N. B. ELLERY.

GUARD STRUCTURE.

APPLICATION FILED OCT. 1, 1915.

1,185,488. Patented May 30, 1916.

Fig. 1.

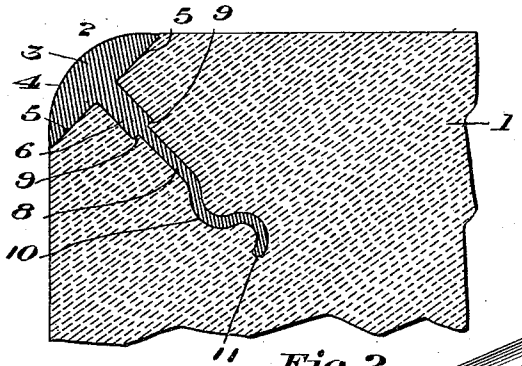


Fig. 2.

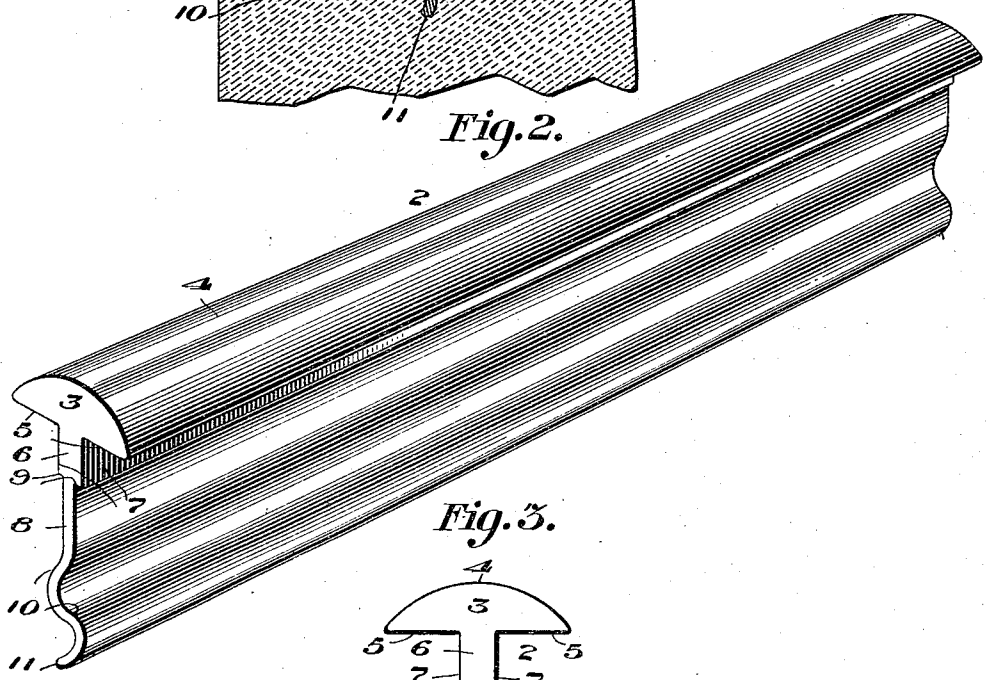
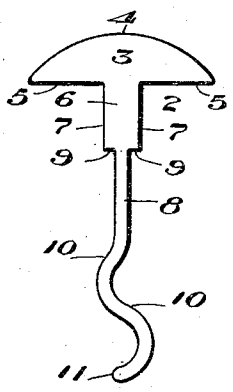


Fig. 3.



Inventor

Nathaniel B. Ellery

Witnesses

Philip E. Barnes

James Atkins.

By Edmund H. Sawyer

Attorney

UNITED STATES PATENT OFFICE.

NATHANIEL B. ELLERY, OF SAN FRANCISCO, CALIFORNIA.

GUARD STRUCTURE.

1,185,488. Specification of Letters Patent. Patented May 30, 1916.

Application filed October 1, 1915. Serial No. 53,609.

To all whom it may concern:

Be it known that I, NATHANIEL B. ELLERY, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Guard Structures, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates broadly to guard structures for protecting the corners, edges, etc., of cement-work and similar hardened masses.

The object of the invention is to present a guard, of simple and effective construction, adapted to be embedded, for the most part, in cementitious and similar masses whereby the exposed corners and edges thereof may be protected from injury, these corners and edges being normally exposed to impact, pressure, and wear.

I am well aware that it has heretofore been proposed to employ a guard, incorporated in cementitious mass, for a purpose similar to that for which my structure is designed. While, in practical use, these have been found more or less effective for the particular purpose designed, yet it has also been found that desirable results are attainable by incorporating certain features in this type of device in accordance with the concept of my invention.

My invention, therefore, resides, in one aspect, in a curb-guard which includes a head-portion having a rounded impact-surface and a plurality of inner surfaces each of which is substantially separated from another surface and all practically flat and continuous, there being an elongated, continuous reinforcing shoulder-portion which separates two of the flat surfaces of the head-portion and which shoulder-portion is integral with the head-portion and extends outwardly therefrom at an angle to the flat surfaces; there being also an elongated and continuous web-portion which is integral with the shoulder-portion and which extends therefrom to a considerable width, it being corrugated toward its outer edge.

Obviously, the invention permits of the utilization of a variety of portions having the characteristics pointed out, and the dimensions of which may be those which, for a particular purpose, may be found to be most effective; it being remembered, however, that it is the desideratum of the invention to arrange certain of the portions in a particular relation so that they shall perform functions which are novel as compared with the structures heretofore proposed, and as above mentioned.

In the accompanying drawings, I have illustrated one of the several embodiments which have occurred to me as susceptible of carrying the invention into effect, and which embodiment has to a greater or less extent the attributes I assert for my novel form of structure.

In these drawings: Figure 1 is a view in vertical transverse section of a section of cement-work with my improved guard embedded in a portion thereof; Fig. 2 is a view in perspective of the guard; and Fig. 3 is a view in transverse section thereof.

Referring to these drawings, the reference-character 1 designates a mass of cement or the like in which my improved guard is adapted to be embedded in part.

The guard, designated generally by 2, includes a head-portion 3 which comprises an outer, impact-surface 4 that is, preferably, rounded, and a plurality of inner surfaces 5 which are practically flat, as shown. In this instance, there are two of these flat surfaces illustrated. Extending outwardly from these surfaces and formed integral with the head-portion is an elongated and continuous reinforcing shoulder-portion 6 which, preferably and as shown, has its opposite walls 7 arranged at approximately right-angles to the flat surfaces 5 of the head-portion. This shoulder-portion is, preferably and as shown, of less thickness than the width of the head-portion, but it is nevertheless of substantial dimensions. Extending from the shoulder-portion is an elongated and continuous web-portion 8 which is integral with the shoulder-portion but of less thickness than that portion. This presents shoulders 9 on the shoulder-portion, and these are of a fairly substantial width. These shoulders are preferably flat and arranged in parallelism with the flat surfaces 5 of the head-portion. The web-portion is

of substantial width and greater than that of the aggregate thicknesses of the head and shoulder portions, as shown, so as to provide for effective anchorage in the cementitious mass. To augment this anchorage and also to provide for additional resistance to blows resulting from impact against the surface 4 of the head-portion, the web-portion is, adjacent its free edge, provided with corrugations 10.

The shoulder-portion 6 not only strengthens the connection of the web-portion to the head portion; but it prevents the formation of voids which ordinarily would occur back of the flat surfaces 5 of the head-portion. The shoulders 9 thereof also present additional surfaces for abutment against the mass of cement; and, these combining with the flat surfaces 5 on the head-portion, and coöperating with the wide and corrugated web-portion, present a plurality of blow-resisting surfaces, precluding the cracking or splitting action that would ordinarily result when a hard blow is struck against the exposed surface of the head-portion.

As shown, the guard is embedded in the mass so that the head-portion occupies a position longitudinally of the curb or other edge which the device is to protect, while the shoulder-portion 6 and the web-portion 8 are firmly embedded in the cement and securely anchor the whole structure therein.

From the foregoing, it will be apparent that the structure includes a plurality of surfaces which are substantially parallel one with another and which have the office of resisting any tendency of the guard to shift in the cement, and crack or split the same, in the event that a blow is struck upon the exposed portion 4 thereof. The plurality of surfaces, just mentioned, include the two flat surfaces 5 of the head-portion, the two shoulders 9 on the reinforcing-portion 7, and the edge 11 of the web-portion. Coacting with these surfaces are those which are presented by the corrugations 10.

Obviously, any tendency of the guard to shift outwardly is precluded by the corrugations which, as aforementioned, securely anchor the whole structure in the hardened cement.

From the foregoing, it will be perceived that I have succeeded in devising a guard-structure which is well adapted to achieve the several objects and ends in view; and that this structure is not only simple and compact in form, but that it is susceptible of being conveniently and inexpensively manufactured.

As many changes may be made in the construction and many apparently widely different embodiments of the invention can be made without departing from its spirit, it is intended that all matter contained in the foregoing description and shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

What I claim is:

1. A curb-guard including an elongated head-portion having its outer impact-surface rounded and its inner surface practically flat, an elongated reinforcing shoulder-portion integral with the head-portion and extending outwardly therefrom and of less thickness than the width of the head-portion, and an elongated web-portion integral with the shoulder-portion and of less thickness than that portion but of a width greater than the aggregate of the thicknesses of the head and shoulder portions.

2. A curb-guard including an elongated head-portion having its outer impact-surface rounded and its inner surface practically flat, an elongated reinforcing shoulder-portion integral with the head-portion and extending outwardly therefrom and of less thickness than the width of the head-portion, and an elongated web-portion integral with the shoulder-portion and of less thickness than that portion but of a width greater than the aggregate of the thicknesses of the head and shoulder portions, the web-portion being corrugated toward its outer edge.

3. A curb-guard including an elongated head-portion having its outer impact-surface rounded and having a plurality of substantially separated inner surfaces and each of which is practically flat, an elongated continuous reinforcing shoulder-portion separating the flat surfaces of the head-portion and integral therewith and extending outwardly from said head-portion at approximately right-angles to the flat surfaces thereof and of less thickness than the width of the head-portion, and an elongated continuous web-portion integral with the shoulder-portion and of less thickness than that portion but of a width greater than that of the aggregate of the thicknesses of the head and shoulder portions and corrugated toward its outer edge.

4. A curb-guard including an elongated head-portion having its outer impact-surface rounded and having two substantially separated inner surfaces which are practically flat, an elongated continuous reinforcing shoulder-portion separating the two flat surfaces of and integral with the head-portion and extending outwardly therefrom at approximately right-angles to said flat surfaces and of a thickness less than the width of the head-portion, and an elongated continuous web-portion integral with the shoulder-portion and of less thickness than that portion to present a plurality of surfaces parallel with the flat surfaces of the head-portion, said web-portion being of a width greater than that of the aggregate of the thicknesses of the head and

shoulder portions and having an edge which presents a surface in substantial parallelism with the flat surfaces of the shoulders on the shoulder-portion and the flat surfaces on the head-portion, said web-portion being corrugated intermediate said edge and said shoulder-portion.

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

NATHANIEL B. ELLERY.

Witnesses:
HORACE HIRSCHLER,
CHAS. F. DUSENBERG.

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