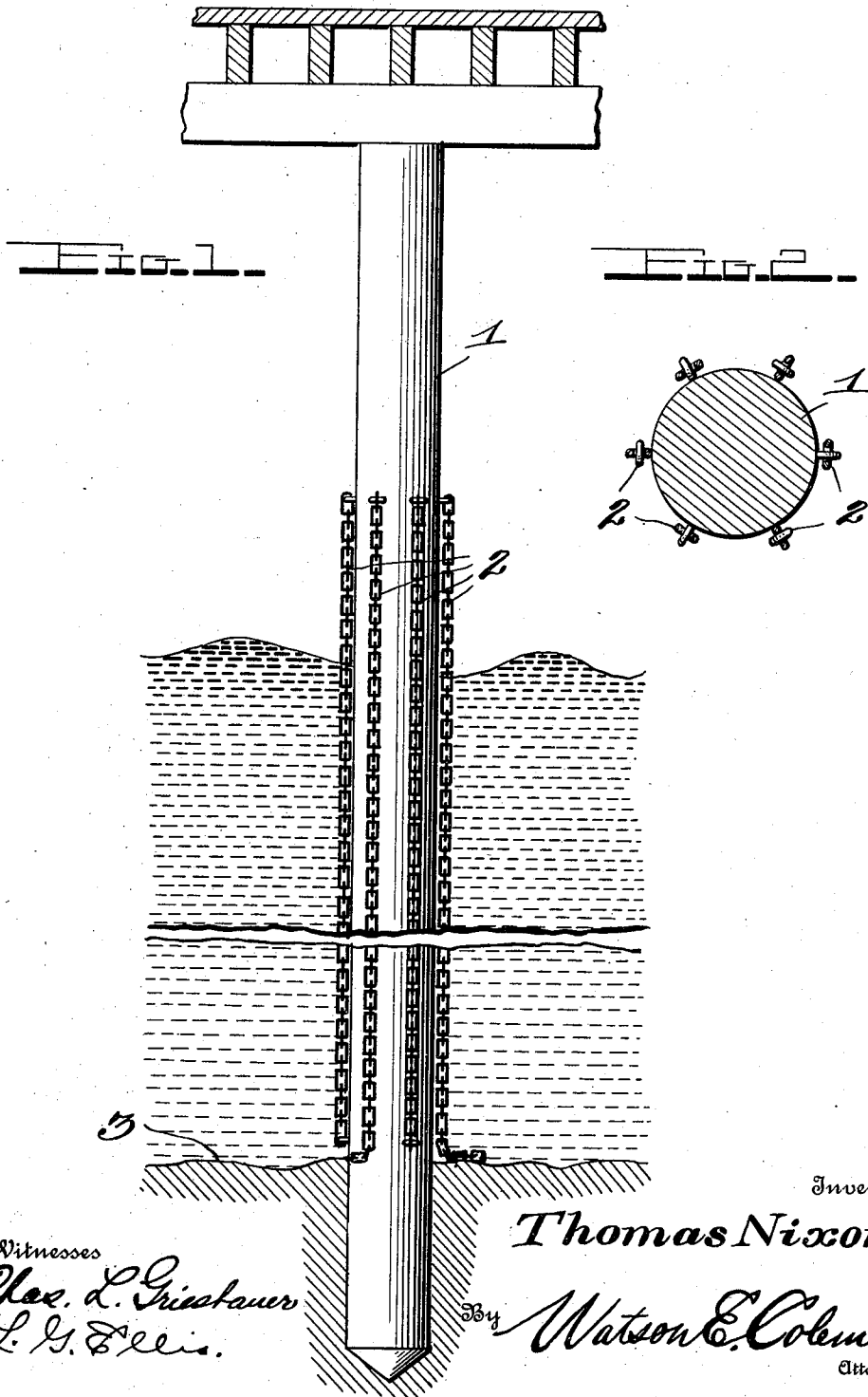


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 DEVICE FOR PROTECTING PILES AND OTHER SUBMERGED STRUCTURES.
 APPLICATION FILED JULY 10, 1911.

1,008,669.

Patented Nov. 14, 1911.



Witnesses
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UNITED STATES PATENT OFFICE.

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DEVICE FOR PROTECTING PILES AND OTHER SUBMERGED STRUCTURES.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, THOMAS NIXON, a citizen of the United States, residing at Santa Barbara, in the county of Santa Barbara and State of California, have invented certain new and useful Improvements in Devices for Protecting Piles and other Submerged Structures, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in piles and other submerged structures and particularly with reference to means for protecting the piles and other submerged structures from the attacks of the toredo and other marine creatures which destroy the submerged wooden structures, the invention consisting in a submerged structure of this class provided with scrapers, actuated by tides and currents to move upon the surface or surfaces of the submerged structure and prevent the lodgment of the toredo and other destructive marine creatures thereon as hereinafter described and claimed.

In the accompanying drawings: Figure 1 is an elevation of a pile provided with protecting scrapers in accordance with my invention; and Fig. 2 is a detail transverse sectional view of the same on a larger scale.

For the purposes of this specification the submerged wooden structure to be protected in accordance with my invention is represented as a pile 1. Such structure may, however, be other than a pile and I would have it understood that I am not limited as to this particular.

In the embodiment of my invention I provide the submerged structure 1, on its surface or surfaces, with a suitable number of scraping devices 2 of such nature as to be adapted to be moved by currents, tides and the like. In the embodiment of the invention here shown these scrapers or scraping devices are shown as chains which are dis-

posed on the surface of the pile, at suitable regular distances apart, and the upper ends of which are secured to the pile at points a suitable distance above the high water mark. These scraping chains lie upon the surface of the pile and extend downwardly thereon. Some of the chains are here shown as extending to the bed 3 in which the lower end of the pile is sunk and the alternate chains are here shown as terminating a slight distance above this bed. The action of the currents, tides and other influences and forces to which the water is subjected are such as to cause the scraping chains, which hang loosely on the surface of the pile or other structure to move and scrape thereon. The toredo and other destructive marine creatures which destroy submerged wooden structures have to attach themselves to the surface of the structure before beginning to bore into the same. The scraping chains, owing to their movement, operate and move back and forth upon the surface or surfaces of the submerged structure and by such movement prevent the destructive marine creatures from effecting lodgment on the surface and hence prevent their destructive attacks upon the same.

Having thus described my invention I claim:

A submerged structure having a number of scraping chains, each of the said scraping chains being attached at its upper end to the structure, hanging therefrom, bearing against the surface of the structure and being movable back and forth upon the surface of the structure by the action of the tides and currents.

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

THOMAS NIXON.

Witnesses:

C. C. HUNT,

C. A. THOMPSON.