May 7, 1968 M. P. ZILLMAN 3,381,937

WEDGE

Filed April 26, 1966

FIG. 1

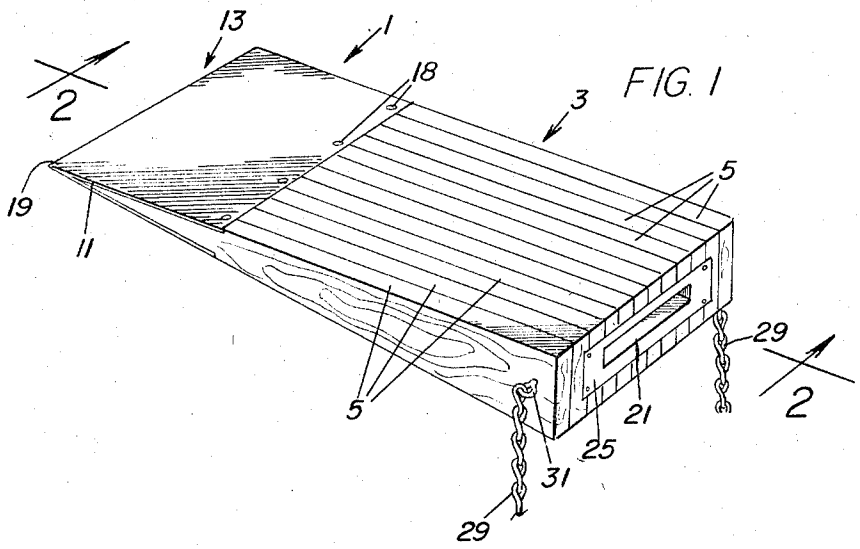


FIG. 2

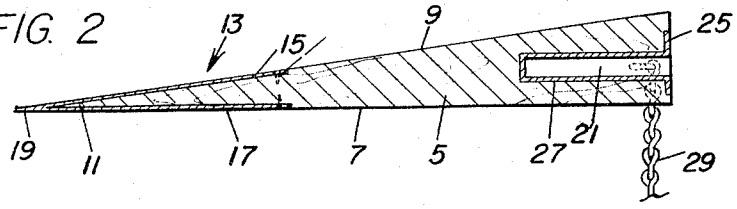


FIG. 3

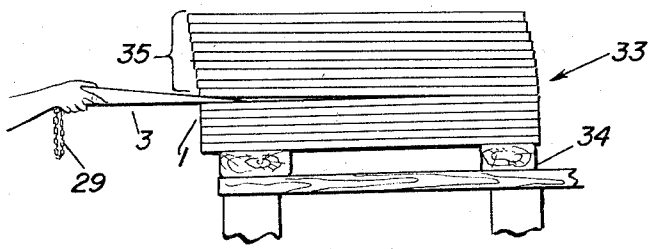
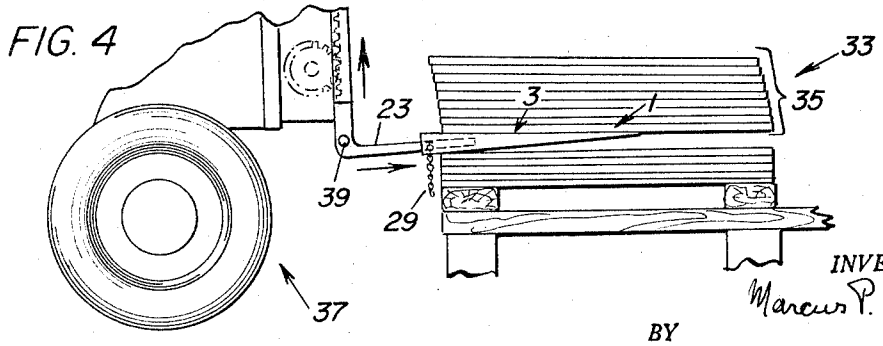


FIG. 4



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WEDGE

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ABSTRACT OF THE DISCLOSURE

A wedge adapted to be inserted between pieces of sheeting material in a stack of sheating material for removing therefrom a predetermined quantity of material. The wedge comprises a body formed of lengths of wood of laminated form, the edges of the lengths of wood forming the top and bottom of the body, the wood being of a highly polishable type and the wedge having an inclined upper surface and a plane lower surface. A stainless steel, or the like, sheath covering the forward portion of the body and being sharpened at that portion thereof where it extends over the forward edge of the body.

This invention relates broadly to wedges and in its more specific aspects it relates to wedges which are adapted for use with fork lift trucks for lifting and moving predetermined amounts of such materials, as for instance, plywood, plasterboard, lumber, prefinished paneling, all types of sheeting and the like; and the nature and objects of the invention will be readily recognized and understood by those skilled in the arts to which it relates in the light of the following explanation and detailed description of the accompanying drawings illustrating what I at present believe to be preferred embodiments or mechanical expressions of my invention from among various other forms, arrangements, combinations and constructions, of which the invention is capable within the spirit and scope thereof.

In the storage and distribution in the filling of orders of general sheeting and the like products as mentioned above, one of the problems that has been encountered and has not heretofore been overcome, is a simple and efficient means whereby a predetermined amount of such sheeting or the like material may be easily picked up from a stack of such material and moved to any spot or desired location. It will be obvious that such maneuver is difficult, time and labor expensive when it is manually done, and in order to overcome these and other disadvantages, I have developed a wedge which is so formed and constructed that the aforesaid and other operations are accomplished with little or no difficulty.

It is to be fully appreciated that in the filling of an order for such materials as have been mentioned above, the wedge which I have devised and is described in detail hereinafter, has very substantial labor saving advantages for one person using the wedge of this invention in combination with any suitable or conventional type of fork lift truck may now handle any order by himself, where heretofore, it took at least two and in many instances three men to fill such an order.

The wedge of this invention is characterized by great versatility and will operate successfully in the filling of orders where predetermined amounts of these various materials are required, and it is also highly advantageous in the unloading of cars and has even been successfully used in such operations in the unloading of rough hardwood lumber and the like.

My experience has shown that a wedge of the character to be described hereinafter, to be successful, must be endowed with certain inherent characteristics to substantially increase its maneuverability in the installation thereof between such materials so that those above it may be removed in filling an order, unloading a car or any other operation where certain amounts of the material are required to be removed from a stack of such material.

To be successful, I have discovered that a wedge adapted for the use to which the one I have developed is adapted, must have its operating end or working edge so formed and constructed that it may be manually initially inserted with relative ease within a stack of material at the proper point therein. The preferred manner of using this novel wedge comprises, as an initial step, the manual partial insertion of the point or working edge of the wedge at the desired place between pieces of the material so that the desired amount thereof will be above the wedge for removal thereof from the stack. It will now be further recognized that the type of working edge of this wedge become more significant and important due to this initial manual steps.

After this initial step, the rear end of the wedge is combined with a fork of a conventional fork lift truck, and by movement of such truck forwardly the wedge is fully inserted in the proper position between pieces of the material for lifting of the material above the wedge when the fork or forks of the trucks are lifted in the usual manner for movement of the desired amount of material to any suitable place.

Not only the working edge of the wedge must have certain inherent characteristics to make the partial and full insertion thereof function properly, but the remaining portion of the body of the wedge must also be endowed with characteristics which enhance and facilatate the full insertion of the wedge into proper position by operation of the fork lift truck. The wedge which I have devised is so formed and constructed that its external surfaces expedite and speed the partial and full insertion of the wedge in the proper place within the stack of lumber.

My wedge provides further simple and efficient means for its quick and easy attachment to and detachment from the fork of a fork lift truck, for the wedge is provided with means facilitating its operative connection with the fork and with further means which simplify and speed up the removal of the wedge from its operative position on the fork below a stack of material which it has lifted.

I have produced a wedge having the above mentioned and other highly desirable characteristics, without sacrificing economy of production, or without sacrificing long lasting qualities of the wedge under normal use conditions.

With the foregoing general objects, features and results in view, as well as certain others which will be apparent from the following explanation, the invention consists in certain novel features in design, construction, mounting and combination of elements, as will be more fully and particularly referred to and specified hereinafter.

Referring to the accompanying drawings:

FIG. 1 is a view in perspective of the wedge.

FIG. 2 is a view taken on the line 2—2 of FIG. 1.

FIG. 3 is a view in elevation illustrating the initial manual step of partially inserting the wedge into proper position within a stack of plywood, plasterboard, or any other type of sheeting products.

FIG. 4 is a view in elevation disclosing a fork lift truck operatively combined and associated with the wedge and having positioned the latter into fully inserted position within the stack of sheeting products preparatory to lifting the predetermined amount of sheeting products.

In the accompanying drawings, and particularly FIGS. 1 and 2 thereof, I have illustrated my wedge in its entirety, and have used the numeral 1 to designate generally the forward section thereof and the numeral 3 to designate generally the rear section thereof. The wedge is formed of a laminated body composed of a plurality of lengths of any hardwood such as maple. The lengths of maple

or other hardwood, which is highly polishable and is resistant to scratching in use, I have designated by the numeral **5**, and these lengths of hardwood extend longitudinally of the wedge and are secured together in wedge forming position in any suitable manner, as by a suitable adhesive, to thereby produce an integral wedge unit.

The lengths of maple, or other hard scratch resistant wood, are adhesively or otherwise secured together along their abutting longitudinal sides so that their longitudinal top and bottom edges form the top and bottom edges of the wedge, as will be clear from consideration of the drawings.

The bottom edges **7** of the lengths of hardwood **5**, are of plane or level construction, while the top edges **9** thereof are of bevelled construction, tapering toward the forward section **3** of the wedge, and each such length terminates at the forward end thereof in a thin point or edge **11**.

The top and bottom edges **9** and **7**, respectively, of the lengths **5**, are highly polished to a fine finish to make sliding easy for a purpose as will be explained hereinafter, and due to the hardness of the maple or other hardwood which is used, scratching of the top and bottom surfaces of the wooden portions of the wedge is prevented.

The forward section **1** of the wedge, which includes as a core the forward tapering or bevelled ends of the wooden lengths **5**, is sheathed on both top and bottom by a metal sheath designated generally by the numeral **13**. The metal sheathing is preferably formed of stainless steel comprising a top section **15** and a bottom section **17**, the two sections of sheathing being secured to the laminated wooden core of the wedge by means of screws **18** or by any other suitable and desirable means. It is preferable that the stainless steel metal sheathing **13** comprise an integral unit extended over and around the forward end of the sheath as at **19** to provide the forward working edge of the wedge. While it is not essential that the sheathing be integrally formed, it is essential that the working edge **19** of the wedge be ground, or otherwise formed, to provide a razor sharp forward working edge to facilitate the insertion of the wedge into a stack of sheathing as will be fully explained hereinafter. It is also one of the significant features and characteristics of my invention that the sections **15** and **17** of the stainless steel sheathing be polished to a fine finish to substantially increase the sliding characteristics thereof when the wedge is in the process of being inserted within and between the pieces of sheeting in a stack of sheeting.

The rear end of the rear section **3** of the wedge is formed with a pocket, or recess **21** therein, which is of generally the width of the fork **23** of a conventional or usual type of fork lift truck which is used in warehouses. I surround the fork receiving recess or pocket with a scar preventing metal plate **25** and preferably, though not necessarily, the inner walls of the recess or pocket may be lined with protective metal as at **27**.

On each side of the rear section **3** of the wedge adjacent to but forwardly spaced from the rear end thereof, I provide a wedge removing chain **29** which may be fixed to the wedge by eyes or the like **31**.

In FIGS. 3 and 4 of the drawings, I have disclosed a stack or pile of any type of sheeting material and have designated such stack in its entirety by the numeral **33**. This stack may be supported on a bed **34**. In using my wedge in order, for instance, to remove a desired predetermined quantity of the sheeting material from the stack **33**, the wedge is first partially inserted manually as illustrated in FIG. 3 between two pieces of the stacked material at a point therein so that the stack of material **35** above the wedge constitutes the quantity of such material which it is desired to move in filling an order or for

any other reason. The wedge, as illustrated particularly in FIG. 3 of the drawings, is manually partially inserted, and it will be apparent that due to the sharp razor forward edge **19** of the wedge, the partial manual insertion of the wedge at the proper point between the pieces of material will be a relatively easy manner, and following this initial locating of the spot in the stack of material by this sharpened edge **19**, the operator then pushes the wedge further into the stack so that it will remain in such partially inserted position until the wedge is connected with a fork lift truck as will be explained. The partial insertion is greatly expedited and made a relatively simple manner due to the high polish on the metal sheathing **13** as well as because of the sharpened edge, so that it will be easily slid into partial inserted position between two pieces of the material.

Following this partial hand insertion, a fork lift truck, designated in its entirety by the numeral **37**, is brought into position, and a fork **23** thereof is inserted into the recess **21** on the rear end of the wedge and the operator of the truck moves the truck forward to fully insert the wedge between the pieces of material as disclosed in FIG. 4 of the drawings. When this operation is completed, the operator of the truck actuates mechanism thereof in the usual manner to lift the fork and the wedge and the desired stack of material **35** from the rest of the stack so that it may be moved by the truck to any desired position.

When this operation is completed, and it is desired to remove the wedge from the bottom of a deposited stack **35**, the operator attaches the chains **29** to an eye or any suitable type of hook member **39** on the fork lift truck and the truck is backed up to pull the wedge from its position under the stack.

It is, of course, within my contemplation to use my wedge at the bottom of a stack, as well as at a selected point therein.

I claim:

1. A wedge adapted for insertion at a selected point between stacks of sheeting material, including a body having a forward section and a rearward section and a top and bottom, said body being formed of lengths of wood laminated to form the body, and the edges of said lengths of wood forming the top and bottom surfaces of said body, and the top and bottom surfaces of said body being formed of highly polishable and scratch resistant wood material, and the forward section of said body being sheathed in a highly polishable and scratch resistant metallic material extending over the forward edge of said body and said portion of the sheathing which extends over the forward edge of the body being sharpened providing a razor sharp edge, the top surface of said body being beveled providing a forwardly extending taper to the top surface of said body and said bottom surface of said body forming a plane surface.

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