

March 14, 1950

L. A. FORDON
DRAG AND CARTING BOX

2,500,534

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2 Sheets-Sheet 1

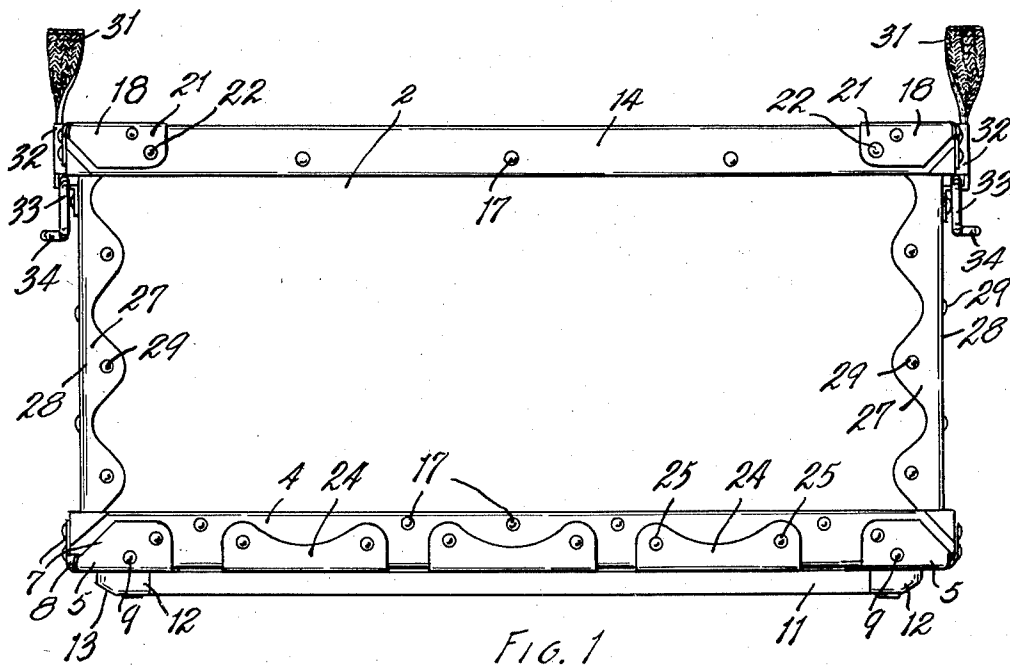


FIG. 1

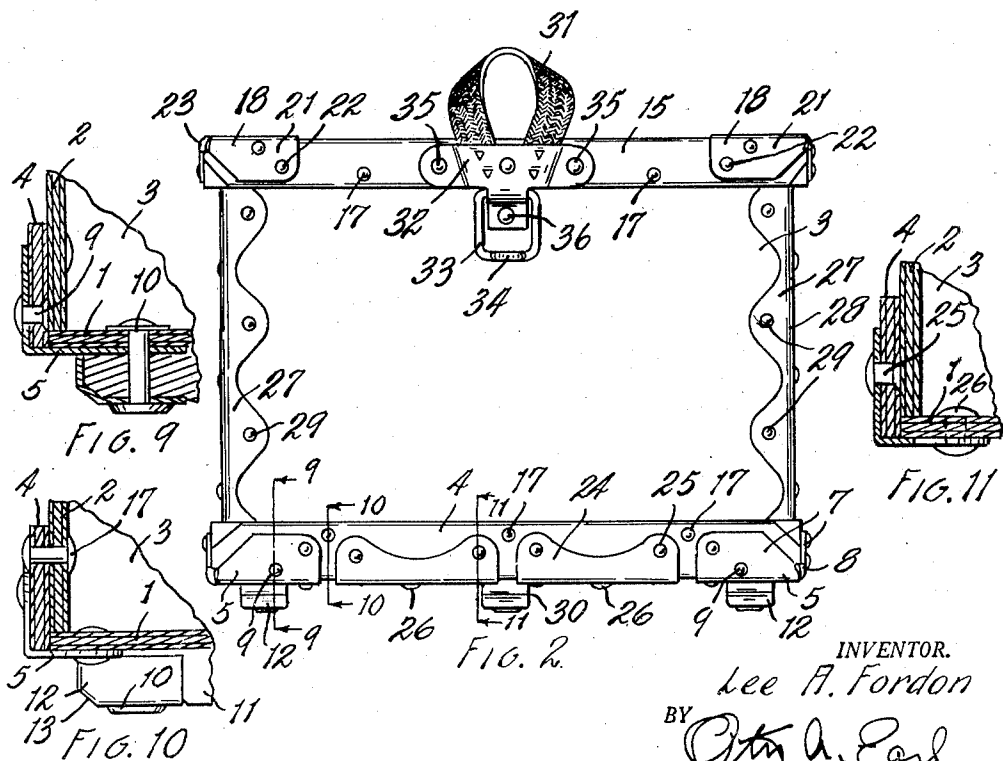


FIG. 2

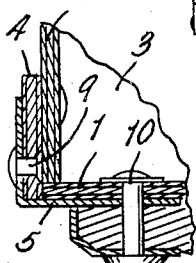


FIG. 9

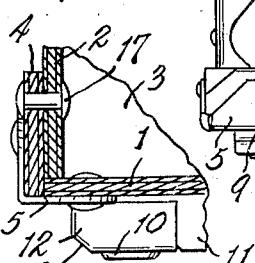


FIG. 10

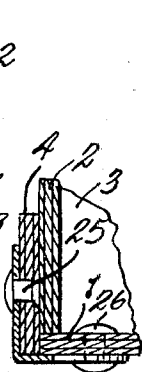


FIG. 11

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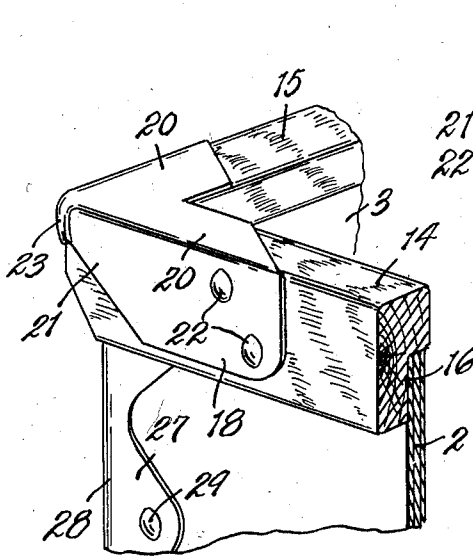


FIG. 3

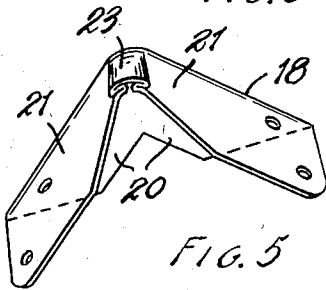


FIG. 5

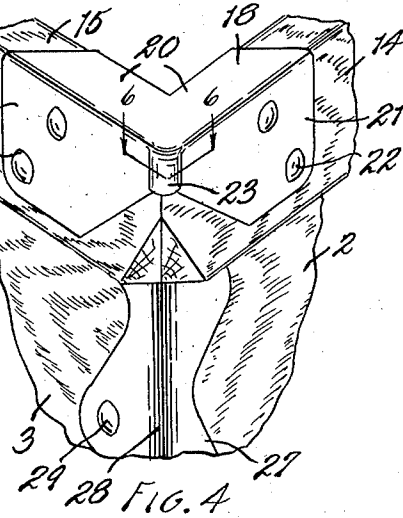


FIG. 4

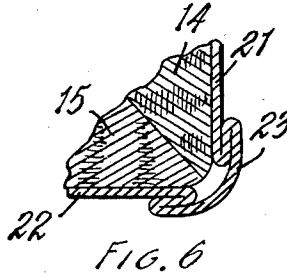


FIG. 6

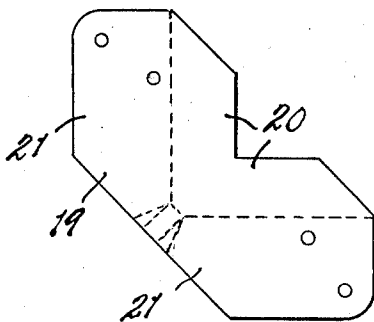


FIG. 7

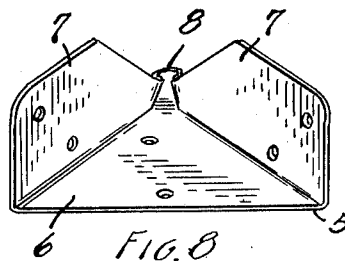


FIG. 8

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DRAG AND CARTING BOX

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8 Claims. (Cl. 217-5)

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This invention relates to improvements in drag and carting boxes.

The main objects of this invention are:

First, to provide a box adapted for use in factories and other conditions of severe usage which, while comparatively light in weight, is very strong and rigid and capable of carrying heavy loads and withstanding severe stresses.

Second, to provide a box in which the corners are rounded and well reinforced and protected.

Objects relating to details and economies of the invention will definitely appear from the description to follow. The invention is defined in the claims.

A structure which embodies the features of the invention is clearly illustrated in the accompanying drawing, in which:

Fig. 1 is a side elevation of a box embodying the invention.

Fig. 2 is an end elevation thereof.

Fig. 3 is an enlarged fragmentary perspective view partially in vertical section.

Fig. 4 is an enlarged top perspective view showing details of the corner structure.

Fig. 5 is a bottom perspective view of one of the top corner irons.

Fig. 6 is a fragmentary horizontal section on a line corresponding to line 6-6 of Fig. 4.

Fig. 7 is a plan view of the sheet metal stock from which the top corner irons are formed.

Fig. 8 is a top perspective view of one of the bottom corner irons.

Fig. 9 is an enlarged fragmentary view in section on line 9-9 of Fig. 2 showing details of the bottom structure and the connection of the side wall thereto.

Fig. 10 is an enlarged fragmentary view in section on line 10-10 of Fig. 2 showing further structural details.

Fig. 11 is a fragmentary view in section on line 11-11 of Fig. 2.

The embodiment of the invention illustrated is designed for a so-called carrying or tote box and drag box. In this embodiment the bottom panel 1 and the side wall panels 2 and 3 are formed of plywood. The bottom frame members 4 are also formed of plywood disposed vertically at the edges of the bottom, the edges of the bottom abutting the inner sides of the frame members. Bottom corner irons 5 are formed of sheet metal and comprise the bottom webs 6. The side flanges 7 are disposed at right angles to each other, the adjacent ends of the side flanges being connected by the reversely folded nose portions 8 which present rounded outer surfaces.

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The side flanges of the bottom irons are secured to the bottom frame members by the rivets 9. The webs 6 of the bottom corner irons are secured to the bottom by the rivets 10 which in the embodiment illustrated pass through the outer runners 11 and the socket-like end pieces 12 which are formed of sheet metal, these end pieces constituting washers for the runners and also protecting the ends of the runners. These end pieces have inclined end portions 13 to facilitate sliding.

In the embodiment illustrated the top frame members 14 and 15 are formed of wood and have inwardly and downwardly facing rabbet-like recesses 16 on their inner sides receiving the upper edges of the wall panels. The members 14 are side members and the members 15 are end members. The wall panels are secured to these frame pieces by rivets 17.

The top corner irons 18 are formed from angle iron blanks 19 as shown in Fig. 7 and have angled arms, the top flanges 20 of which engage the tops of the top frame or rim members, the side flanges 21 thereof being disposed on the outer sides of the frame members and secured thereto by rivets 22. These top corner irons have reversely folded nose portions 23 which provide rounded exteriors and supportingly connect the ends of the side members. The nose portions 8 of the bottom corner irons are the same as those of the top corner irons illustrated in greater detail in Figs. 5 and 6. The dotted lines shown in Fig. 7, indicate the lines on which the blank 19 is folded in forming the side flanges 21 and the reversely folded nose portion 23.

The bottom is further supported by the angled side irons 24, the vertical flanges of which are secured to the outer sides of the bottom frame members by the rivets 25 and the horizontal flanges, and the horizontal flanges extend under the bottom and are secured thereto by the rivets 26, see Fig. 11. The vertical corner irons 27 are formed of sheet metal and are rounded at 28 to present a round surface. The flanges of these upright corner irons are secured to the wall panels by rivets 29. The runners constitute bottom supports and reinforcing members, there being a central runner 30 in the embodiment illustrated.

The handles 31 are preferably formed of strips of fabric secured to the end top frame members by means of the clips 32 which are formed of sheet metal and have parts struck out therefrom to engage the handles. These clips also secure the drag links 33 which normally depend at the

ends of the box and desirably have outwardly offset portions 34 at their swinging end facilitating the engagement of a drag hook. The clips are secured by rivets 35 through the frame and the rivets 36 through the end walls 15.

With the parts thus arranged I provide a very strong and rigid structure and one capable of carrying heavy loads, even when formed of relatively light stock. The corners or angles of the box are well protected and present rounded surfaces. The multi-ply bottom and walls are effectively connected and are also strong and durable, even though of relatively light stock. It will be noted that the edges of the flanges of the side irons and corner upright irons are cut away between the rivets, the purpose being to lighten the structure.

I have illustrated and described my invention in a highly practical embodiment thereof but have not attempted to illustrate and describe various modifications and adaptations which I contemplate as it is believed this disclosure will enable those skilled in the art to adapt the invention as may be desired.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. A box comprising a bottom panel and walls of plywood, a bottom frame comprising members of plywood disposed vertically edgewise with the edges of the bottom panel abutting the inner sides of the bottom frame members, the wall panels being arranged within the bottom frame members and riveted thereto with their bottom edges in abutting relation to the upper side of the bottom panel, bottom corner irons of sheet metal comprising bottom webs and angularly disposed side flanges, the adjacent ends of the flanges being connected by integral reversely folded nose portions providing rounded exteriors, the bottom corner irons being arranged with their flanges on the outer sides of adjacent frame members and riveted thereto and with their webs extending under the bottom panel and riveted thereto, the reversely folded nose portions merging integrally into the bottom webs and increasingly overlapping the side flanges as the nose portions extend upwardly away from the bottom webs, the nose portions being disposed across and in opposed relation to the vertical corner edges of adjacent bottom frame members, and runners disposed below the bottom panel in supporting relation thereto with their ends extending below the webs of said bottom corner irons, the runners being provided with end pieces, said runners being secured by rivets disposed through said end pieces, the runners, the webs of said bottom corner irons, and said bottom panel.

2. A box comprising a bottom panel and walls of plywood, a bottom frame comprising members of plywood disposed vertically edgewise with the edges of the bottom panel abutting the inner sides of the bottom frame members, the wall panels being arranged within the bottom frame members and riveted thereto with their bottom edges in abutting relation to the upper side of the bottom panel, and bottom corner irons of sheet metal comprising bottom webs and angularly disposed side flanges, the adjacent ends of the flanges being connected by integral reversely folded nose portions providing rounded exteriors, the bottom corner irons being arranged with their flanges on the outer sides of adjacent frame members and riveted thereto and with their webs extending under the bottom panel and riveted thereto, the re-

versely folded nose portions merging integrally into the bottom webs and increasingly overlapping the side flanges as the nose portions extend upwardly away from the bottom webs, the nose portions being disposed across and in opposed relation to the vertical corner edges of adjacent bottom frame members.

3. A box comprising a bottom panel and walls of plywood, a bottom frame comprising members of plywood disposed vertically edgewise with the edges of the bottom panel abutting the inner sides of the bottom frame members, the wall panels being arranged within the bottom frame members and riveted thereto with their bottom edges in abutting relation to the upper side of the bottom panel, bottom corner irons of sheet metal comprising bottom webs and angularly disposed side flanges, the adjacent ends of the flanges being connected by integral reversely folded nose portions providing rounded exteriors, the bottom corner irons being arranged with their flanges on the outer sides of adjacent frame members and riveted thereto and with their webs extending under the bottom panel and riveted thereto, the reversely folded nose portions merging integrally into the bottom webs and increasingly overlapping the side flanges as the nose portions extend upwardly away from the bottom webs, the nose portions being disposed across and in opposed relation to the vertical corner edges of adjacent bottom frame members, and angled side irons disposed with their vertical flanges on the outer sides of the frame members and riveted thereto and their horizontal flanges extending below and riveted to the bottom panel.

4. A box comprising a bottom panel and walls of plywood, a bottom frame comprising members of plywood disposed vertically edgewise with the edges of the bottom panel abutting the inner sides of the bottom frame members, the wall panels being arranged within the bottom frame members and riveted thereto with their bottom edges in abutting relation to the upper side of the bottom panel, and bottom corner irons of sheet metal comprising bottom webs and angularly disposed side flanges, the adjacent ends of the flanges being connected by integral reversely folded nose portions providing rounded exteriors, the bottom corner irons being arranged with their flanges on the outer sides of adjacent frame members and riveted thereto and with their webs extending under the bottom panel and riveted thereto, the reversely folded nose portions merging integrally into the bottom webs and increasingly overlapping the side flanges as the nose portions extend upwardly away from the bottom webs, the nose portions being disposed across and in opposed relation to the vertical corner edges of adjacent bottom frame members.

5. A box comprising a bottom and side walls, a bottom frame, the side walls being arranged within the bottom frame and secured thereto, and bottom corner irons of sheet metal comprising bottom webs and angularly disposed side flanges, the flanges being connected by folded nose portions, the bottom corner irons being arranged with their flanges on the outer sides of adjacent frame pieces and secured thereto and with their webs extending under the bottom and secured thereto, the folded nose portions having vertically extending folds integrally connected to each other and to the adjacent ends of the side flanges and integrally merging into the bottom web portions and divergently increasing in size as the nose portions extend upwardly

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away from the bottom webs, the nose portions being disposed across and in opposed relation to the vertical corner edges of said adjacent frame pieces.

6. A box comprising a bottom and side walls, top frame members disposed on the outer sides of the side walls and secured thereto, and angled top corner irons of sheet metal having arms of angled section, the adjacent ends of the vertical arms of said top corner irons being joined by integral folded nose portions, said top corner irons being disposed with their horizontal arms overlapping the tops of the top frame members and secured thereto, the folded nose portions having vertically extending folds integrally merging into the horizontal arms and divergingly increasing in dimensions as the nose portions extend downwardly from the horizontal arms, said nose portions being disposed across and in opposed relation to the vertical corner edges of adjacent top frame members.

7. In a box structure, a corner reinforcing member formed of integral sheet metal and comprising a horizontal web portion and vertically extending side flanges disposed at an angle to each other for engaging adjacent vertical side walls of the box on the opposite sides of a corner edge thereof, and a vertically extending nose portion having reversely extending folds integrally connected to each other and to the adjacent ends

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of the side flanges and integrally merging into the horizontal web portion and increasingly overlapping the side flanges as the nose portion extends vertically away from the horizontal web portion.

8. In a box structure, a corner reinforcing member formed of sheet metal and comprising a horizontal web portion and vertical side flanges disposed at an angle to each other for engaging the vertical side walls of a box on the opposite sides of a corner thereof, and a vertically extending nose portion having vertically extending folds integrally connected to each other and to the adjacent ends of the side flanges and integrally merging into the horizontal web portion and divergingly increasing in size as they extend vertically away from the horizontal web portion.

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