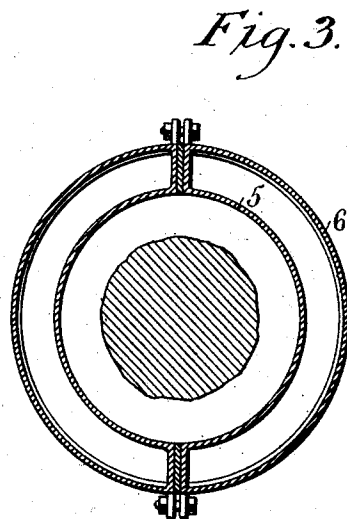
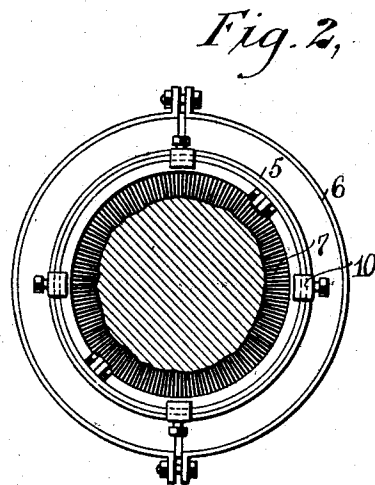
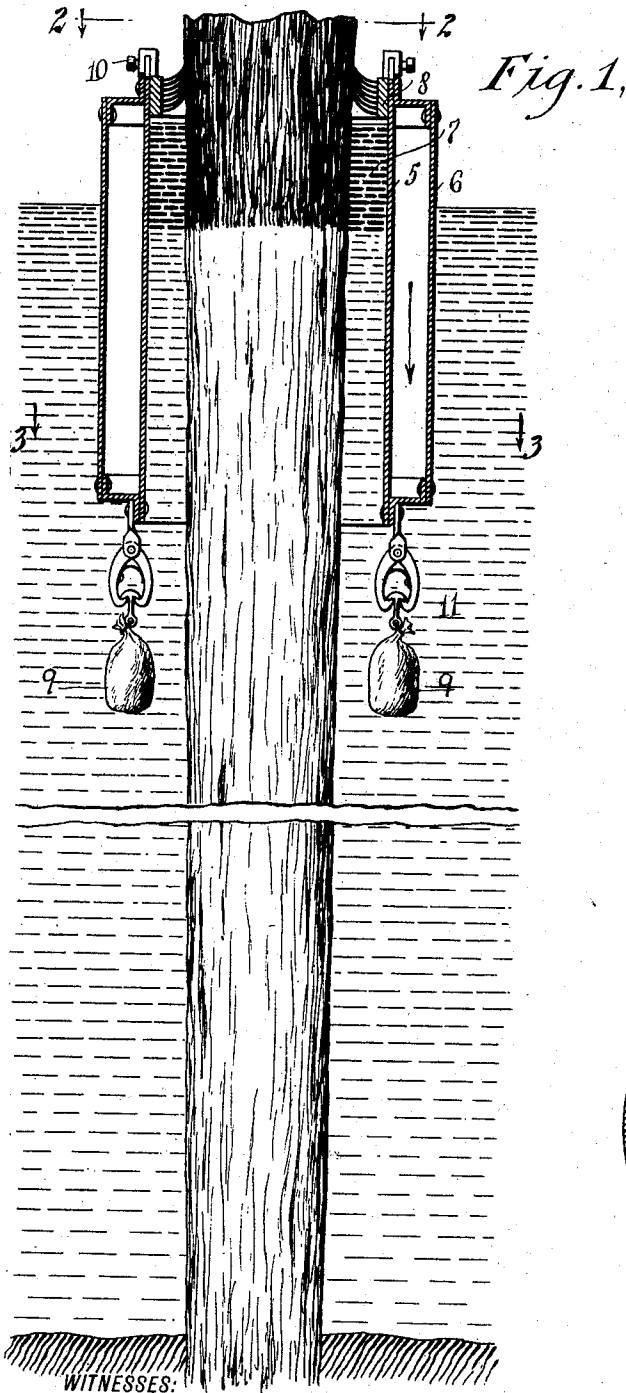


C. N. HUBBARD.
 PILE PROTECTOR.
 APPLICATION FILED SEPT. 3, 1910.

992,776.

Patented May 23, 1911.



WITNESSES:
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CHARLES N. HUBBARD, OF KAMELA, OREGON, ASSIGNOR OF ONE-HALF TO JOSEPH G. THOMAS, OF WALLA WALLA, WASHINGTON.

PILE-PROTECTOR.

992,776.

Specification of Letters Patent.

Patented May 23, 1911.

Application filed September 3, 1910. Serial No. 580,290.

To all whom it may concern:

Be it known that I, CHARLES N. HUBBARD, a citizen of the United States, and a resident of Kamela, in the county of Union and State of Oregon, have invented a new and Improved Pile-Protector, of which the following is a full, clear, and exact description.

The invention is an improvement in pile protectors of the character disclosed in Letters Patent Number 934,176, granted to me September 14, 1909, wherein a casing surrounded by an air jacket is adapted to encircle the pile and move up and down thereon as the level of the water falls and rises, and has the upper portion thereof liquid-tight for containing a preservative solution of less specific gravity than the water.

The object of the present invention is to provide the casing with a brush or equivalent device arranged to rub the preservative into the crevices and pores of the wood, and also provide in connection with the casing, one or more weights to draw the protector into the water, the weights being automatically released when they strike the ground or bed of the water after having performed their mission.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a vertical section of a pile protector as applied to a pile, embodying my improvements; Fig. 2 is a section through the pile on the line 2—2 of Fig. 1, looking in the direction of the arrows; and Fig. 3 is a similar section on the line 3—3 of Fig. 1.

The pile protector I have shown to comprise a casing 5 adapted to surround the pile and move up and down thereon as the level of the water falls and rises, the casing having a surrounding sealed air jacket, and, together with this jacket, is made into two separable half sections, as shown in Fig. 3, which enables the protector to be applied to the pile. The upper portion of the casing is liquid-tight for containing a preservative solution 7, of less specific gravity than the water, whereby this solution floats and stands slightly above the water level.

The construction of the protector thus far described is the same as disclosed in the patent above referred to.

The present invention resides in the application to the upper portion of the casing of a brush 8, which is arranged to rub the preservative into the crevices and pores of the pile as the protector is moved up and down with the rise and fall of the water level; also, in the application of one or more weights 9 to the protector to draw the same downwardly on the pile into the water, as is sometimes necessary. The fibers of the brush 8 may be made of any suitable material, and the brush, which is shown to be of annular form to fit within the casing, is removably held in place by one or more clamps 10, which enables the brush to be readily renewed or removed. The weights 9, which may be of rock, sand, or other suitable character, are shown to be applied to the casing so as to be automatically released when the weights strike the bed of the water. For this purpose any suitable clutch or tong 11 may be used.

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

1. In a pile protector, a casing adapted to surround the pile and move up and down thereon as the level of the water falls and rises, with the upper portion of the casing liquid-tight for containing a preservative solution of less specific gravity than the water, a float buoyantly supporting the casing, and a brush carried by the casing and arranged to rub the preservative on the pile.

2. In a pile protector, a casing adapted to surround the pile and move up and down thereon as the level of the water falls and rises, with the upper portion of the casing liquid-tight for containing a preservative solution of less specific gravity than the water, a float buoyantly supporting the casing, and a brush arranged to rub the preservative on the pile and fitting within and detachably secured to the casing.

3. In a pile protector, a casing adapted to surround the pile and move up and down thereon with the level of the water as it falls and rises, the upper portion of the cas-

ing liquid-tight for containing a preserva-
tive solution of less specific gravity than the
water, a weight to draw the casing into the
water, and means connecting the weight to
5 the casing, adapted to automatically re-
lease the weight when the latter strikes the
bottom.

In testimony whereof I have signed my
name to this specification in the presence of
two subscribing witnesses.

CHARLES N. HUBBARD.

Witnesses:

H. V. HUBBARD,
J. G. THOMAS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
