(No Model.)

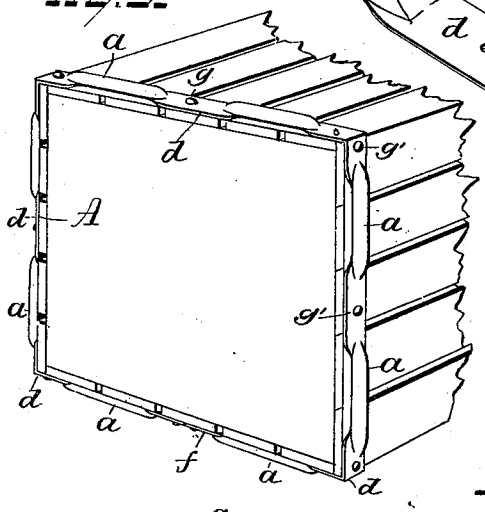
W. W. MINER.

HOOP FOR BOXES, &c.

No. 510,436. Patented Dec. 12, 1893.

Fig. 1.

Fig. 3.



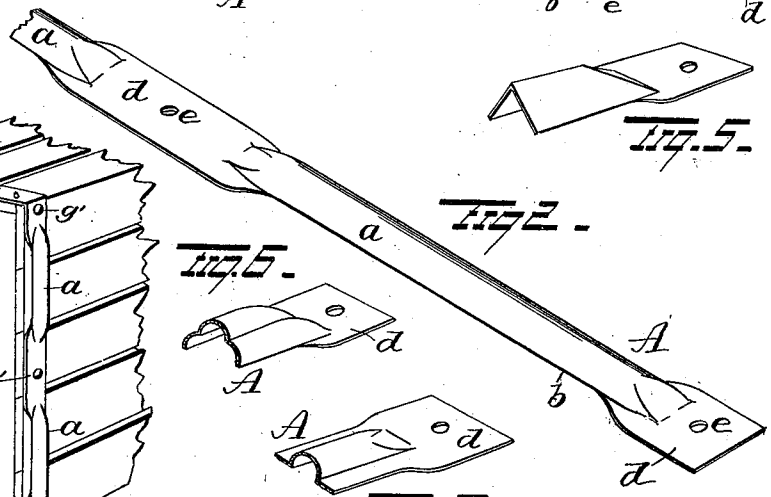


Fig. 5.

Fig. 6.

Fig. 7.

Fig. 4.

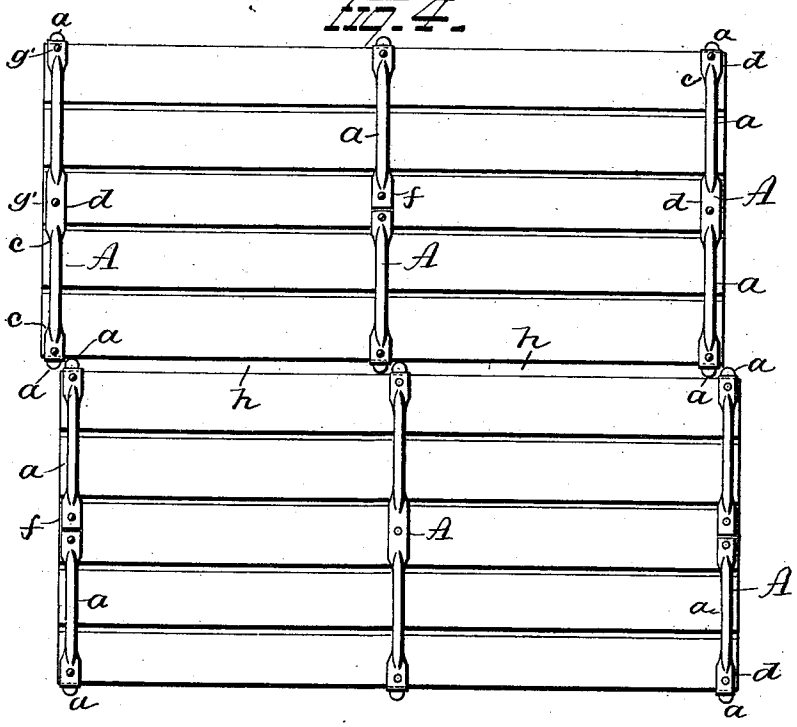
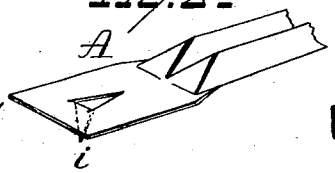


Fig. 8.



Witnesses
E. Nottingham
G. F. Downing

Inventor
W. W. Miner
By H. A. Seymour
Attorney

THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM W. MINER, OF TORRINGTON, CONNECTICUT.

HOOP FOR BOXES, &c.

SPECIFICATION forming part of Letters Patent No. 510,436, dated December 12, 1893.

Application filed February 9, 1893. Serial No. 461,664. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. MINER, of Torrington, in the county of Litchfield and State of Connecticut, have invented certain new and useful Improvements in Hoops or Bands for Boxes, Crates, and Packages; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in hoops or bands for boxes, crates and packages, the object being to provide a hoop of such construction that it may be securely fastened in place; of such form in cross-section that it will insure a ventilating space between the adjacent surfaces of boxes or crates when piled one above another, and which will be of small initial cost in its manufacture.

With these ends in view my invention consists in a hoop or band embodying certain features of form and construction as will be hereinafter described and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in perspective of my improved hoop. Fig. 2 is an enlarged view. Fig. 3 is an end view of a portion of a box provided with my improved hoops. Fig. 4 is a side view of two boxes one placed on the other, each being provided with my improved hoop whereby a ventilating space is provided between the boxes. Figs. 5, 6, 7 and 8 show modifications.

A represents my improved hoop which is made of comparatively thin sheet iron and is stamped or pressed into the form shown. Sections *a* are curved in cross section their edges *b*, *b*, being adapted to rest on the crate or box. The ends of each section *a* are gradually curved as at *c* and merge into the flattened sections *d* which latter are provided with one or more holes *e* through which nails are driven into the box or crate.

In applying the hoop to a box the end *f* is nailed to the box and the flattened sections *d* are bent around the corners and secured by the nails *g*, *g'* driven into the top and sides of the box. The hoop is secured to the central portions of the top, bottom and sides of the box by nails driven through the flattened sections *d*.

The hoop is preferably made so that after it has been bent around and fastened to a box, its ends will slightly separate as shown, in order to enable each end to be nailed directly to the box or crate.

The hoop is especially adapted for use on orange boxes the width and depth of which are equal in measurement and hence in applying the hoops, the flattened sections will always register with the corners of the box. However hoops may be specially designed for boxes or crates of any size or of varying dimensions. The curved sections *a* impart great strength and rigidity to the hoops, and owing to the fact that they project outwardly from the box, they constitute supporting ledges which serve to separate the boxes when piled one on another as shown in Fig. 4 and thereby form intervening ventilating air spaces *h* between them. This is a very essential feature in the transportation of oranges and other fruit. The curved sections with their curved ends *c* constitute in effect sectional metal shoes or runners which enable the boxes to be readily handled in piling them for transportation as they can be easily moved transversely one on another and without danger of catching or breaking their hoops.

Instead of making the curved sections *a* of the form in cross-section shown in Fig. 1, they may be made of the angular form illustrated in Fig. 5 or corrugated or fluted as shown in Fig. 6, or with lateral bearings as shown in Fig. 7. Again the nail holes through the flattened sections may be made by punching a triangular spur *i* (one or more) therefrom as represented in Fig. 8. These spurs may be driven into the box or crate as the hoop is being applied and thereby serve as an additional means for securing the hoop in place.

As it is evident that my invention is susceptible of embodiment in forms of hoops other than the particular forms shown and described I would have it understood that I do not limit myself to the particular construction and forms shown and described; but,

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

1. A sheet metal hoop for boxes, crates, packages and similar devices, constructed

with a series of longitudinal ribs projecting outwardly from one face of the hoop, said ribs sufficiently removed from each other at adjacent ends to leave flat bearings, said bearings adapted to rest flat on the article upon which the hoop is placed, and having each means whereby it may be fastened to the article, the ends of the longitudinal ribs tapering and merging into the intervening bearings, substantially as set forth.

2. A sheet metal hoop for boxes and similar articles constructed with a series of longitudinal ribs the ends of which taper, and intervening flat bearings wider than the portion having the ribs thereon and into which the ends of the ribs merge, and constructed with means to effect an attachment to the article upon which it is placed and secured, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM W. MINER.

Witnesses:
LOUIS G. MINER,
MILO L. PECK.