

March 15, 1932.

H. K. MOORE

1,849,330

SHIPPING PACKAGE

Filed Dec. 31, 1930

4 Sheets-Sheet 1

Fig. 1.

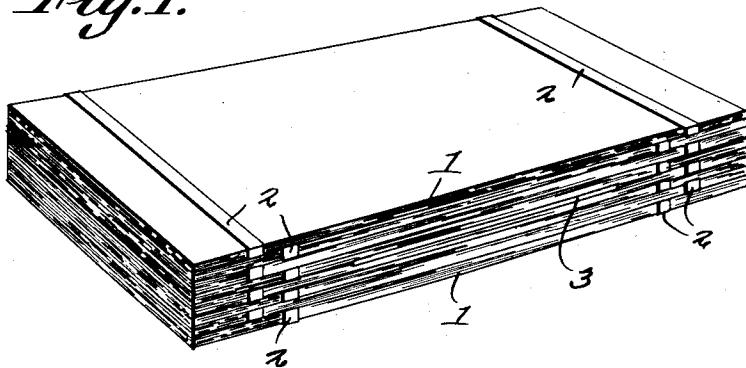


Fig. 2.

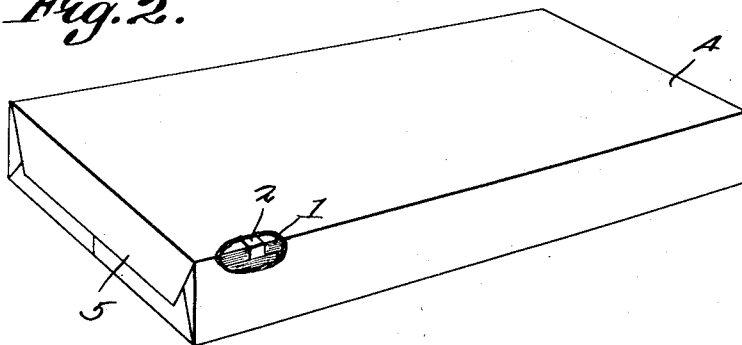
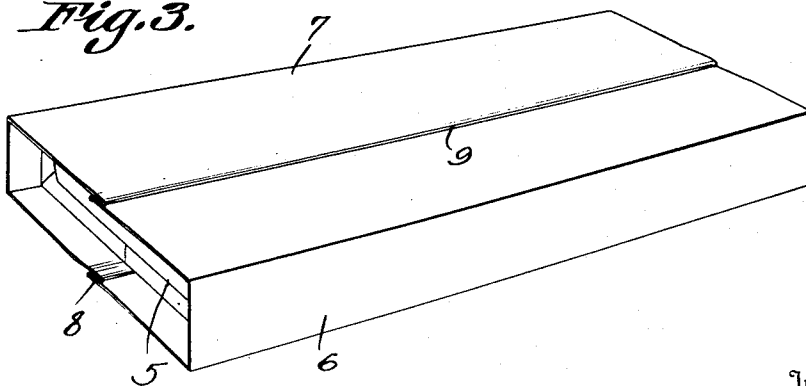


Fig. 3.



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4 Sheets-Sheet 2

Fig. 5.

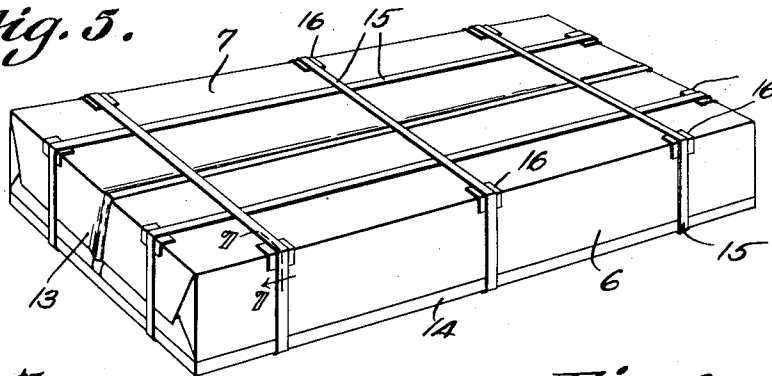


Fig. 7.

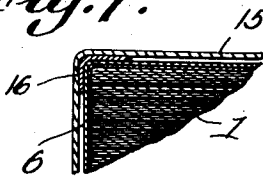


Fig. 6.

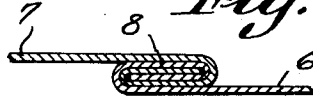
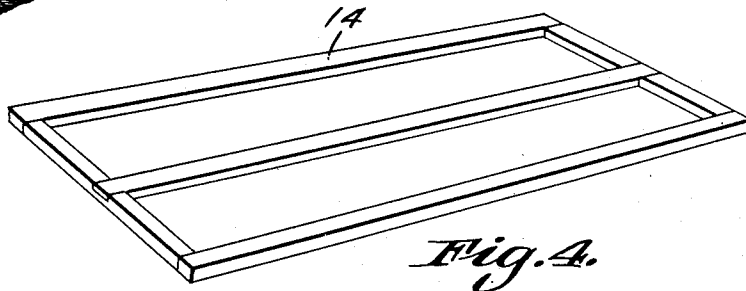


Fig. 4.

Fig. 8.

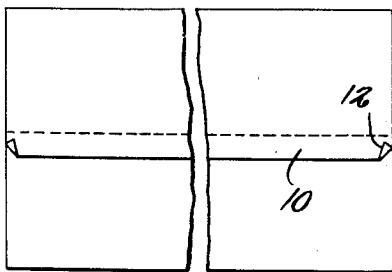
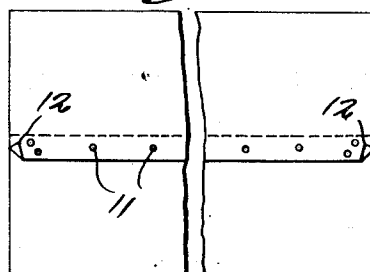


Fig. 9.



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4 Sheets-Sheet 3

Fig. 10.

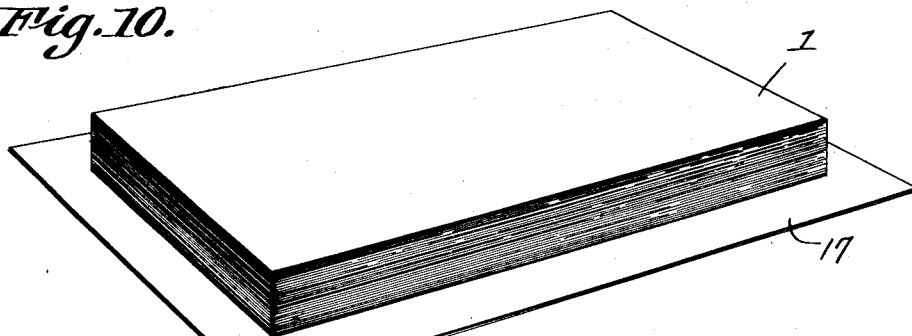


Fig. 11.

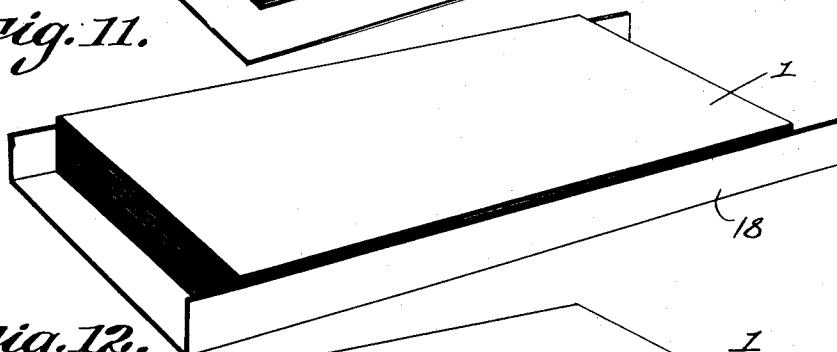


Fig. 12.

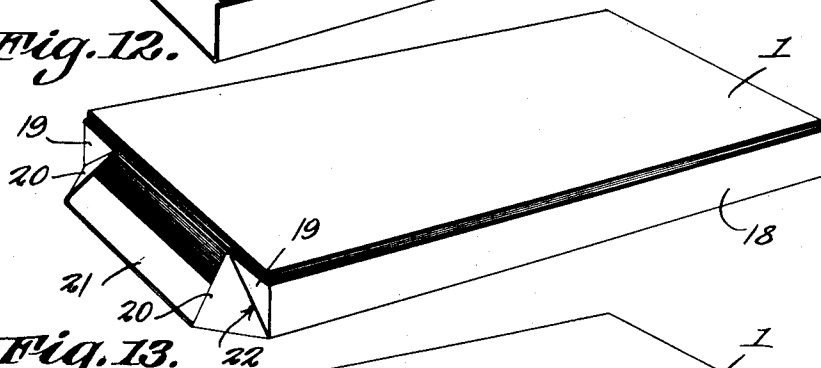
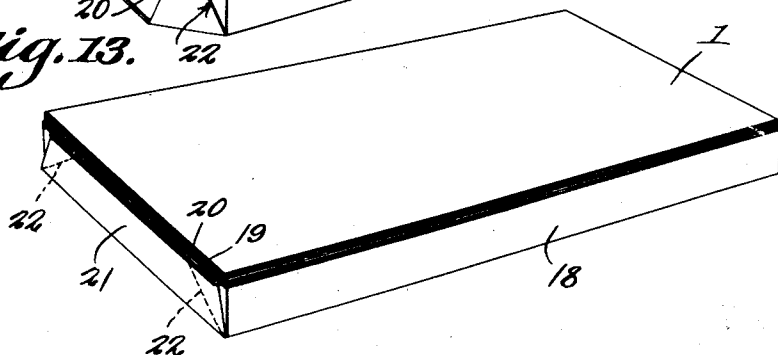


Fig. 13.



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4 Sheets-Sheet 4

Fig. 14.

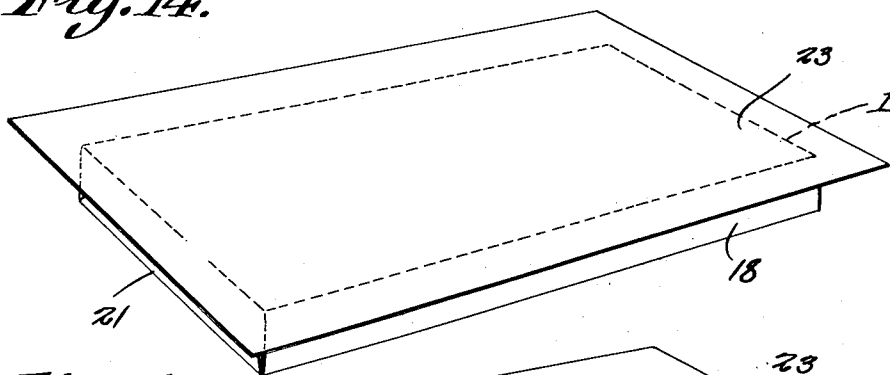


Fig. 15.

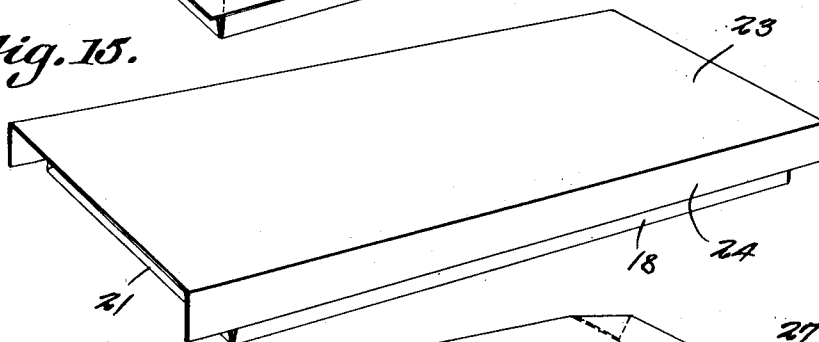


Fig. 16.

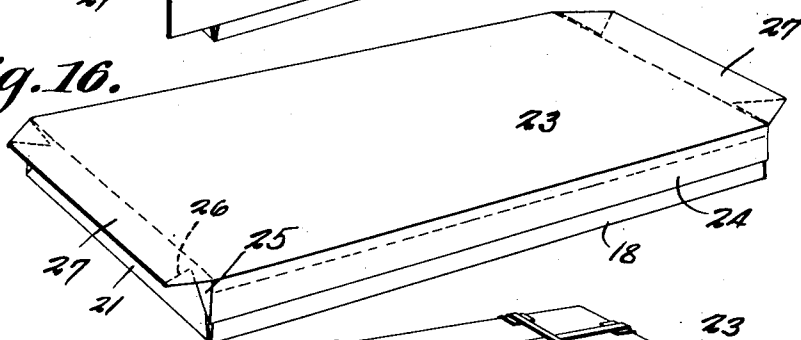
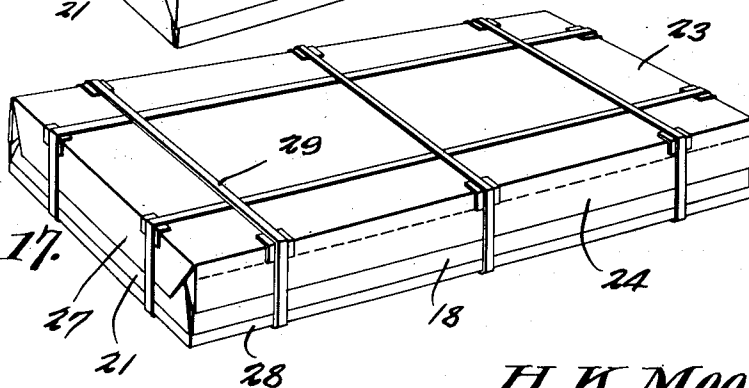


Fig. 17.



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UNITED STATES PATENT OFFICE

HOWARD K. MOORE, OF WHEELING, WEST VIRGINIA

SHIPPING PACKAGE

Application filed December 31, 1930. Serial No. 505,854.

This invention relates to a package designed for use in the shipment of sheet iron and sheet steel. In shipping sheets of metal by ocean it has been found that they have been attacked by moisture and more especially by the salt air which is encountered, this being particularly true of galvanized steel and iron sheets. As a result of this action the sheets, when received at their destination, have contained what is known as "white rust" which collects on the surface of the material. While this action most commonly occurs where shipments are made on or adjacent to the ocean, fresh water such as rain or dew, and condensation from changes in temperature, also affect the sheets unless they are promptly dried immediately following the application of moisture thereto.

It has been the practice until recently to have sheet material insured against "white rust" but the losses due thereto have become so great that insurance of this nature is now refused and, consequently, delivery of sheet material containing "white rust" generally develops a controversy among the shipper, the receiver, and the carrier of the goods in an effort to locate responsibility.

It is an object of the present invention to provide a means whereby sheet iron and sheet steel can be transported without danger of formation of "white rust".

It is also an object of the present invention to provide a package which is not only sealed against the admission of moisture to the contents, but can be easily prepared, handled and stacked.

A still further object is to provide a package utilizing "waster" or rejected sheets of metal for wrapping purposes.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed, without departing from the spirit of the invention.

While various means have been devised by

me for producing a package of protected metal sheets, all of which possess the same new and novel characteristics, the preferred form of package has been found to be the one illustrated in the accompanying drawings in which:

Figure 1 is a perspective view of a stack of metal sheets assembled for protection by the cover provided therefor.

Figure 2 is a perspective view showing the sheets wrapped in their inner covering, a portion of which is broken away.

Figure 3 is a perspective view showing one form of outer sheathing of the package in position prior to the closing of the ends thereof.

Figure 4 is a perspective view of the base frame of the package.

Figure 5 is a perspective view of the completed package.

Figure 6 is an enlarged transverse section through one of the seams of the outer sheathing of the package.

Figure 7 is a section through a portion of the package on line 7-7, Figure 5.

Figure 8 is a view of a portion of the sheathing showing a modified means of connecting the lapping portions thereof.

Figure 9 is a similar view showing another modification of the means of connecting the lapping parts.

Figure 10 illustrates the first step in another method of forming the package.

Figure 11 is a view showing the next step of the second method.

Figure 12 shows the ends of the bottom portion of the package partly folded.

Figure 13 is a view of the bottom portion of the modified package completely folded.

Figure 14 shows the first step in the formation of the top of the modified package.

Figure 15 illustrates the next step.

Figure 16 shows the package prior to the final end folds.

Figure 17 is a perspective view of the completed package.

Referring to the figures by characters of reference 1 designates superposed bundles of metal sheets, the sheets of each bundle being fastened together by straps 2 extending there-

around. These straps add to the thickness of the series of bundles adjacent to the ends thereof and, in order to prevent the stack of sheets from sagging at the center, one or more inserts 3 formed of wooden strips are placed in the center of the stack as shown, these inserts extending partly or entirely across the stack from one side to the other.

After the desired number of sheets have been assembled as shown in Figure 1, they are wrapped in an inner covering 4 of heavy paper or other suitable material the ends of which are folded flat in lapped relation as shown at 5, all laps being sealed by means of a suitable adhesive.

The outer wrapper or sheathing of the package is formed of sheet metal. For example, and as shown in Figure 3, two sheets of metal 6 and 7 can be joined by means of an interlocking seam 8 which has been shown in detail in Figure 6. Thereafter the sheets can be drawn tightly about the wrapped contents and the free longitudinal lapping portions of the sheets can be bent to form another interlocking seam 9 corresponding with the one shown in Figure 6. Instead of providing the seam 8 the two sheets can be joined by welding or soldering as shown at 10 in Figure 8 or they can be connected by rivets 11 as in Figure 9. Where such methods are used it is desirable to bend back the corners of the outer sheet as shown at 12 so as to prevent injury to persons handling the package. After the outer sheathing has been fastened around the wrapped sheets the ends are closed by hammering them inwardly with a wooden mallet or the like to form lapping folds as illustrated at 13. As these folds are flattened against each other they produce very efficient closures for the ends of the package.

Following the closing of the sheathing as explained, the wrapped sheets are placed on a stiffening frame 14 formed preferably of wood and straps 15 are drawn tightly about the completed package, including the frame, and secured in any manner desired. It is preferred to reinforce the corner portions of the package by means of protecting plates 16 as shown.

While the package heretofore described is advantageous under certain conditions, the package frequently can be made up as illustrated in Figures 10 to 17 inclusive. In preparing this last form of package the sheets 1 to be wrapped are stacked on a metal sheet 17 forming a part of the wrapper and the sides of this wrapper sheet are bent upwardly against the sides of the stack of sheets 1 as shown at 18 in Figure 12. Thereafter the ends of these side portions are folded inwardly to form triangular end folds 19 and 20 whereby when the ends 21 are bent upwardly against the ends of the stack of sheets 1, downwardly diverging creases 22 are produced.

After the bottom portion of the package has thus been formed as described, another sheet 23 to be used for wrapping purposes is placed on the stack of sheets 1 after which its side portions are bent downwardly as at 24 to lap the side portions 18. The ends of these side portions 24 are then folded inwardly to form triangular folds 25 and 26 similar to the folds 19 and 20 so that when the ends 27 of sheet 23 are bent downwardly onto the ends 21, inclined creases will be formed between the folds 25 and 26. At any time during the assembly of the sheet 17 and 23 the lapping sides 18 and 24 can be joined by welding, sealing, riveting or other known methods, some of which have been illustrated in Figures 6 to 9 inclusive. Where the lapping portions exceed certain widths, however, it is not necessary to join them. Instead, all of the parts will be held together properly by the straps 29. The ends 21 and 27 can also be joined in any manner desired so that when the package is completed, as by securing the wrapped sheets to a frame 28 by means of straps 29, there will be no danger of moisture seeping into the package.

While folds other than those shown in Figures 12, 13 and 16 can be employed at the ends of the package, these particular folds have been found advantageous because, should a package be left in an open car holding water to a depth of three or four inches such as frequently occurs following a hard rain, there would be no danger of this water flowing into the package.

In practice the straps 2 are used only when required by a purchaser. Where these are not employed it is unnecessary to provide the inserts 3.

The metal sheets used for wrapping the package are known as "waster" or rejected sheets.

It has been found in practice that a package produced as herein described will positively exclude moisture from the sheet metal contents and can be handled and shipped readily without being opened accidentally. It has resulted in a saving of large sums which have heretofore been expended because of the formation of "white rust" on sheets exposed to the action of moisture and has removed a source of constant irritation and controversy.

What is claimed is:

1. A shipping package including a stack of superposed bundles of relatively large metal sheets, the sheets of each bundle being bound together transversely adjacent to their ends, means for maintaining opposed faces of the stack substantially parallel, and a sheathing housing the bundles.

2. A shipping package including superposed bundles of relatively large metal sheets, the sheets of each bundle being bound together transversely adjacent to their ends, a filler interposed between certain of the

bundles to maintain opposed faces of the package substantially parallel, a sheathing housing the bundles, and straps extending around the sheathing.

5 3. A shipping package including super-
posed bundles of relatively large metal
sheets, the sheets of each bundle being bound
together transversely adjacent to their ends,
a filler interposed between certain of the
10 bundles to maintain opposed faces of the
package substantially parallel, an inner
wrapping of moisture-proof material com-
pletely inclosing the bundles, and an outer
sheet metal housing inclosing the inner
15 wrapping.

4. A shipping package including super-
posed bundles of relatively large metal sheets,
the sheets of each bundle being bound to-
gether transversely adjacent to their ends, a
20 filler interposed between certain of the
bundles to maintain opposed faces of the
package substantially parallel, a sheathing
wrapped about the bundles and having its
ends closed by folding, and straps extending
25 around the sheathing to maintain the folds
closed, said sheathing comprising sheets of
metal folded to seal the package and having
lapping edges, and means for joining the
lapping edges of the sheets, the exposed
30 corners of the sheets being folded back
against the package.

In testimony that I claim the foregoing as
my own, I have hereto affixed my signature.

HOWARD K. MOORE.

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