(No Model.)

G. D. SUTTON.

STREET CURB.

No. 329,343. Patented Oct. 27, 1885.

Fig. 1.

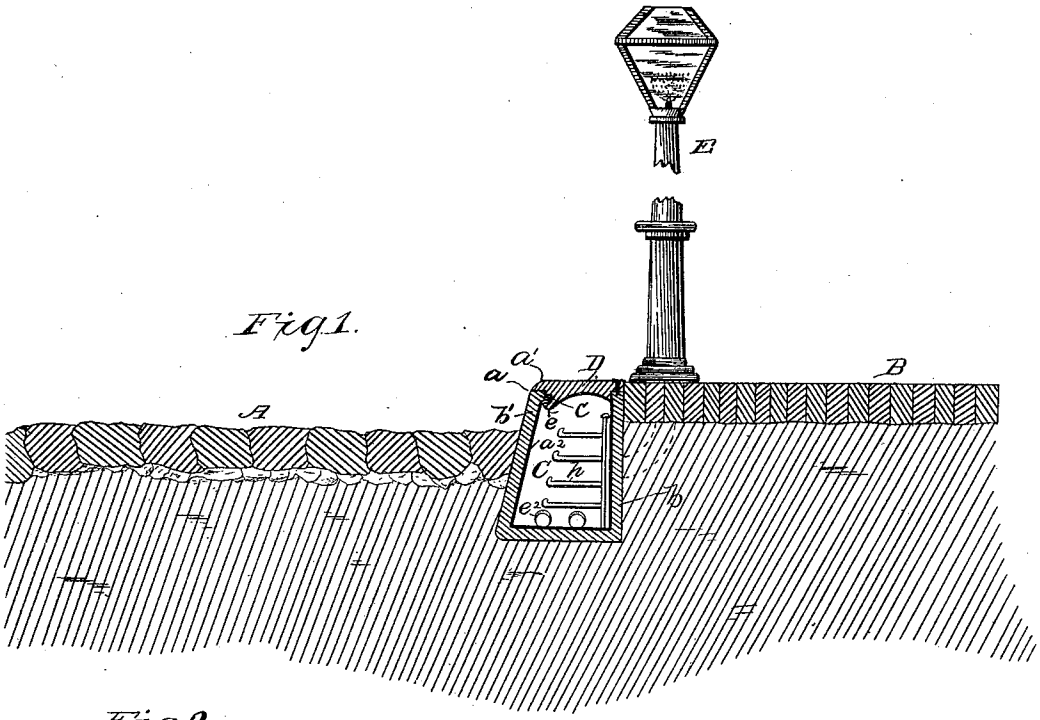


Fig. 2.

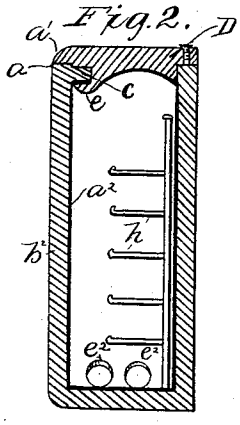


Fig. 3.

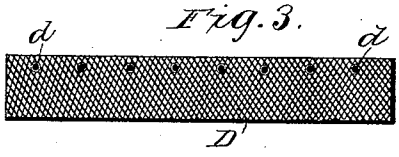
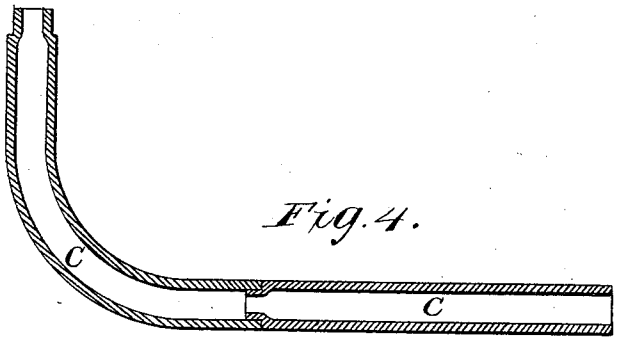


Fig. 4.



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UNITED STATES PATENT OFFICE.

GEORGE D. SUTTON, OF NEW YORK, N. Y.

STREET-CURB.

SPECIFICATION forming part of Letters Patent No. 329,343, dated October 27, 1885.

Application filed August 10, 1885. Serial No. 173,906. (No model.)

To all whom it may concern:

Be it known that I, GEORGE D. SUTTON, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Street-Curbs, of which the following is a specification.

My invention relates to the construction of the curbing of streets of cities and towns; and it has for its object the production of a curb that may be advantageously substituted for the stone curb now universally used, and which, in addition to serving the purposes for which a curb is now employed, may be utilized as a conduit for telegraphic, telephonic, and electric-light wires and cables, or for pipes for conveying power—such as compressed air—and for like purposes.

My invention consists in the construction pointed out in the claims at the end of this specification.

Referring to the accompanying drawings, which form a part of this description, and in which like features are indicated by like letters, Figure 1 represents a cross-section of one side of a street, including the curb and sidewalk, showing the application of my invention in its preferred form. Fig. 2 is a transverse vertical section of another form of my hollow curb, showing the construction of the removable cover. Fig. 3 is a plan view of a section of the removable cover, showing the corrugations on its outer surface; and Fig. 4 is a horizontal section of parts of two sections of the hollow curb, showing one method of uniting the sections.

In the drawings, A indicates the carriage-way of the street; B, the sidewalk, and C the hollow curb. The curb C is designed to be of regulation size, and by preference is of cast-iron, although any other metal or material adapted for the purpose may be used instead of cast-iron. It may be twenty inches deep, more or less, according to the requirements of the service for which it is intended, and from five to eight inches wide at its top, more or less, to meet the conditions of city and town regulations. This curb will occupy the same relation to the carriage-way and sidewalk that the stone curb now in use occupies, extending slightly above the surface of the carriage-way, but being substantially on a level with the sidewalk. The curb C will also be sufficiently thick to prevent its interior being affected by frost.

In Fig. 1 the curb C is shown with its rear wall, b, perpendicular, and its front wall, b^2, inclined from the top downward. In practice the inclination of wall b^2 will be such as to provide a width of about four inches more at the base of the structure than at its top; but I do not confine myself to any exact proportions. The advantage of this form of the curb is that increased capacity is afforded without lessening the strength of the structure. The pressure of the carriage-way upon the inclined wall b^2 will have no tendency to rupture the casting, as might be the case if the wall b^2 were curved and the paving-blocks rested upon the joint of the curve. It will also be observed that the inclination of the curve above the surface of the carriage-way is such that the wheels of vehicles when passing along the streets will not come in contact with the cover D of the curb, thus avoiding liability of the cover being injured.

The letter a^2 represents a lining of cement or any other non-conducting substance. This lining may be about three-eighths of an inch thick. Its object is to avoid any possibility of the metal composing the hollow curb detrimentally affecting the electric wires and cables which may be located within the same. Of course the wires and cables will be properly insulated, and may be provided with an armor of lead or other suitable material. When thus protected there is little if any liability of trouble arising from induction; but the non-conducting lining serves as an additional safeguard in this particular. This lining is not absolutely essential to the success of this plan of accommodating the wires beneath the surface of the ground, and its use may be dispensed with, if thought desirable.

D indicates the cover of the curb, and it is made in sections. This cover is corrugated on its outer surface, and may be provided with a series of countersunk screw-holes, d, near its inner edge, in order that said edge may be securely fastened to the top edge of the curb C. The outer edge of the cover D is provided on its under surface with a downwardly-projecting hook-shaped extension, e, and the top is secured in position by the hook catching under

a lug, *c*, formed on the upper inner surface of the outer wall of the curb C. The exterior surface of the upper edge of the outer wall of the curb C is slightly rounded or beveled, as shown at *a*, and the outer edge, *a'*, of the top D is correspondingly rounded or beveled in order to conform to the shape of the wall of the curb. By this construction the objection of an angular or sharp edge on the outer or exposed side of the curb is overcome. The corrugations on the outer surface of the cover D add strength to the metal and prevent undue wear, besides rendering said surface less liable to become polished and slippery from constant use. The cover D is made quite thick at its edges, which come in contact with the walls *b* b^2 of the curb C, so that when in position it will afford strength and solidity to the structure. The curb C is made in sections of any convenient length, which are joined by any suitable method. As shown in Fig. 4, the joint is an ordinary pipe-joint. In putting the sections together packings similar to pipe-joint packings may be used for making a water-tight connection between the sections, in order to prevent the moisture of the soil from affecting the interior of the curb. At the street-corners the sections of the curb may be made curved or angular to meet the demands of the regulations under which the curb may be laid. The interior of the curb C may be provided with suitable supports, *h*, at appropriate distances apart for the electrical conductors, when it is desirable to separate several systems of wires from one another.

The letter e^2 represents pipes or tubes of a compressed-air or other power or supply system. It is understood, of course, that when service-connections for electric lighting or any other purpose are required the hollow curb will be tapped in the appropriate place for making these connections. If thought desirable, the curb can be formed in casting with a series of such openings, which may be afterward provided with water or moisture tight plugs until required for use.

E indicates a lamp-post for an electric light. It will be located in close proximity to the hollow curb C, and its interior connected with the interior of the curb, so that the light will ventilate the conduit formed by the curb. There may be as many of these lamps as necessary or desirable, and instead of an electric light the ordinary gas-light may be utilized for this purpose. It is of course obvious that the streets of a city may be lighted by lamps taking the electric current from the wires located in my curb-conduit.

While the primary object of my invention is to furnish an inexpensive and effective underground electric-wire conduit, I do not restrict the invention to such use. For electric-wire purposes it possesses obvious advantages, as by its use the carriage-way of streets need not be disturbed either for putting down the system or for purposes of repairs and additions of new wires or cables. In crossing intersecting streets the wires or pipes may be conducted from the hollow curb through suitable boxes specially designed for such service by means of any of the well-known devices in use for transmitting objects from one point to another—as, for instance, an arrangement of cords and pulleys. This feature of the case forms no part of my invention, and I do not therefore show it or describe it in detail.

My invention will be found serviceable for parks where curbs are employed to separate the walks from the grass-plots, and where electric lights are used, as the wires may be thus placed beneath the surface of the ground with the utmost facility, and may be examined and repaired without in any degree disfiguring the appearance of the parks.

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

1. A hollow street-curb having its front wall inclined from the top to the bottom and provided with a removable cover, substantially as and for the purpose set forth.

2. A hollow street-curb having a perpendicular rear wall and an inclined front wall and provided with a removable cover, substantially as set forth.

3. A hollow street-curb having a lug, *c*, formed on its inner surface, and having the upper edge of its exterior surface rounded or beveled, as shown, in combination with the cover D, whose under surface is provided with a downwardly-projecting hook-shaped extension, *e*, and whose outer edge, *a'*, is rounded or beveled, substantially as set forth.

4. The hollow curb C, having the supports or ledges *h*, and provided with the removable cover D, substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 6th day of August, A. D. 1885.

GEO. D. SUTTON.

Witnesses:
JOHN BOYD,
J. E. M. BOWEN.