J. G. HODGSON.

HOLDER FOR SHIPMENT OF TIN PLATE OR OTHER THIN SHEETS.

APPLICATION FILED NOV. 13, 1907.

921,699.

Patented May 18, 1909.

Fig. 1

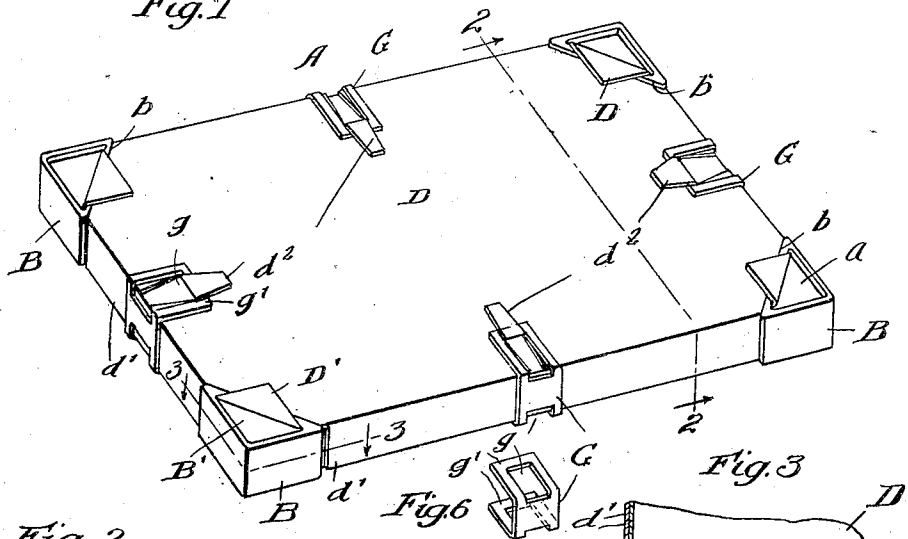


Fig. 6

Fig. 3

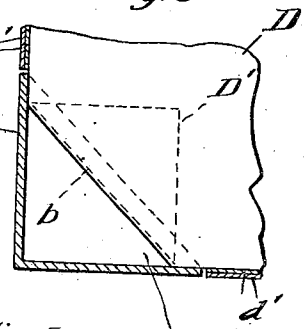


Fig. 2

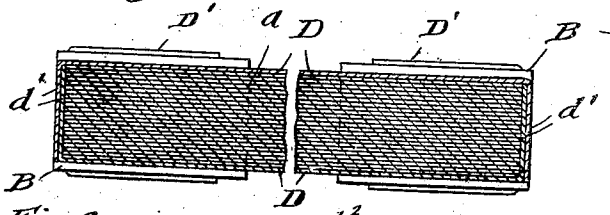


Fig. 4

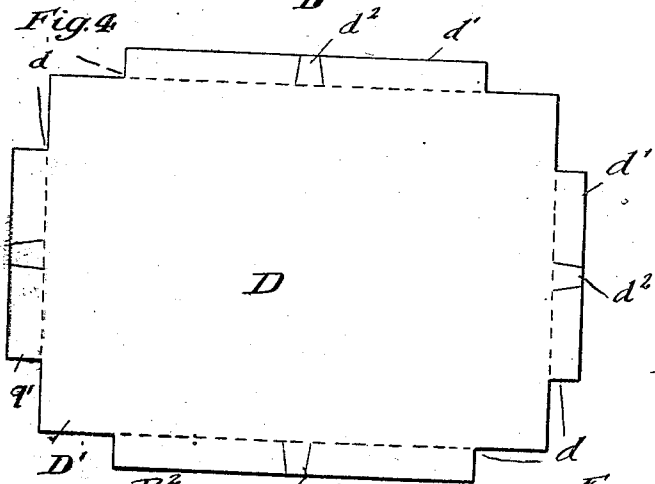


Fig. 5

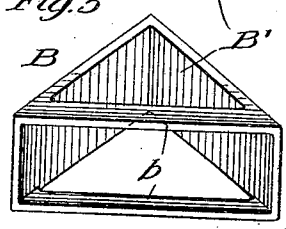


Fig. 7

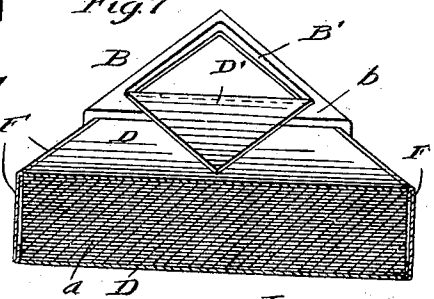


Fig. 8

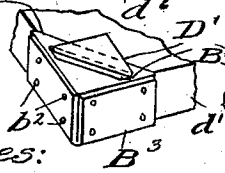
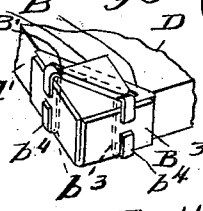


Fig. 9



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UNITED STATES PATENT OFFICE.

JOHN G. HODGSON, OF MAYWOOD, ILLINOIS, ASSIGNOR TO AMERICAN CAN COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

HOLDER FOR SHIPMENT OF TIN-PLATE OR OTHER THIN SHEETS.

No. 921,699. Specification of Letters Patent. Patented May 18, 1909.

Application filed November 13, 1907. Serial No. 401,940.

To all whom it may concern:

Be it known that I, JOHN G. HODGSON, a citizen of the United States, residing in Maywood, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Holders for Shipment of Tin-Plate or other Thin Sheets, of which the following is a specification.

My invention relates to improvements in packages or holders for shipment of tin plate or other thin sheets.

The object of my invention is to provide a package or holder for shipment of tin plate in the customary sized packages or bundles, of say about 100 pounds weight and 112 sheets; which will be of a strong, simple and durable construction; which may be readily and conveniently applied; which will efficiently bind the numerous thin sheets of the package together so that they will mutually reinforce and strengthen each other as well as the package or holder itself; which will effectively protect the corners and edges of the sheets in the package from denting, bending or other injury; which will properly protect the outer surfaces of the upper and lower sheets from wet, dirt, scratching or other injury; and which at the same time will be a returnable package or holder and capable of being used over and over again, and which will be adapted for use on sheets of any size.

My invention consists in a holder for shipment of tin plate or other thin sheets in piles or packages, comprising essentially a plurality of corner protectors adapted each to be slipped over one corner of the pile or packages of sheets and each having upper and lower angle bars around which the corners of the outer protecting sheets of the pile or package may be bent or folded, so that the outer protecting sheets will thus serve as the connecting means for the corner protectors and firmly connect and bind them all together. It further consists, in connection with these parts, in providing the outer or upper and lower protecting and connecting sheets with folds or flanges at the marginal edges thereof to overlap and protect the side and end edges of the tin plate or other sheets in the pile or package.

It further consists in the novel construction of parts and devices and in the novel combinations of parts and devices herein shown and described.

In the accompanying drawing, forming a part of this specification, Figure 1 is a perspective view of a tin plate shipping package or holder embodying my invention; Fig. 2 is a vertical section on line 2—2 of Fig. 1; Fig. 3 is a detail longitudinal section on line 3—3 of Fig. 1; Fig. 4 is a detail plan view of one of the outer protecting and connecting sheets; Fig. 5 is a detail perspective view of one of the corner protectors; Fig. 6 is a detail perspective view of one of the U-shaped intermediate binders; Fig. 7 is a perspective view illustrating a modification; Fig. 8 is a perspective view illustrating a modified construction of one of the corner protectors, showing the same made of sheet metal in two parts permanently secured together; and Fig. 9 is a perspective view illustrating a modified construction of the corner protector in which it is made of two sheet metal stamped parts removably connected together.

In the drawing A represents a shipping unit or package of tin plate or other thin metal sheets of any ordinary or customary size, such for example as a 100 pound package comprising say 112 sheets *a* of 14 by 20 inches, or 20 by 28 inches or other customary dimensions.

My holder for the pile or package of sheets A consists in a plurality of corner protectors B, preferably of malleable cast metal, each adapted to slip over and embrace one corner of the pile or package A, and each preferably of a general triangular socket-shape, and each having upper and lower integral bars *b* extending diagonally or cornerwise, and leaving a triangular-shaped opening B^1 in the holder through which the corner D^1 of the outer protecting and connecting sheet D may be folded over said bar *b* of the corner protector B at each of the four corners of the package and thus firmly connect all the socket-shaped corner protectors together. The outer or protecting sheets D are preferably made of thin untinned sheet steel or taggers iron, or other suitable sheet metal. If desired the two outer ones of the tin plate sheets *a* may be used as the connecting sheets for the socket-shaped triangular corner protectors B. The outer or connecting sheets D are preferably furnished with notches *d* to facilitate the bending or folding of the corners D^1 thereof over the angle bars *b* of the corner protectors B. The connecting or protecting sheets D may also preferably be furnished with projecting portions d^1,

which may be turned or folded to overlap the sides and end edges of the pile or package of tin plate sheets *a*, to cover and protect such side and end edges; although as the corner protectors B in combination with the connecting sheets D, serve to very rigidly, snugly, firmly and closely bind the pile A of sheets *a* together, such sheets will mutually protect each other from injury at the side and end edges thereof. If preferred, edge protecting strips F for covering the sides and end edges of the sheets *a*, may be employed, the same fitting at the ends thereof within the corner protectors B B, as will be readily understood from Fig. 7 of the drawing illustrating this modification. These edge protecting strips F may be made of any suitable material, as thin strips of wood, paper-board or metal. The connecting sheets D are also preferably furnished with slotted projections or tongues d^2 which are inserted through the slots or openings *g* of the U-shaped intermediate binders G and folded or clenched over the bars g^1 thereof. The intermediate binders or loops G thus coöperate with the connecting sheets D to firmly compress and secure the package of sheets *a* at the middle portions of the package.

The corner protectors B may be of any desired size and if made large enough to substantially meet or cover the entire end and side edges of the package A they will themselves serve as the protecting, means for the side and end edges of the sheets *a* as well as corner protectors.

In the modification illustrated in Fig. 8 the corner protector is made in two parts B^2 and B^3 of sheet metal stamped to the required form and secured together by rivets b^2.

In the modification illustrated in Fig. 9 the two parts B^2 B^3 of the corner pieces are removably secured together by sheet metal straps b^3 having bent ends b^4.

The supplemental covering or protecting sheets D^2 of water-proofed paper, paper-board, or other suitable material, may, if desired, as indicated in Fig. 7 be interposed between the connecting and protecting sheet D and the outer sheets *a a* of the tin plate pile or package A. These supplemental cover sheets D^2 protect the tin plate sheets from wet or dirt that might enter at the openings in the connecting sheets D formed by the turned over lips or corners thereof.

I claim:

1. A holder for shipment of tin plate or other thin sheets, consisting in a plurality of triangular socket-shaped corner protectors, one embracing each corner of the pile or package of sheets, and each having upper and lower angle bars and triangular openings, and outer protecting and connecting sheets having their corners folded over the upper and lower angle bars of said corner protectors, substantially as specified.

2. A holder for shipment of tin plate or other thin sheets, consisting in a plurality of triangular socket-shaped corner protectors, one embracing each corner of the pile or package of sheets, and each having upper and lower angle bars and triangular openings, and outer protecting and connecting sheets having their corners folded over the upper and lower angle bars of said corner protectors, said protecting and connecting sheets being furnished with notches at their edges adjacent to their folded corners, substantially as specified.

3. A holder for shipment of tin plate or other thin sheets, consisting in a plurality of triangular socket-shaped corner protectors, one embracing each corner of the pile or package of sheets, and each having upper and lower angle bars and triangular openings, and outer protecting and connecting sheets having their corners folded over the upper and lower angle bars of said corner protectors, said protecting and connecting sheets being furnished with notches at their edges adjacent to their folded corners, and also having folded projecting portions or flanges covering the side and end edges of the pile or package of sheets between said corner protectors, substantially as specified.

4. A holder for shipment of tin plate or other thin sheets, consisting in a plurality of triangular socket-shaped corner protectors, one embracing each corner of the pile or package of sheets, and each having upper and lower angle bars and triangular openings, and outer protecting and connecting sheets having their corners folded over the upper and lower angle bars of said corner protectors, said protecting and connecting sheets having folded portions or flanges covering the side and end edges of the pile or package of sheets between said corner protectors, substantially as specified.

5. A holder for shipment of thin sheets in piles or packages, consisting of socket-shaped corner protectors having openings to receive members of a connecting sheet, one embracing each corner of the pile or package, in combination with connecting sheets having members extending through and clenched over said corner protectors for securing said corner protectors together, substantially as specified.

6. A holder for shipment of thin sheets in piles or packages, consisting of socket-shaped corner protectors having openings to receive members of a connecting sheet, one embracing each corner of the pile or package, in combination with connecting sheets having members extending through and clenched over said corner protectors for securing said corner protectors together, and means for covering and protecting the side and end edges of the pile of sheets between said corner protectors, substantially as specified.

7. In a holder for shipment of thin sheets in piles or packages, a socket-shaped corner protector having upper and lower angle bars and triangular openings, and connecting sheets having members extending through said openings and clenched over said angle bars for securing said corner protector in place, substantially as specified.

8. The combination with a plurality of corner protectors furnished with angle bars, of outer connecting sheets folded at the corners thereof over said angle bars of the corner protectors, substantially as specified.

9. A holder for shipment of thin sheet in piles or packages, consisting of socket-shaped corner protectors having openings to receive members of a connecting sheet and U-shaped intermediate binders, in combination with connecting sheets having members extending through and clenched over said corner protectors for securing said corner protectors and intermediate binders together, substantially as specified.

10. A holder for shipment of thin sheets in piles or packages, consisting in corner protectors, intermediate binders and upper and lower connecting sheets furnished with clenching lips extending through said corner protectors and binders, substantially as specified.

11. A holder for shipment of thin sheets in piles or packages, consisting in corner protectors, intermediate binders and upper and lower connecting sheets furnished with clenching lips extending through said corner protectors and binders, and means for covering or protecting the side and end edges of the pile or package of sheets, substantially as specified.

12. A holder for shipment of thin sheets in piles or packages, consisting in the combination of socket-shaped corner protectors with U-shaped intermediate binders and connecting sheets having their corners clenched over the corner protectors and provided with lips or tongues clenched over the U-shaped intermediate binders, substantially as specified.

13. A holder for shipment of thin sheets in piles or packages, consisting in a plurality of corner protectors having angle bars and openings over and through which the corners of a connecting sheet may be folded, in combination with an outer connecting sheet having its corners folded through and over the bars of said corner protectors, and a supplemental cover sheet beneath said connecting sheet, substantially as specified.

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Witnesses:
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