A. E. DAVIS.

CORNER GUARD FOR CONCRETE CURBING AND THE LIKE.

APPLICATION FILED JAN. 30, 1913.

1,245,689. Patented Nov. 6, 1917.

Fig. 1.

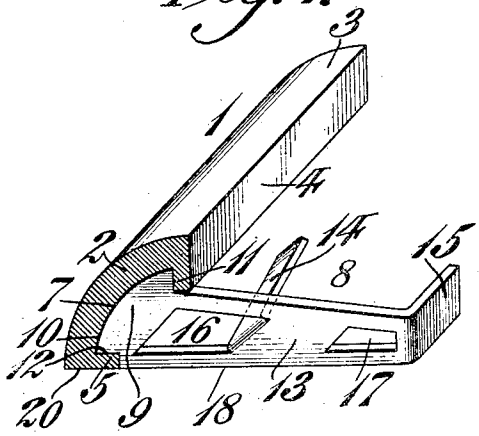


Fig. 2.

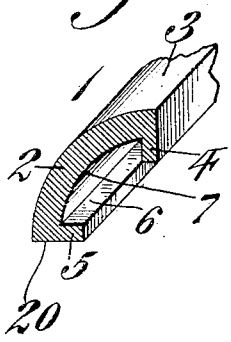


Fig. 3.

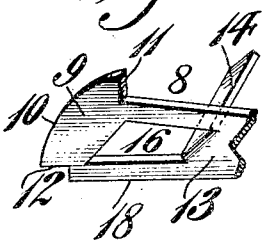


Fig. 4.

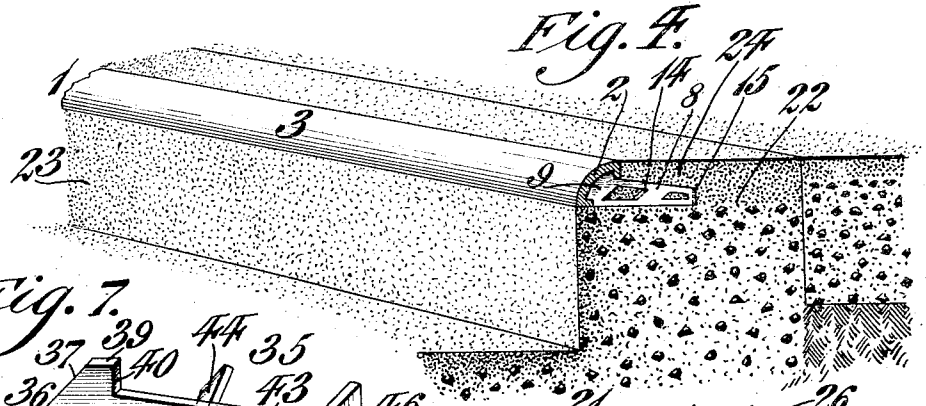


Fig. 7.

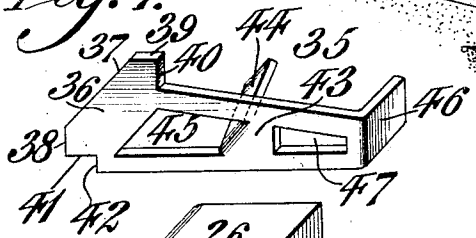


Fig. 6.

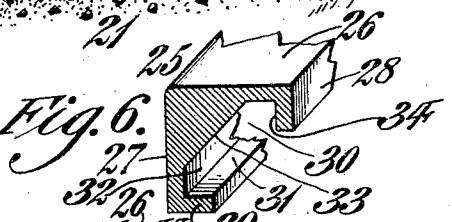


Fig. 5.

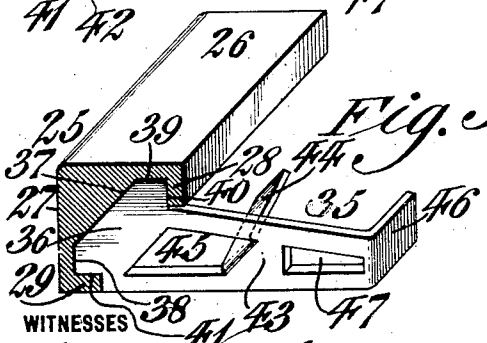
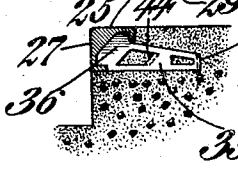


Fig. 8.



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UNITED STATES PATENT OFFICE.

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CORNER-GUARD FOR CONCRETE CURBING AND THE LIKE.

1,245,689. Specification of Letters Patent. Patented Nov. 6, 1917.

Application filed January 30, 1913. Serial No. 745,173.

To all whom it may concern:

Be it known that I, ANTHONY ELTON DAVIS, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Corner-Guard for Concrete Curbing and the like, of which the following is a specification.

My invention consists of a novel construction of a corner guard, and coacting anchoring devices, for concrete curbing and the like, wherein I employ a novel construction of both corner guard and anchoring device therefor, whereby the edge of the structure is protected, without weakening it in any degree. The concrete is also reinforced by my invention so as to make the structure practically indestructible, while the defects hitherto existing, such as difficulty in erection, imperfect anchorage, poor alinement and division of the structures into small portions of the concrete, are entirely obviated, my novel invention being capable of installation without the employment of skilled labor, and the concrete being positively reinforced and not affected by frost or the elements, or by expansion and contraction, since the guard expands and contracts uniformly with the concrete in which it is embedded, whereby an efficient and ornate appearance is given to the completed structure.

My invention further consists in a novel construction of anchoring device, which is provided with a suitable head or body portion, adapted to interlock with a coacting pocket of the corner guard, said anchoring device being provided with laterally extending tongues or terminals, and having its lower edge preferably constructed so as to aline with the bottom wall of the corner guard, when the parts are assembled, whereby an exact and accurate alinement of the corner guard with respect to the concrete and to the finished structure is attained.

To the above ends, my invention consists of a novel construction of corner guard and anchoring device therefor, the novel features of which will be hereinafter fully set forth and pointed out in the claims.

For the purpose of illustrating my invention, I have shown in the accompanying drawings one form thereof which is at present preferred by me, since the same has been found in practice to give satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized and that my invention is not limited to the precise arrangement and organization of these instrumentalities, as herein shown and described.

Figure 1 represents a perspective view partly in section of my novel corner guard and anchoring device in assembled position, with the concrete removed therefrom, the corner guard being shown in section, and the anchoring device in perspective.

Fig. 2 represents a perspective view of a section of the corner guard with the anchoring device removed.

Fig. 3 represents a perspective view of a portion of the anchoring device in detached position.

Fig. 4 represents a perspective sectional view of the finished structure, showing the corner guard and anchoring device in assembled position with respect to the body of concrete.

Fig. 5 represents a perspective view of a slightly different construction of corner guard and its coacting anchoring device.

Fig. 6 represents in section a perspective view of the corner guard seen in Fig. 5, with the anchoring device removed therefrom.

Fig. 7 represents a perspective view of the anchoring device seen in Fig. 5, in detached position.

Fig. 8 represents, on a reduced scale, a sectional view of the corner guard and anchoring device seen in Fig. 5, in assembled position with respect to the concrete.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings:—

1 designates the curb guard, the same comprising the body portion 2, having in one embodiment of my invention the convex exterior surface 3, which terminates at its upper portion in the depending, overhanging or substantially vertical flange 4, and at its lower portion, in the substantially horizontal or laterally extending flange 5, whereby a pocket or seat 6 is formed between the inner walls of the flanges 4 and 5, and the preferably curved inner wall 7 of the curb guard, which latter may be of metal formed by rolling, casting or any

other approved process, whereby the curb guards may be produced of any desired length or lengths. In practice, the body portion of the curb guard may be of substantially the same thickness throughout, but the contour or thickness thereof may be varied, if desired, without departing from the spirit of my invention.

8 designates the novel construction of anchor I employ, the same comprising the head or locking member 9, having the convex edge 10, conforming substantially to the curve 7 and provided with the shoulders or recessed portions 11 and 12, which contact with and coact with the juxtaposed inner surfaces of the flanges 4 and 5 respectively. 13 designates an arm or extension, projecting from the head 9 of the anchor and having the intermediate tongue 14 projecting inwardly or laterally therefrom, said extension terminating in the inwardly or laterally deflected terminal 15. 16 designates an opening in the arm or extension 13, which is preferably formed by punching or otherwise deflecting the tongue 14, said extension 13 having also the opening 17 near the outer portion thereof, which openings are adapted in practice to be filled with the concrete or similar material, when the parts are assembled therein.

It will be understood from Figs. 1 and 4, that when the corner guard and the anchoring device 8 therefor are assembled, the lower edge 18 of the anchoring device is substantially flush with or on substantially the same rectilinear or horizontal line as the lower edge 20 of the curb guard or the flange 5, so that during the installation of the anchoring device and the corner guard, the desired alinement of said corner guard with respect to the curb can be readily obtained.

In Fig. 4, I have shown a sectional view, in perspective, of the completed corner guard, wherein 21 represents the coarse or initial bed of concrete, which is filled in up to about the line 22, the vertical wall 23 being formed in any suitable manner. The corner guard 1 is then placed in position, and the anchoring device 8 assembled with respect thereto, and by simply setting the corner guard and anchoring device in the proper position, as indicated in Fig. 4, any ordinary cement worker can install the same in place by positioning the parts, as shown in Fig. 4, and then flushing the soft concrete, indicated at 24, against the inner surface of the curb guard and around the anchoring device, the soft concrete encompassing the tongues 14 and the terminals 15, and filling in the openings 16 and 17, so that in the finished article, the body of concrete in which my novel device is embedded, is massed solidly behind and in contact with the guard, passing through and around the anchoring device and entirely filling the openings in the anchoring device and encompassing the terminals 14 and 15, thus locking and binding the guard and the anchoring device securely in the body of the structure, from which it cannot be dislodged by blows, frost, expansion or contraction, or any of the other causes which may tend to dislodge or destroy other types of corner guards. It is entirely unnecessary in practice to hold my novel construction of corner guard and anchoring device temporarily in place, while installing the same, by the aid of forms, machines or frogs, as any ordinary cement workman can readily install the same and during the act of installation, it will be apparent that in the particular construction shown, by setting the lower faces 18 and 20 on substantially the same rectilinear or horizontal line, the desired alinement of the corner guard will be readily effected.

The curb guards 1 may be made of the desired lengths and in practice the anchoring devices 8 are placed in position at intervals of about twelve inches or thereabout, although it will of course be understood that the precise manner of assembling or locating the guard and its anchoring device may be varied by those skilled in the art, without departing from the spirit of my invention.

In the construction of corner guard seen in Figs. 1, 2 and 4, I have shown the outer edge of the same as rounded arc-shaped, or convex, while in Figs. 5, 6 and 8, I have shown the outer surfaces of the corner guard, as more nearly rectangular, in which case I employ a slightly different construction of anchoring device, which will now be referred to.

25 designates my modified construction of corner guard, the same comprising the top, substantially horizontal member 26 and the substantially vertical member 27, said surfaces being arranged at substantially a right angle to each other. The inner portion of the modified construction of corner guard 25 is provided with a depending longitudinal flange 28 and a laterally extending or substantially horizontal longitudinal flange 29, the inner portion of the corner guard being provided with an angular shaped recess or pocket 30, formed by the plane surfaces 31, 32, 33 and 34.

35 designates the preferred form of anchoring device I employ in connection with the corner guard 25, said anchoring device having the head 36 provided with the polygonal surfaces 37, 38, 39, 40, 41 and 42, which are adapted to interlock and coact with the corresponding similarly shaped surfaces of the pocket or recess 30, seen in Figs. 5, 6 and 8. 43 designates an arm or extension of the anchoring device 35, the same being provided with a tongue 44, the open-

ing 45, the laterally deflected terminal 46, and the opening 47, as will be understood from Figs. 5 and 7, whose functions have already been explained.

It will be understood that when the parts are assembled, as seen in Figs. 5 and 8, the lower edge of the anchoring device 35 will be in substantially the same horizontal or rectilinear line as the lower surface of the flange 29, whereby the desired alinement of the parts with respect to the body of concrete may be readily effected during the installation of the device in position, as has already been explained.

The manner of installing the device seen in Figs. 5 to 8 inclusive, is substantially the same as has been already described with respect to Fig. 4, as is evident.

It will be apparent that both embodiments of my invention are applicable for concrete construction in sidewalks, curbs, steps, buildings and the like, and form an effective protection and reinforcement for the outturned edges of concrete structures.

My invention is also applicable as a protection to the corners of columns in factory buildings, which are usually subject to considerable abuse, since it protects a larger area of the column than any other guard with which I am familiar and cannot be broken or loosened under ordinary conditions of use.

It will now be apparent that I have devised a novel and useful construction of a corner guard for concrete curbing and the like, which embodies the features of advantage enumerated as desirable in the statement of the invention and the above description, and while I have, in the present instance, shown and described a preferred embodiment thereof which has been found in practice to give satisfactory and reliable results, it is to be understood that the same is susceptible of modification in various particulars without departing from the spirit or scope of the invention or sacrificing any of its advantages.

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

1. In a device of the character stated, a corner guard, comprising a metallic strip having top and side portions, each provided with an inturned longitudinal flange on each of its longitudinal edges adapted to form a locking engagement with the concrete, and an anchoring device interlocked with said flanges and having its lower edge a substantially rectilinear continuation of the bottom surface of said corner guard in combination with a prepared foundation on which said anchoring device rests to position the corner guard during the formation of the curb.

2. In a device of the character stated, a corner guard comprising a metallic strip having a longitudinal recess therein, and an inturned longitudinal flange on each of its longitudinal edges, and an anchoring device comprising a flat metallic strip having a flat head interlocked with said flanges and provided with an extension having a laterally deflected member thereon and said anchor serving to maintain the position and alinement of the strip during the construction of the curb in combination with a prepared foundation on which said anchoring device rests to position the corner guard during the formation of the curb.

3. In a device of the character stated, a corner guard comprising a metallic strip having a longitudinal recess therein, and an inturned longitudinal flange on each of its longitudinal edges, and an anchoring device comprising a flat metallic strip having a flat head interlocked with said flanges and provided with an extension having a laterally deflected member thereon, said extension also having a laterally deflected terminal and said anchor serving to maintain the position and alinement of the strip during the construction of the curb in combination with a prepared foundation on which said anchoring device rests to position the corner guard during the formation of the curb.

4. In a device of the character stated, a corner guard comprising a metallic strip having a longitudinal recess therein, and an inturned longitudinal flange on each of its longitudinal edges, and an anchoring device comprising a flat metallic strip having a flat head interlocked with said flanges and provided with an extension having a laterally deflected member thereon, said extension also having openings therein and a laterally deflected terminal and said anchor serving to maintain the position and alinement of the strip during the construction of the curb in combination with a prepared foundation on which said anchoring device rests to position the corner guard during the formation of the curb.

5. In a device of the character stated, a corner guard comprising a metallic strip having top and side portions, each provided with an inturned longitudinal flange on each of its longitudinal edges adapted to form a continuous locking engagement with the concrete, and an anchoring device provided with a rigid head thereon engaging said flanges, the lower edge of said anchoring device being a continuation of the bottom surface of said corner guard and said anchor serving to aline said strip with respect to the concrete in combination with a prepared foundation on which said anchoring device rests to position the corner guard during the formation of the curb.

6. A corner guard for concrete curbing

and the like, consisting of a metallic strip having a longitudinal recess therein, bounded by longitudinally extending upper depending and lower lateral flanges, whereby a pocket is formed, and an anchoring device having a head adapted to coact with said pocket and having its lower edge, when the parts are assembled, adapted to form a continuation of the lower surface of said lateral flange, said anchoring device having an extension provided with a laterally extending tongue.

7. The combination of a concrete curb having a corner top and side portions, a metallic guard strip shaped in cross section to coincide with the contour of said corner, and having straight extension portions at right angles to each other, and adapted thereby to coincide with the planes of the tread and of the rise of the curb respectively, the terminals of said extended portions of said strip having short inturned flanges which enter the concrete in a direction to intersect each other at right angles and engage and interlock a body of the concrete curb between them to the inner face of said metallic strip, of an anchoring device interlocked with said flanges, and having its lower edge projecting in substantially the same rectilinear horizontal line as the lower edge of the bottom flange of said guard strip.

8. As a new article of manufacture, an anchoring device comprising a flat strip of metal having at its forward end a convex edge and provided with shoulders, the opposite end of said strip being deflected at an angle, a portion of said strip having a tongue formed from the strip and extending at an angle therefrom and said strip having intermediate its ends an aperture to provide for the interlocking of the strip and the concrete in combination with a corner guard engaging said shoulders, and a prepared foundation on which said anchoring device rests to position said corner guard during the formation of the curb.

ANTHONY ELTON DAVIS.

Witnesses:
E. HAYWARD FAIRBANKS,
C. D. MCVAY.

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