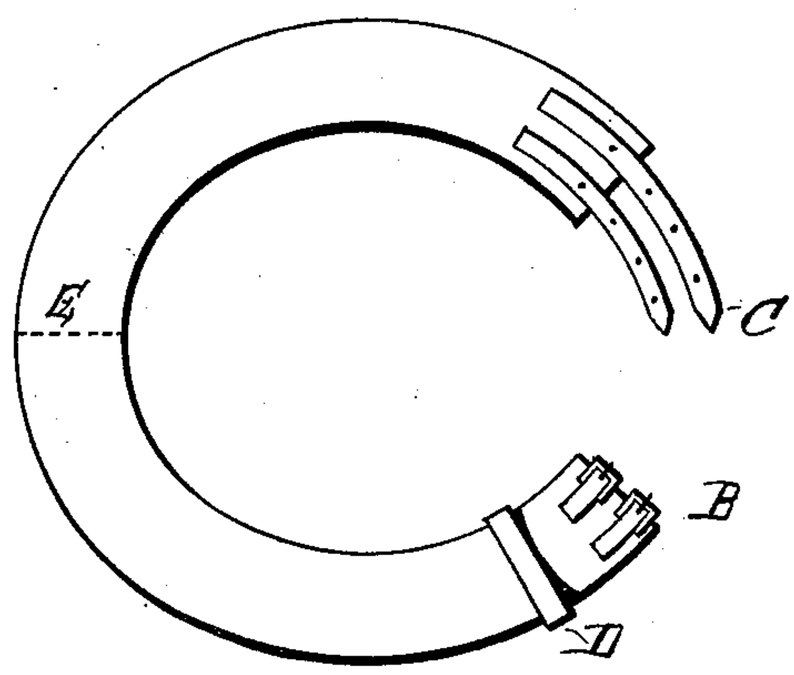


FIG. 3

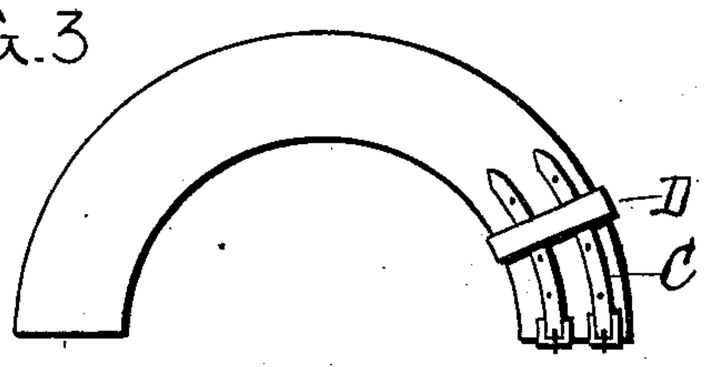


FIG. 4

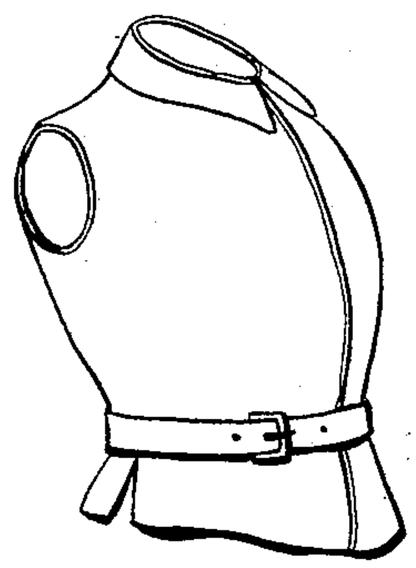


FIG. 5

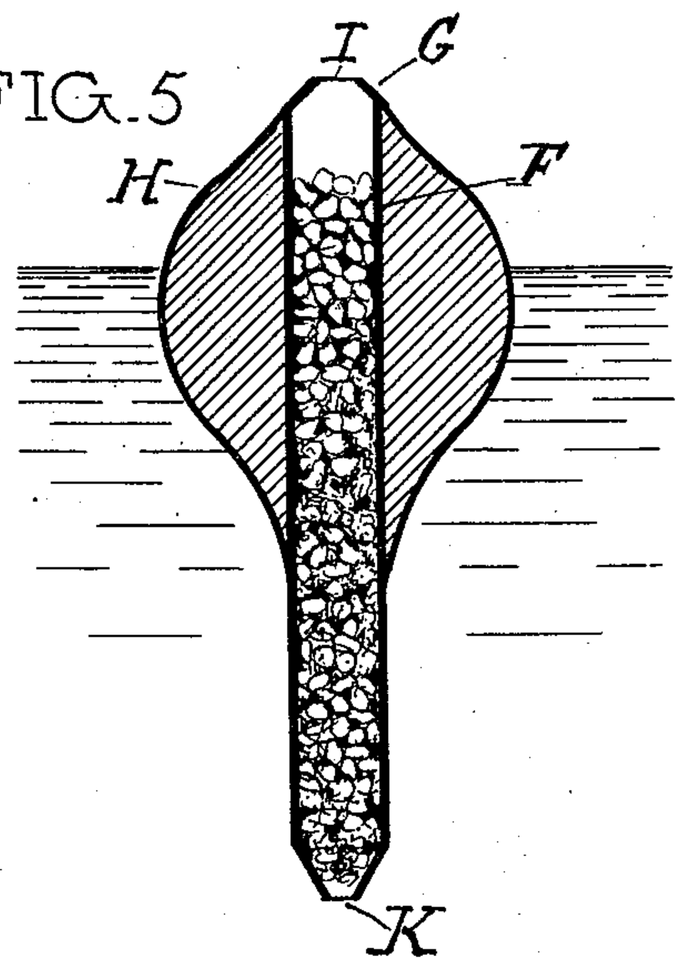


FIG. 6

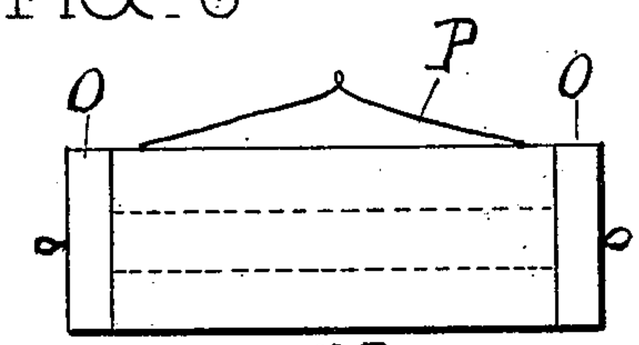


FIG. 7

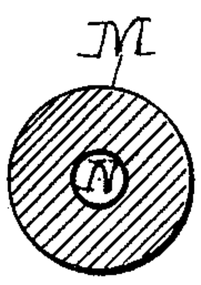
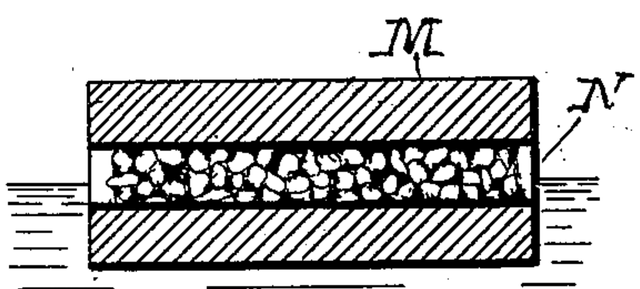


FIG. 8



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Geo. M. Copenhaver.

Inventor
Eugène Exupère Roussel
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Attorney

UNITED STATES PATENT OFFICE.

EUGÈNE EXUPÈRE ROUSSEL, OF LORIENT, FRANCE.

LIFE-PRESERVER, &c.

SPECIFICATION forming part of Letters Patent No. 607,137, dated July 12, 1898.

Application filed September 8, 1897. Serial No. 651,000. (No model.) Patented in France March 13, 1897, No. 264,905.

To all whom it may concern:

Be it known that I, EUGÈNE EXUPÈRE ROUSSEL, a citizen of the French Republic, residing at Lorient, in the Department of Morbihan, France, have invented certain new and useful Improvements in Buoyant Articles and Structures and Filling Material Therefor, (for which I have obtained a patent in France, No. 264,905, dated March 13, 1897;) 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 appertains to make and use the same.

This invention relates to filling material for buoyant articles and structures and to life-saving articles filled therewith.

The said invention consists in comminuted torrefied cork in separate grains as a new material for filling buoyant articles and structures and in floating life-preserving devices provided with a filling of comminuted torrefied cork in a loose granular condition and of a high degree of buoyancy.

In the accompanying drawings, Figure 1 represents a plan view of a belt-form life-preserver when closed. Fig. 2 represents a similar view of the same article when open. Fig. 3 represents a similar view of the same article when folded for packing and carrying. Fig. 4 represents a perspective view of a life-preserving jacket. Fig. 5 represents a vertical central section of a luminous floating device adapted to be used with such belts and jackets. Fig. 6 represents in side elevation another form of luminous floating device for similar use; and Figs. 7 and 8 represent, respectively, a cross-section and a central longitudinal section of the device shown in Fig. 6, but with the stopper removed.

The life-preserving devices shown in Figs. 1, 2, 3, and 4 consist in each instance of a hollow casing, which may be of any suitable fabric filled with comminuted cork in separate grains, heated to such a degree that it constitutes a material in a loose granular condition which is very much lighter than cork in its natural state or than a cork filling made up of fragments united into one mass by a degree of heat sufficient to cause the gum to exude and to cement the said fragments into an integral mass, as sometimes has been practiced. So far as I know this comminuted torrefied material, consisting of independent grains or particles, is a new article. For convenience of folding each belt thus filled is made thin at a point diametrically opposite the opening, stitches E connecting the opposite sides of the fabric along the line of fold. The opening of the belt is closed at will adjustably by straps C, secured to the casing on one side of said opening, and buckles B, secured to the casing on the other side of the said opening. An annular flexible keeper D fits around the end of the belt, behind the said buckles, to hold the otherwise loose ends of the said straps when the belt is tightened.

When the belt is thrown at night to a swimmer, he will not be likely to see it and seize it unless it has some luminous attachment. Various forms and kinds of such devices have been used. I do not claim them broadly; but I employ an especially-serviceable construction consisting of a buoy or bulb provided with a filling H of the torrefied comminuted granular cork hereinbefore described, and having a tube G extended centrally down through it and to some distance below, this tube being contracted at both ends into conoidal form and being supplied with any material F of a nature such as to give off on contact with water a gas which will ignite by contact with air. A phosphureted carbid of calcium in fragments is preferred. The opening K at the lower end of the tube is much smaller than the opening I at the upper end. The water enters only in minute quantities and very gradually, maintaining the chemical action for a considerable time without the tube being refilled. The gas disengaged from the contained material rises to the upper opening I, burning as it enters the air with a light which is visible for a long distance, the opening I being held above the surface of the water by the buoyancy of the torrefied granular cork H. Instead of this illuminating device I may employ a cylinder M, intended to float in a horizontal position, comprised of the aforesaid granular comminuted torrefied cork, which is inclosed within a cell, the said cylinder having a central longitudinal bore for

containing the chemical material above referred to, and also having its ends normally closed by stoppers O, which are connected by cords to some relatively-fixed part of the ship that carries these life-saving articles.

A cord P is used for connecting the body of the cylinder to a life-preserving belt or other article. When this belt is picked up to throw it overboard, the stoppers O are withdrawn by the pull of the cords on them, and the open ends of the cylinder admit the water as soon as the life-preserver and illuminating attachment are thrown into the sea.

I do not claim any particular means of fastening the illuminating device to the life-preserver. Either of the forms of such illuminating device above described may be attached to the life-preserver in any convenient way. The end pieces or stoppers are sealed to the body of the cylinder for preventing the ingress of air or moisture so long as the cylinder is left in position on shipboard.

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

1. A floating, life-preserving device provided with a filling of comminuted, torrefied cork in a loose, granular condition and of a high degree of buoyancy, substantially as set forth.

2. As a new material for filling buoyant articles and structures, comminuted, torrefied cork, in separate grains, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

EUGÈNE EXUPÈRE ROUSSEL.

Witnesses:

EDWARD P. MACLEAN,

N. MONTANÉ.