

A. L. REYNOLDS.
WOODEN PILE PROTECTOR.
APPLICATION FILED SEPT. 20, 1911.

1,036,907.

Patented Aug. 27, 1912.

Fig. 1

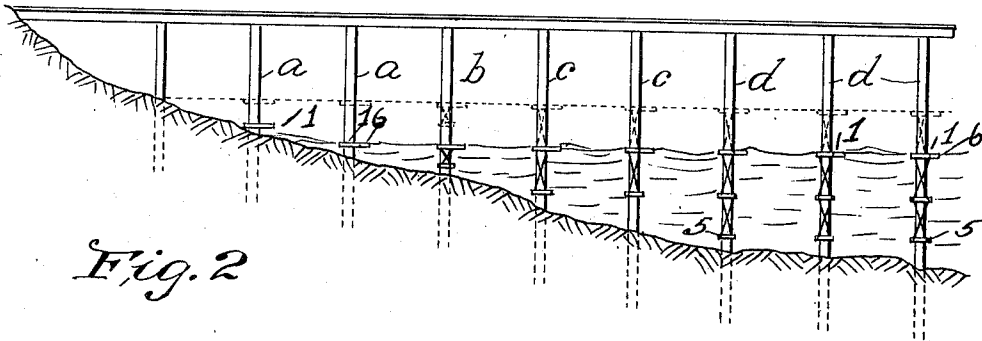


Fig. 2

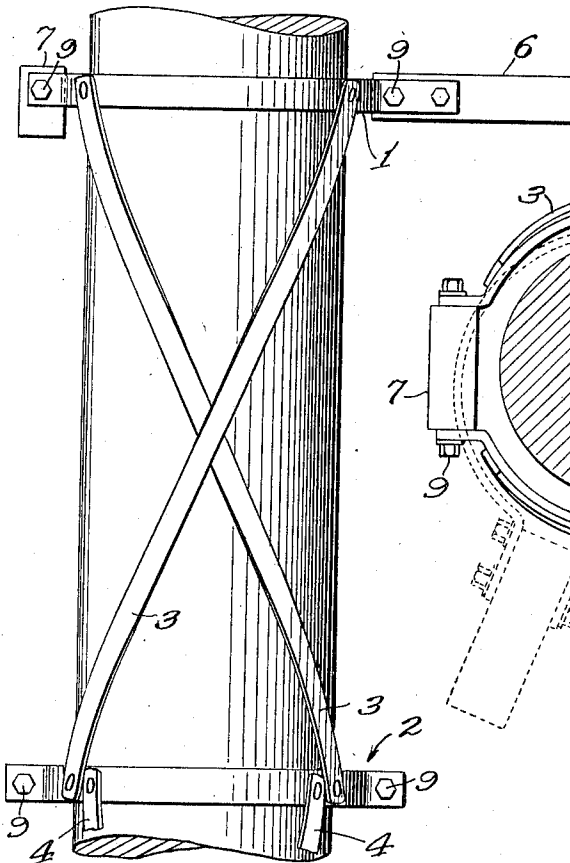
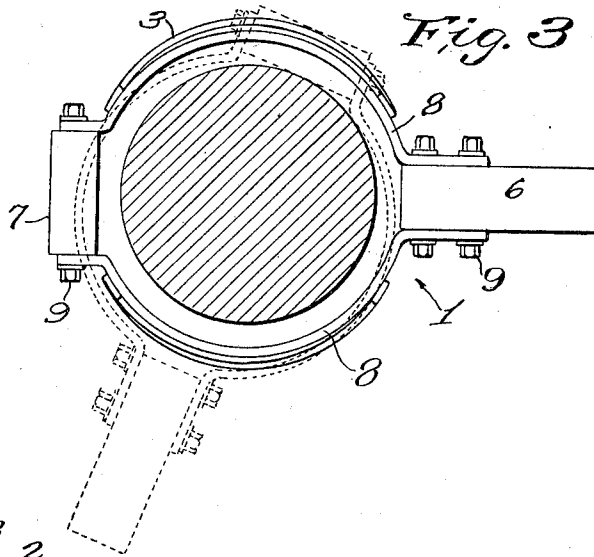


Fig. 3



Witnesses
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UNITED STATES PATENT OFFICE.

ALVA L. REYNOLDS, OF LONGBEACH, CALIFORNIA, ASSIGNOR TO COMMON SENSE PILE PROTECTOR COMPANY, OF LONGBEACH, CALIFORNIA, A CORPORATION OF CALIFORNIA.

WOODEN-PILE PROTECTOR.

1,036,907.

Specification of Letters Patent.

Patented Aug. 27, 1912.

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To all whom it may concern:

Be it known that I, ALVA L. REYNOLDS, a citizen of the United States, residing at Longbeach, in the county of Los Angeles and State of California, have invented a new and useful Wooden-Pile Protector, of which the following is a specification.

An object of this invention is to provide means whereby wooden piles may be automatically protected from teredos, barnacles and other sea growth ordinarily destructive of the piles. Teredos attack wooden piles through the hatching of eggs which are deposited on the outside of the pile and from which the teredos enter the pile and there grow and develop, feeding upon the pile until it is destroyed. Other kinds of sea growth, such for instance as barnacles, also attach themselves to the wood piles and are a menace to the same.

This invention comprises a mechanical device, automatically-operated by wave and tide action to destroy and scrape off all the deposited eggs and other menacing growth from the surface of the pile.

The invention is pioneer in that it comprises floating means loosely encircling the pile and means to rotate the encircling means on the pile, thus to effect the cleansing of the pile.

The accompanying drawings illustrate the invention in the form deemed most practical.

Figure 1 is a view of a wharf the piles of which are provided with my newly-invented protector in different forms. Fig. 2 is a fragmental view showing in side elevation one section of one of such protectors on a pile. Fig. 3 is a fragmental plan view of one of the protectors loosely encircling a pile which is shown in cross-section.

The protector comprises a floating collar loosely encircling a pile to rise and fall with the tide, and is preferably provided with a vane to be acted upon by the water for the purpose of revolving or oscillating the collar around the pile. Buoyant means are provided to maintain the collar in operative position, and also to allow the collar to rise and fall with the tide. The collar may be variously constructed and may include one or more rings that encircle the pile and in case several rings are employed they may be connected by braces. In the form shown in Fig. 2 a plurality of rings is employed,

the upper ring 1 being connected with a lower ring 2 by reversely-arranged spiral braces 3 which are fixed to the collars. Spiral braces 4 are shown in part as extending downward to connect with a third ring 5 shown in Fig. 1. The ring 1 is provided on one side with a float 6 which may be of any construction as a sheet metal hermetically tight hollow box or a block of light wood. Where a wood block is used it is advisable to treat the same by boiling it in tar or other suitable material to make it impervious to water and to make it capable of resisting, to a greater or less degree, the attacks of sea life. On the opposite side of the ring is provided a second float 7 which is preferably about the same buoyancy as the float 6; and the combined buoyancy of the two floats is such as to hold the upper end of the collar about at the surface of the water and to allow the collar to be carried up and down responsive to the rise and fall of the water level either from wave action or from the tides. The collar is also provided on one side with a vane and in the instance shown the float 6 forms such vane and is subject to the wave action so as to be swung around the pile as the waves advance and recede, thus revolving or oscillating the collar on the pile.

In the forms shown in Figs. 2 and 3 the upper ring of the collar is made up of two iron straps 8 of similar semi-circular construction secured on opposite sides of the floats 6 and 7 by means of bolts 9.

In practical application the upper collar 1 including the metal ring section or straps 8 and the vane and floats 6 and 7 will be used without the metal braces 3 and will be applied to the piles *a* which are sufficiently close in shore to be in low tide line; that is to say, at that point where, at extreme low tide the piles would be entirely exposed to the air. Other piles *b* and *c* are provided with collars having two rings, and braces between said rings; the collar for the pile *b* being shown of less length than the collar for the pile *c*. The collars for the outer pile *d* are longer than for the piles closer in shore, the object being to provide a floating collar of sufficient length to scrape the surface of the pile as far down below the level of the water as may be necessary in order to keep off the sea life. In practice

the collar may be applied to the piles in opposite halves which are bolted together by the bolts 9. Then the work of keeping the pile clean goes on automatically in response
5 to the action of the waves on top.

I claim:—

1. A pile protector comprising a floating collar loosely encircling the pile to rise and fall with the tide and means operatable by
10 the movement of the water to cause rotary motion of the collar.

2. A pile protector comprising a floating collar loosely encircling the pile to rise and fall with the tide, and a vane on the collar
15 whereby the waves will cause the collar to oscillate or rotate around the pile.

3. A pile protector comprising floating means loosely encircling the pile to rise and

fall with the tide, and means to rotate said floating means on the pile. 20

4. A pile protector comprising a floating collar loosely encircling the pile to rise and fall with the tide and composed of rings and braces securing the rings together; and a
25 vane to turn the ring on the pile.

5. A pile protector comprising a plurality of ring sections and two floats bolted together to loosely encircle a pile; one of said floats being elongate to form a vane. 25

In testimony whereof, I have hereunto set
my hand at Los Angeles, California, this
15th day of September, 1911. 30

ALVA L. REYNOLDS.

In presence of—

JAMES R. TOWNSEND,
L. BELLE RICE.

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