J. R. LAMBERT.

STRUCTURAL UNIT.

APPLICATION FILED FEB. 3, 1920.

1,382,095.

Patented June 21, 1921.

Fig. 1.

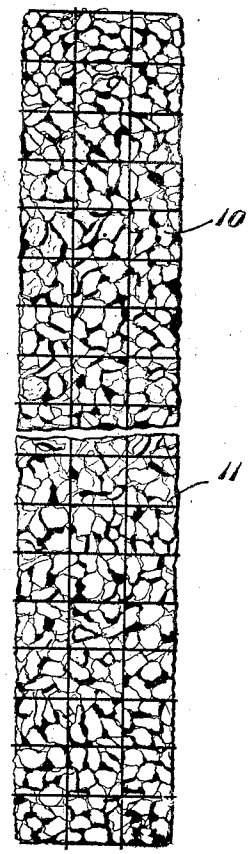


Fig. 4.

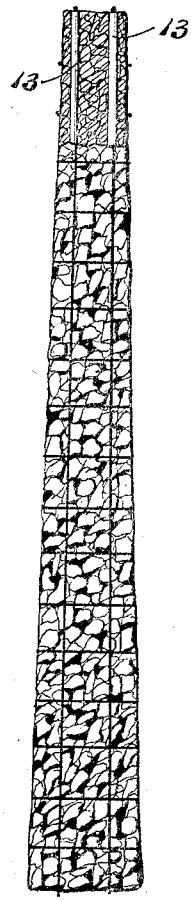


Fig. 2.

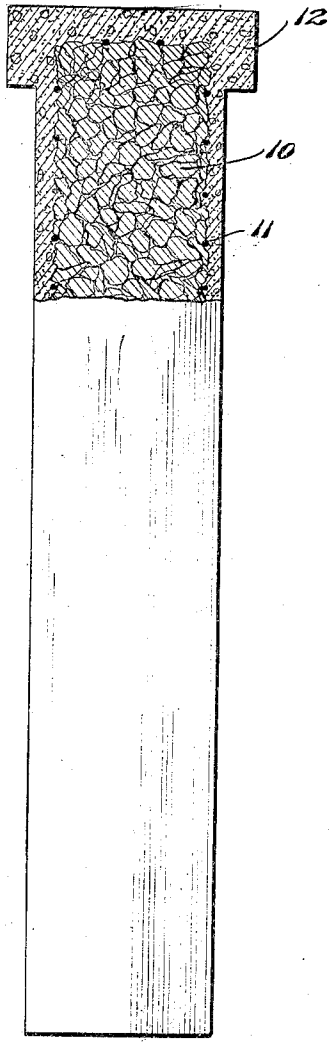
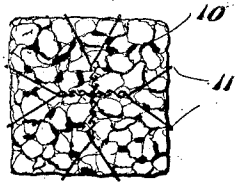


Fig. 3.



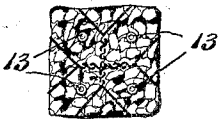


Fig. 5.

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UNITED STATES PATENT OFFICE.

JOHN RAYMOND LAMBERT, OF SAN ANTONIO, TEXAS.

STRUCTURAL UNIT.

1,382,095. Specification of Letters Patent. **Patented June 21, 1921.**

Application filed February 3, 1920. Serial No. 356,097.

To all whom it may concern:

Be it known that I, JOHN RAYMOND LAMBERT, a citizen of the United States, residing at San Antonio, Bexar county, State of Texas, have invented certain new and useful Improvements in Structural Units, of which the following is a specification.

The object of my invention is to provide a structural unit to be used in building small houses, in constructing roads, in making fence posts, curbing, porch pillars, and in many other ways, which has the properties of lightness, strength, ease of manufacture, cheapness, and durability. I obtain a structural unit having these advantages by compressing empty metal cans, containers, and metallic receptacles of other kinds into a compact mass or core of any desired shape, and covering the surface of the resulting article with a protective coating of cement, asphalt, paint or composition of any desired character which will adhere to and protect the core. I preferably reinforce this core of compressed cans by passing bands of wire or sheet metal around it, but these strengthening bands are, in some forms of the invention, unnecessary.

In the larger cities and towns many thousands of empty metallic food containers and receptacles, and cans of other varieties are collected yearly with the garbage. It has been a problem to dispose of these cans promptly, and without expense. Usually they have simply been thrown on a "dump" to rust and disintegrate. Where garbage disposal plants are used, this involves a separation of the cans from the garbage before the latter can be disposed of. Where the garbage is dumped on land, in a river, or in the sea, the cans are disposed of, but are totally lost. Various suggestions have heretofore been advanced for profitably using the waste cans, such as compressing them compactly into articles such as window weights, or heating them to such a degree that the solder will melt and run off. Neither of these methods, or any similar method, has come into popular use, and in the great majority of instances, the cans are disposed of now as they have been since cans first came into extensive use.

By collecting the waste cans and compressing them into structural shapes, they are converted to useful purposes, and not only is the problem of their disposal satisfactorily solved, but a considerable saving of other kinds of materials effected, which would otherwise have been employed in lieu thereof.

One embodiment of the invention is described below and illustrated in the accompanying drawings, in which—

Figure 1 is a side view of a core formed of compressed metal cans bound with wire, and adapted for use in forming a fence post;

Fig. 2 is a side view of a finished post, part of the surface being broken away to show the interior;

Fig. 3 is an end view of the core shown in Fig. 1;

Fig. 4 is a side view of a reinforced core of compressed cans part being broken away to show the reinforcing members;

Fig. 5 is a section on the line 5—5 of Fig. 4.

In Figs. 1, 2 and 3 of the drawings, 10 indicates the core of cans which have been pressed in any suitable compressing machine to the shape of a member adapted for use as a fence post. While I have shown and will describe the invention embodied in a fence post, it will be understood that the number of different articles which may be constructed in accordance with the spirit of the invention is practically unlimited, and paving blocks, porch pillars, and many other structural units may be made in the same manner. The cans 10 which may be waste cans of any description, are reduced considerably in size or volume in the pressing operation, but are preferably not flattened, and still contain air spaces in their interiors, as well as having interstices between them of considerable size.

When undergoing compression, the cans bend and fit into each other with the result that they are interlocked in the resulting unit, which may have a considerable strength even without reinforcing members.

To give the core thus formed, however, increased strength, I wrap or bind the same with wires or strips of metal, as shown in the drawings, this wrapping giving the core a considerable strength throughout and eliminating the possibility of the unit disintegrating in case the cans were not sufficiently interlocked at any point during the compressing. Any desired form of wrapping or reinforcing members may be used.

To the outside of the core I preferably apply a protective coating of cement, as-

phalt, paint, composition, or similar material, which serves not only to render the resulting product more attractive, but also to protect the metal of the cans and reinforcing members from moisture to cause rusting. In the drawings I have shown a coating of cement which completely covers the core, the cement penetrating into the interstices of the core and being held there. In preparing a core which is to be subsequently coated with cement, the degree of pressure is such that the interstices are neither so large that an excessive amount of cement will penetrate between them, or so small that an insufficient amount will penetrate, rendering the cement coating insecure and easily chipped off.

Where it is desired to construct a core capable of withstanding considerable bending or compression strains it may be reinforced internally or externally by bars or tubes of metal, wood, or other suitable material. In Figs. 4 and 5 of the drawings are illustrated a core of this description having internal longitudinal reinforcing members 13 extending from end to end. If desired, one or more of these members may be conduits or electric wires. Obviously, other forms of reinforcing devices and methods of incorporating them in the core may be used if desired.

A structural unit made in accordance with this invention is light in weight, inexpensive, attractive in appearance, and has a good weight carrying capacity, enabling it to be used in a large variety of ways.

Having thus described the invention what is claimed as new and desired to be secured by Letters Patent is:

1. As a new article of manufacture, a structural unit having a core consisting of waste sheet metal crushed and compressed into suitable form and having a weather proof coating.

2. As a new article of manufacture, a structural unit having a core consisting of waste sheet metal vessels crushed and compressed into suitable form and having an outer layer of weather proof material interlocked with the interstices of the core.

3. As a new article of manufacture, a structural unit having a core consisting of waste sheet metal vessels crushed and compressed into suitable form and having an outer coating of cement mortar interlocked with the interstices of the core.

In testimony whereof I affix my signature.

JOHN RAYMOND LAMBERT.