

June 18, 1935.

W. C. TAMPLIN

2,005,117

APPARATUS FOR SHIPPING METAL

Filed Sept. 21, 1933

2 Sheets-Sheet 1

Fig. 1.

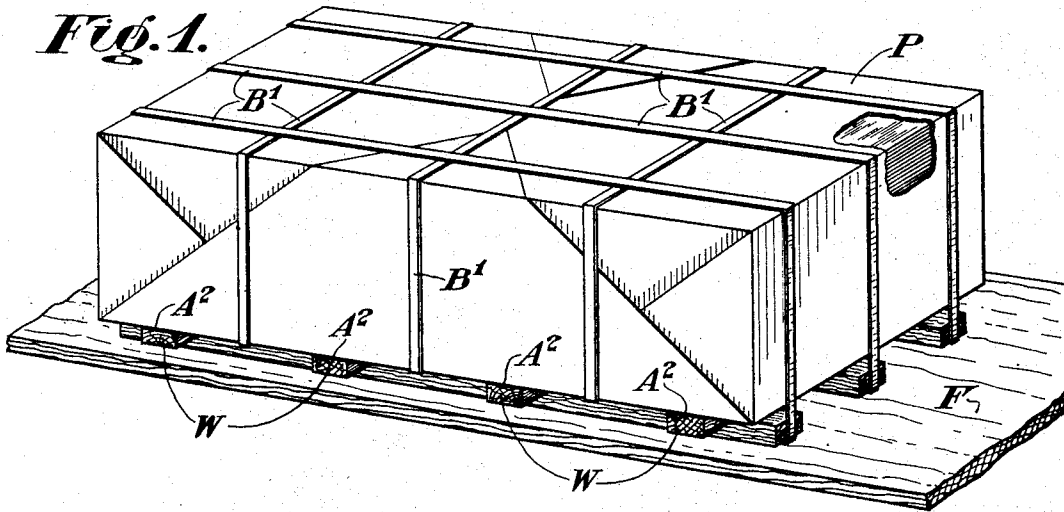


Fig. 2.

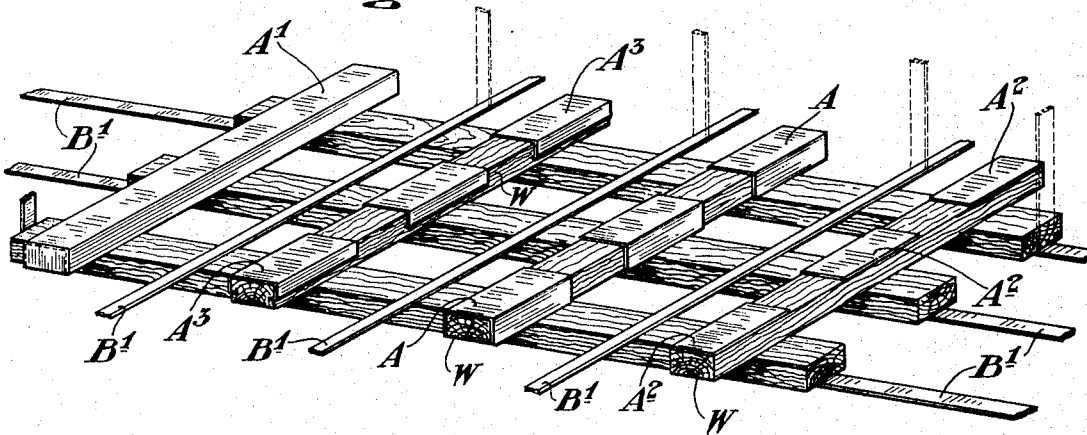


Fig. 4.

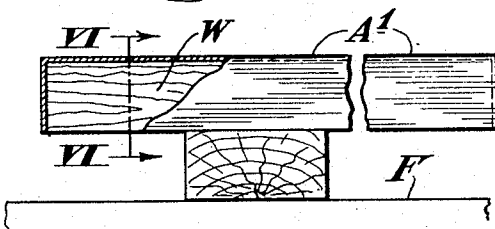


Fig. 5.

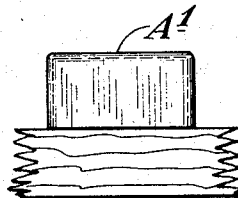
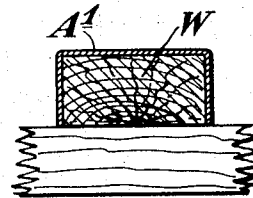


Fig. 6.



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2 Sheets-Sheet 2

Fig. 3.

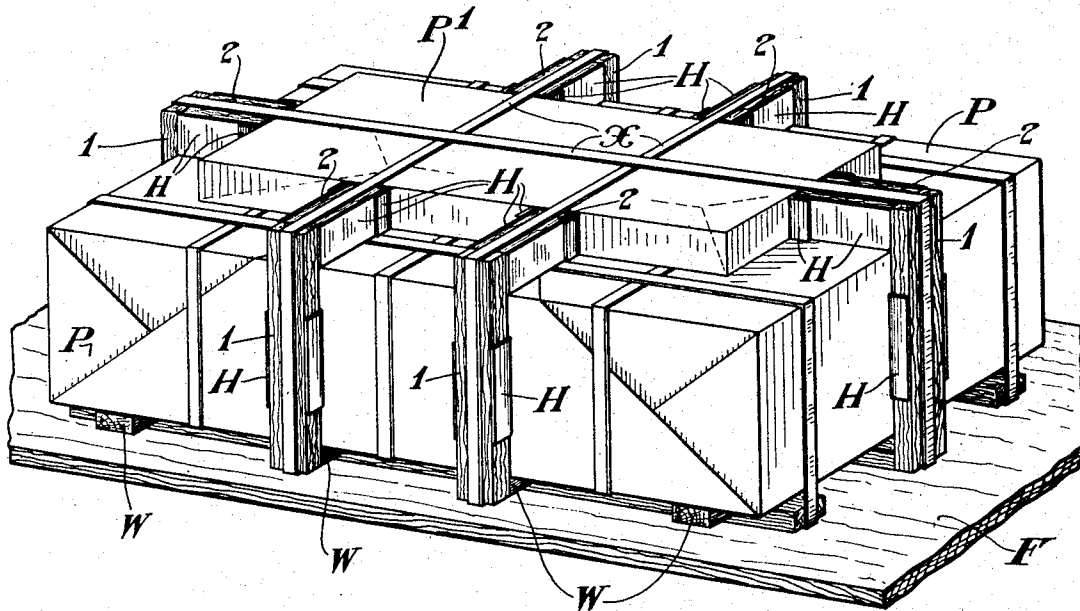


Fig. 7.



Fig. 9.

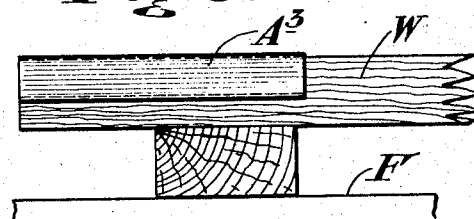
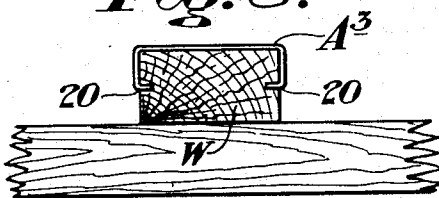


Fig. 8.



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UNITED STATES PATENT OFFICE

2,005,117

APPARATUS FOR SHIPPING METAL

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Application September 21, 1933, Serial No. 690,485

2 Claims. (Cl. 206—60)

This invention relates to an apparatus for supporting packs of metal sheets during transportation in railway cars and the like, and while not limited thereto, relates particularly to an apparatus for supporting packs of steel sheets, and has for one of its objects the provision of an apparatus particularly designed to protect the bottom-most sheet of the pack of sheets against damage resulting from moisture or other corrosive or mechanical damaging elements.

The packs of sheets to which this invention relate are generally enclosed in a heavy non-metallic waterproof wrapping, supported on suitable wooden supports and the wrapped pack and supports are bound together in a unit by steel bands or wires.

Heretofore it has generally been the practice to provide the top and bottom of the packs of sheets with what are technically known in mill parlance as "waster" sheets. These sheets have considerable commercial value when further processed, so as to be usable for other purposes than that for which they were originally designed. Provision of waster sheets as the top and bottom sheets of the packs protect the prime or perfect sheets of the pack. However, such waster sheets were expensive to the manufacturer or shipper for the reason that over a period of time these sheets amount to considerable tonnage. The amount of loss in the waster sheets will be more readily appreciated when it is understood that some packs are composed of very large sheets, such as for example sheets 72" to 84" in width and 120" to 160" in length having from 16 to 24 USS gages.

In an attempt to eliminate the expensive use of waster sheets manufacturers and shippers have provided heavier and more expensive wrappings for the packs and have applied an expensive and heavy oil coating particularly to the bottom and top sheets of the packs. However, in spite of this precautionary measure experience has shown that during transit the bottom sheets and the top sheets, in case the packs are arranged one on top of the other with wooden spacers between them, become corroded and damaged so that the purchaser, upon the receipt of the packs of sheets, would reject the outer sheets. The wooden supporting members and spacing members on which the packs of the sheets rest have a tendency to absorb moisture and this moisture in connection with the acid inherent in the wood and the chemical reactions resulting from the combination of this moisture with grit and other foreign matter may penetrate the so-called waterproof wrappings of a package, even though the wrapping is

unbroken. However, the damage is greatly increased when the wrapping is broken in transit.

The present apparatus overcomes all of the above disadvantages of the prior art methods of shipping the packs of sheets and reduces the cost of shipping material.

In the drawings:

Figure 1 is perspective of the device of the invention in use.

Figure 2 is a view similar to Figure 1, showing various details of construction.

Figure 3 is a perspective view of a modified form of the invention.

Figure 4 is a detail, shown partly in section.

Figure 5 is a fragmentary end view of the detail of Figure 4.

Figure 6 is a sectional detail on the line VI—VI of Figure 4.

Figures 7 and 8 are views similar to Figure 6, of a modified detail of construction.

Figure 9 is a side elevation of a modification of Figures 7 and 8.

The reference letter F designates the floor of a railway car or other vehicle on which are arranged wooden spacing blocks or elongated supporting members W. The supporting members W are generally composed of lengths of standard 2" x 4" lumber and are arranged to form an overall supporting area substantially equal with the area of the pack of plates or sheets to be supported. The supports W may be blocked on the floor F of the vehicle, if desired to prevent shifting of the assembled pack. However, such blocking is not essential. The supporting members are in every instance adapted to be of such size as to provide a space between the bottom of the pack of sheets and the floor of the vehicle to permit the insertion of loading or unloading hooks or tractor prongs. Longitudinally extending steel bands B¹ extend under the longitudinally arranged supports and are adapted to be secured over the pack of wrapped sheets to bind the whole assembly together as a unit.

In order to space the pack of sheets or plates from the wooden supporting members W, metal spacing members A are secured to the wooden supports W. The spacers A are generally composed of sheet or strip steel, but any other moisture-resisting material of satisfactory strength may be substituted. The spacers A may be of various shapes and sizes and may be applied to both the transverse and longitudinal supporting members, or to only the longitudinal or the transverse supporting members, as desired.

In the drawings the members A are shown as being substantially channel-shaped and are of relatively short length so that they may be applied at spaced intervals to the supporting members W, and they are shown as A¹ of such length that they are co-extensive to the entire length of the transverse supporting members W.

A modified form of spacing member A² is shown consisting of relatively short lengths of flat sheets or plates adapted to be mounted on the upper face only of the supporting members W.

A further modification may be provided as shown at A³ in which the spacing members are provided with flanges having their free edges bent inwardly, as at 20, to provide anchoring means adapted to be driven into the sides of the wooden supporting members W.

In practice it has been shown that spacing members used in accordance with this invention will prevent corrosion, discoloration or other damage to the outer sheets of a pack when formed of very thin material, for example, while spacing members composed of 18 gage stock are preferable, as low as 28 gage stock is satisfactory.

In Figure 3 I have shown a further use of spacer members on vertical supports. Referring particularly to this figure the letter P is used to designate a pack of sheets or plates assembled as described above, and the letter P¹ is used to designate a pack of smaller sheets or plates mounted on top of the pack P. In order to prevent the smaller pack P¹ from shifting relative to the large pack P, I have provided vertical wooden supporting elements 1 which are arranged in line with the wooden supporting members W of the large pack P and having their lower side faces abutting the ends of the supporting members W. The members 1 extend above the top face of the pack P, and horizontal wooden supporting members 2 are arranged between the projecting portions of the supporting members 1 and the end and side edge faces of the small pack P¹. In order to prevent corrosion and marking of the sheets of the large pack P the supporting members 1 and 2 are provided with metal spacing members H of the same construction as the spacers A, previously described. In order to hold the supporting members 1 and 2 and the pack P¹ in assembled position, steel bands X are secured around the assembled packs and over-lie the supporting members.

While I have shown and described certain specific embodiments of my invention it will be understood that I do not wish to be limited thereto, since various modifications may be made without departing from the scope of my invention as defined in the appended claims.

I claim:

1. A pack of metal sheets arranged for transport comprising a plurality of assembled prime sheets arranged one on top of the other, a non-metallic water-proof wrapping enclosing said assembled sheets, transverse means for securing said assembled and wrapped sheets together as a unit, spaced wooden supporting elements disposed longitudinally under said unit, spaced wooden supporting elements disposed between said unit and said longitudinally disposed supporting elements and arranged transversely with respect to the latter, separate metal spacing elements arranged at spaced intervals along the length of said transversely disposed supporting elements, each of said metal spacing elements being disposed wholly below said unit of assembled and wrapped sheets and contiguous thereto, and means extending along said longitudinally disposed supporting elements for securing the same to said unit of assembled and wrapped sheets.

2. A pack of metal sheets arranged for transport comprising a plurality of assembled prime sheets arranged one on top of the other, a non-metallic water-proof wrapping enclosing said assembled sheets, transverse means for securing said assembled and wrapped sheets together as a unit, a similarly assembled and wrapped pack of smaller sheets disposed on said unit, spaced wooden supporting elements disposed longitudinally under said unit, spaced wooden supporting elements disposed between said unit and said longitudinally disposed supporting elements and arranged transversely with respect to the latter, separate metal spacing elements arranged at spaced intervals along the length of said transversely disposed supporting elements, each of said metal spacing elements being disposed wholly below said unit of assembled and wrapped sheets and contiguous thereto, at least one vertically disposed and spaced wooden supporting element on each side of said first named unit, a separate spacing element between each of said vertically disposed supporting elements and said pack of smaller sheets, means connected with said vertically disposed supporting elements for maintaining said pack of smaller sheets in position, separate metal spacing elements disposed between said last named means and said pack of smaller sheets, separate metal spacing elements disposed between said last named means and said unit, means extending along said longitudinally disposed supporting elements for securing the same and said unit together, and means extending along said vertically disposed wooden supporting elements and said means connected thereto for securing said unit and said pack of smaller sheets together.

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