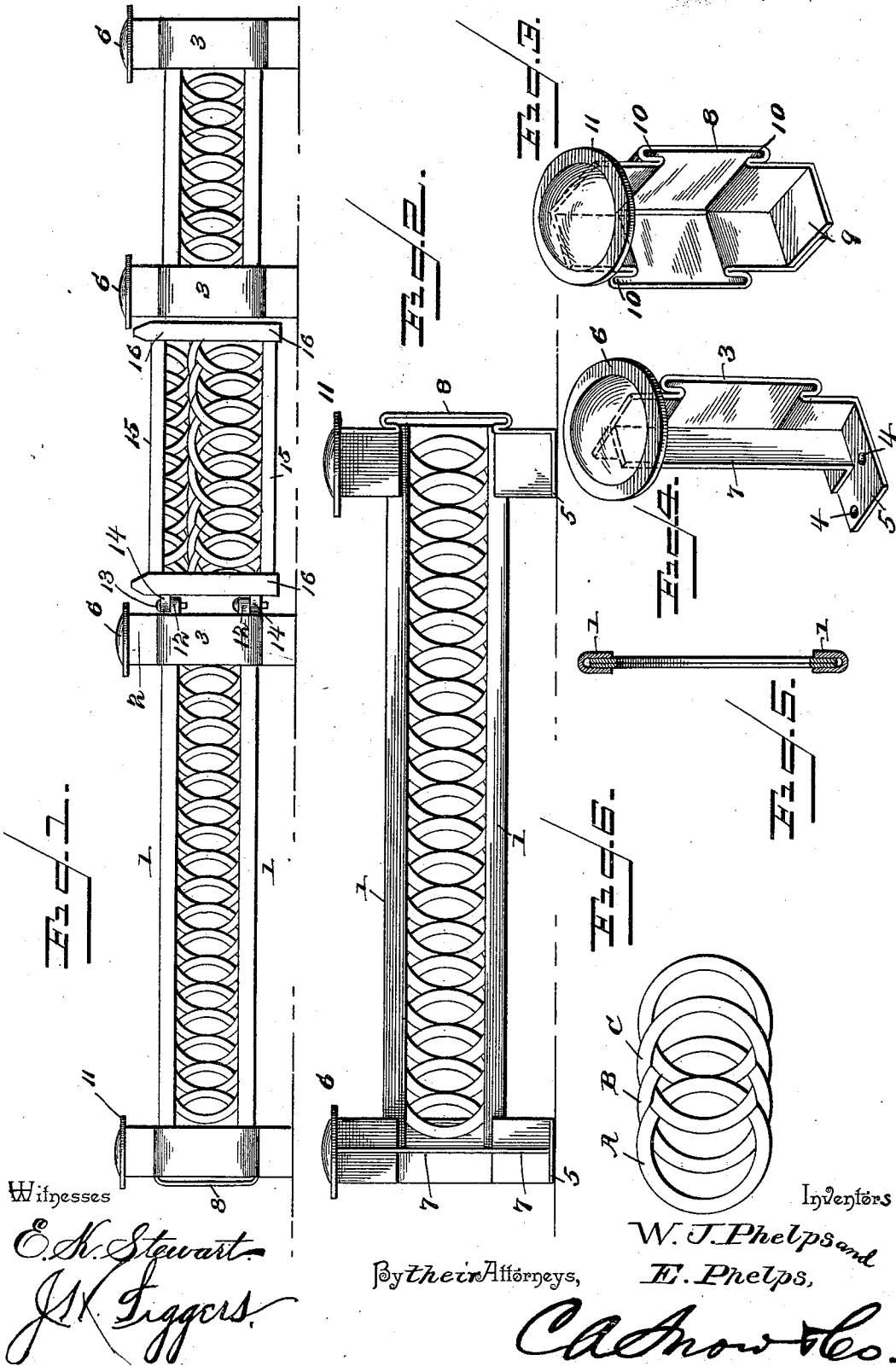


(No Model.)

W. J. & E. PHELPS.
TOY FENCE.

No. 513,137.

Patented Jan. 23, 1894.



UNITED STATES PATENT OFFICE.

WALTER J. PHELPS AND EDWIN PHELPS, OF BALTIMORE, MARYLAND.

TOY FENCE.

SPECIFICATION forming part of Letters Patent No. 513,137, dated January 23, 1894.

Application filed November 30, 1892. Serial No. 453,653. (No model.)

To all whom it may concern:

Be it known that we, WALTER J. PHELPS and EDWIN PHELPS, citizens of the United States, residing in the city of Baltimore and State of Maryland, have invented a new and useful Toy Fence, of which the following is a specification.

Our invention relates to improvements in toy fences, and those especially designed for use in connection with Christmas-trees to give an artistic and realistic appearance to the tree and its surroundings. Heretofore it has been customary to form these fences of cast-iron, and in other instances of wood, the latter being principally used. The cast-iron fence is apt to be broken by the driving of nails through the posts into the base for supporting the tree; and the wooden fence is liable at any time to become unglued, so that numerous disadvantages have arisen and objections presented themselves in the use of these fences.

The objects of our invention are primarily to produce a fence of sheet-metal, the same being strong and durable, separable, readily set up into a fence of any desired size or area, whereby it is adapted for large and small trees and their bases; and furthermore, to produce such a fence at a minimum cost of manufacture, and to utilize in such manufacture nothing but waste scraps of metal, preferably those that come from the manufacture of tin cans.

With these objects in view the invention consists in certain features of construction hereinafter specified and particularly pointed out in the claims.

Referring to the drawings:—Figure 1 is an elevation of one section of a fence, a gate, and an adjacent section all constructed in accordance with our invention. Fig. 2 is a reverse elevation. Fig. 3 is an interior perspective of one of the corner posts. Fig. 4 is a similar view of one of the intermediate posts. Fig. 5 is a transverse section through one of the fence-sections or panels. Fig. 6 is a detail of several of the filling-rings going to produce the panel and illustrating the manner of interlacing the same.

Like numerals of reference indicate like parts in all the figures of the drawings.

In the manufacture of tin cans it is cus-

tomary to stamp from the tops thereof openings or mouths which are circular, and those portions of the stock of metal that are removed from these circular openings are again cut or have stamped therefrom smaller disks which serve as covers for the mouths or openings of the smaller sizes of cans. That is to say that the openings in the three-pound cans are larger than those in the one-pound cans, and the disks cut from the three-pound cans have stamped therefrom smaller disks to serve as covers for the one-pound cans. This leaves but a small waste of stock, in fact but a mere ring, but these rings have heretofore had no utility, and have become waste bringing a very small price per ton. These rings we utilize in the manufacture of the fence and in the following manner:

In order to start the interlacing of the fence the ring A is taken in the left-hand of the operator, and the ring B laid thereunder and across the same as shown to the left of Fig. 6. The second ring C is then introduced through the ring B and overlaps the inner portion of the ring A or that portion inclosed by the ring B. The ring D is then introduced into the ring C from the under side, overlaps the ring B or that portion thereof inclosed by the ring C, and is engaged under the extreme edge of the ring A, and so on is the interlacing carried on so that a complete filling for the panel is produced. A pair of binding-strips 1 are next folded over the opposite edges of the filling thus produced and the binding-strips together with the filling pass between suitable rollers for compressing the whole together. When they emerge from the rollers the rings or filling and the strips are flattened and form a rigid interlacing structure of beautiful and artistic design and great strength, the whole being if desired free from solder or other securing means. These sections of fence may be of any desired length so that as will hereinafter appear they being connected by suitable posts any length of fence may be produced. The binding-strips which serve to bind the filling-rings in position are also left from the cutting of the can-body, and the scraps are thus utilized in this regard.

The intermediate post comprises a front metal strip 2, which between its ends is folded upon itself at each side of its transverse cen-

ter forming a loop or keeper 3, which is as wide as the fence panel. The lower ends of the post are inwardly bent to form feet 5 perforated at 4 to receive securing nails whereby they may be secured upon the base of the tree. Those portions of the stock which are formed from the heads of the smaller sizes of cans and are too small to make disks of for covering other cans are here utilized by being stamped and soldered upon the upper ends of the strips 2 forming caps 6 for the posts. Vertical stay-strips 7 are interposed between the caps and the feet 4 of the posts and are arranged at an angle to the front strips 2 of the posts thereby stiffening said posts.

The end posts are similar to the intermediate posts with the exception that they comprise the two front strips 8 of the intermediate post, the same having their feet 9 overlapping and soldered together and the vertical stay being omitted. Each of these strips 8 is bent at opposite sides of its transverse center to form the loops or keepers 10 and the whole surmounted by the cap 11. These corner posts are as their name implies employed at the corners of the fence, while the sections comprising the sides of the fence are connected by the intermediate posts. One of the intermediate posts is provided with eyes 12, and connected removably to them by pintles 13 are eyes 14 formed on the end of a gate. This gate has a filling constructed like the fence panels with the exception that it is duplicated or partially so at the upper end of the gate, the several rings composing the upper series taking between those composing the lower series, and in this instance are cut through their transverse diameters as shown. The top and bottom binding-strips 15 are employed and these are connected at their ends to the posts 16, the latter being securely soldered together.

From the foregoing description it will be seen that we have provided a fence that can be readily manufactured, easily taken down and set up by inexperienced persons, may readily conform to the size desired, and is unique, novel, and artistic; and finally that the entire fence is constructed of what is now scrap material and goes to waste, its intrinsic value being so extremely small as to hardly pay for its collection.

Having described our invention, what we claim is—

1. A fence section made up of a series of intermediate metal rings arranged successively one under the other, passed through its adjacent ring over the next adjacent one and interlocking with the third, and so on throughout the series, and means for confining the rings at their upper and lower edges; substantially as described.

2. In a toy fence, the combination with posts having keepers, of intermediate sections comprising upper and lower binding-strips of metal and intermediate fillings of metal, the strips being rolled upon the fillings and the sections at their ends being adapted for removable insertion into the keepers of the posts, substantially as specified.

3. In a toy fence, the combination with opposite posts, each comprising a front strip folded at each side of its transverse center to form a keeper, and having its lower end bent at a right angle and perforated to form a securing foot, and a cap surmounting the fence, of an intermediate section of sheet-metal adapted to fit removably at its ends within the keepers of the posts, substantially as specified.

4. In a fence, the combination with the end posts each comprising two outer strips arranged at right angles to each other and having their lower ends bent to form right angularly-disposed feet overlapping and soldered together, said feet being perforated to receive nails, the strips being surmounted by a cap and at each side of their transverse centers bent or folded to form intermediate keepers, of fence sections formed of sheet metal and adapted at their ends to be removably inserted into said keepers, substantially as specified.

5. A fence-section, comprising upper and lower binding strips of metal, and a series of intermediate rings also of metal embraced by the binding-strips, said rings arranged successively one under the other, passed through its adjacent ring over the next adjacent and interlocking with the third, and so on throughout the series, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

WALTER J. PHELPS.
EDWIN PHELPS.

Witnesses:

W. N. WAMSLEY,
WM. H. JONES.