United States Patent [19]

Spencer

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[54] **MACHINE FOR STRIPPING PLANKS FROM FRAMES**

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[52] **U.S. Cl.** ..... **29/244**, 29/200 D, 29/251, 29/252

[51] **Int. Cl.** **B23p 19/04**

[58] **Field of Search** ..... 29/200 D, 251, 252, 200 R, 29/208 E, 244, 427; 100/226

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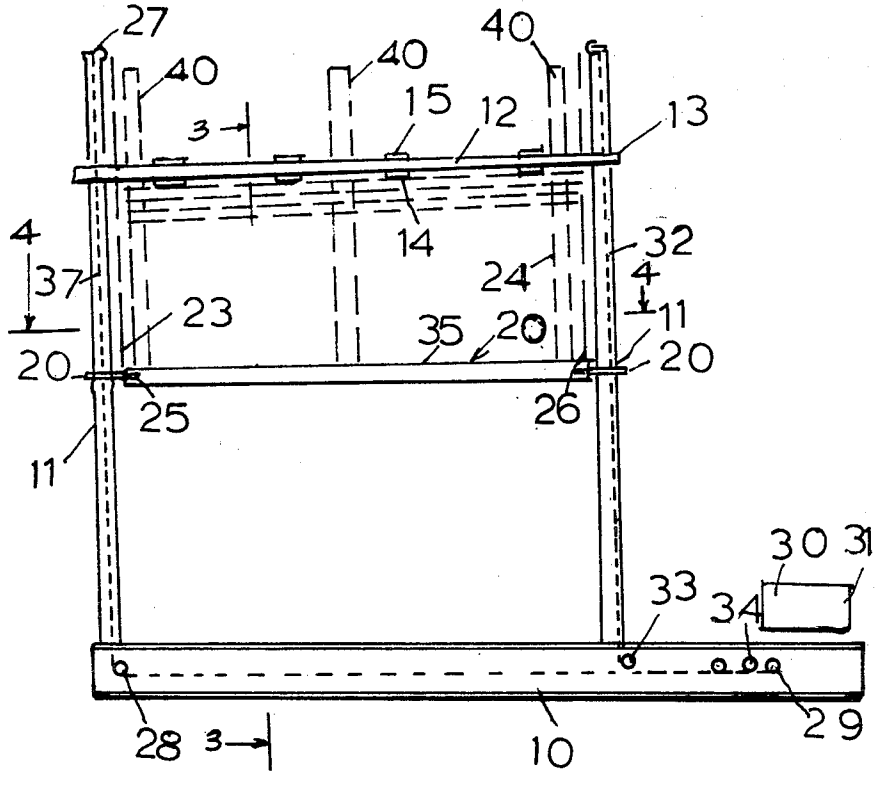
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Primary Examiner—C. W. Lanham
Assistant Examiner—James R. Duzan

[57] **ABSTRACT**

A machine for stripping the planks from pallets that are used with forklift trucks and made up of two spaced plank surfaces with frame members extending between them. The stripper is made up of a base beam, a top beam, two columns supporting the top beam on the base beam. The top beam is made of two spaced frame members, each of which engage one of the rows of planks on the pallet. A pull bar is slidably supported on the columns. A cable extends through each column and has one end fixed to the pull bar, the other end of the cable being fixed to a winch. The winch pulls the pull bar toward the upper beam and forces the pallet frame member through a space between the top member in the top beam and strips the boards or planks from the frame members.

6 Claims, 6 Drawing Figures



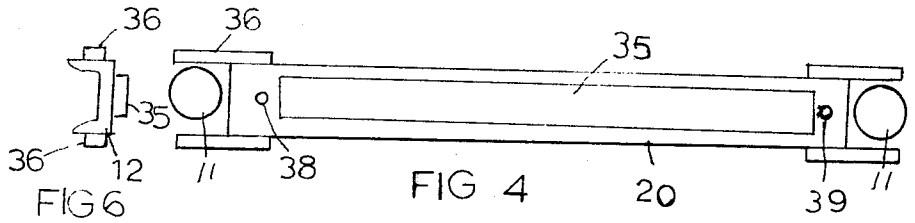


FIG 6

FIG 4

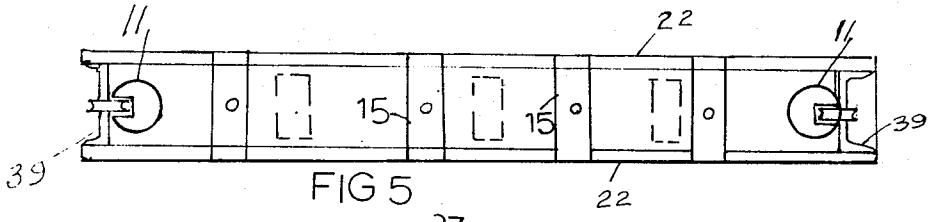


FIG 5

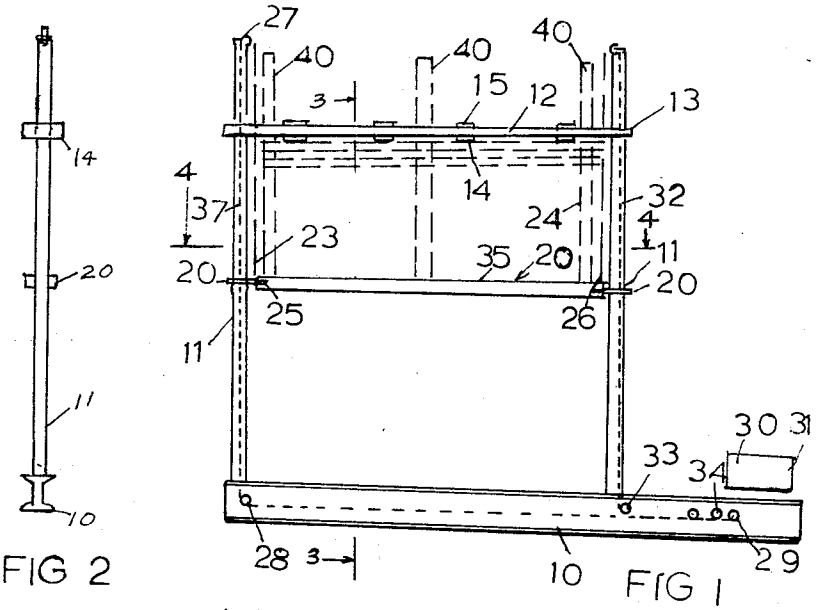


FIG 2

FIG 1

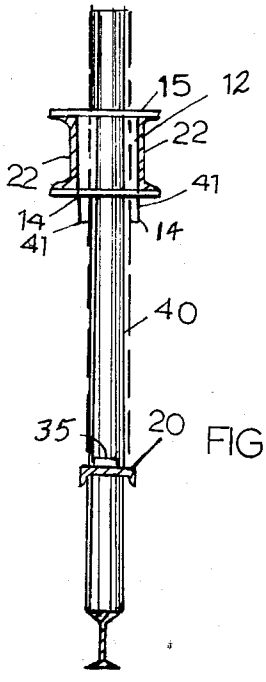


FIG 3

MACHINE FOR STRIPPING PLANKS FROM FRAMES

OBJECTS OF THE INVENTION

It is an object of the invention to provide an improved machine for dismantling pallets.

Another object of the invention is to provide an improved pallet stripper.

Another object is to provide a pallet stripper made up of a top beam and another pull bar that forces the frame member of a pallet through the top beam and strips the boards from it.

A further object of the invention is to provide a pallet stripper that is simple in construction, economical to manufacture, and simple and efficient to use.

With the above and other objects in view, the present invention consists of the combination and arrangement of parts hereinafter more fully described, illustrated in the accompanying drawings and more particularly pointed out in the appended claims, it being understood that changes may be made in the form, size, proportions, and minor details of construction without departing from the spirit or sacrificing any of the advantages of the invention.

GENERAL DESCRIPTION OF THE DRAWINGS

FIG. 1 is a front view of the pallet stripper according to the invention.

FIG. 2 is an end view of the pallet stripper shown in FIG. 1.

FIG. 3 is a cross sectional view taken on line 3—3 of FIG. 1.

FIG. 4 is a top view of the pull bar in place on the columns taken on line 4—4 of FIG. 1.

FIG. 5 is a top view of the pallet stripper.

FIG. 6 is an enlarged end view of the pull bar.

DETAILED DESCRIPTION OF THE DRAWINGS

Now with more particular reference to the drawings, the frame is made up generally of the base **10** with the columns **11** extending upwardly from the base and the upper or top bar **12** fixed at each end to the columns. The pull bar **20** is slidably supported on the columns **11** and has its ends fixed to the first ends of the cables **23** and **24** at **25** and **26.** The cable **23** passes around roller **27** at its upper end and down through the column **11** around the roller **28** and passes around roller **29** and is attached to the drum **30** driven by the winch **31.** The cable **32** passes through the columns **11** and around the roller **33** and around roller **34** and to winch **30.** The second end of the cable **32** is attached to the pull bar **20** at **26.**

The base member **10** may be a wide flange I-beam, for example, 6 inches × 6 inches. The columns **11** may be 2 inch iron pipe, for example.

The pull bar **20** may be made, for example of 3 inch steel channel with the flanges of the channel extending downwardly. A 1 inch × 2 inch plate **35** may be welded to the back of the flanges of the channel **12.** Two spaced short plates **36** are welded to each flange of channel **12** at each end of the channel and the plates **36** form a space which slidably receives the pipes therebetween.

The cables **23** and **24** are attached by means of eye bolts or other suitable fasteners in holes **38** and **39** respectively.

The upper beam **12** is preferably made up of two spaced channels **22** which may be, for example, 3 inch channels spaced from each other and having their flanges extending toward each other. A spacer member **39** extends between the ends of the two channel members **22** and may be welded to the columns at the ends. The upper board stops **15** and the lower board stops **14** are welded to the channels **22.** These board stops engage the planks that rest on the frame members **40** of the pallets. Thus when a pallet to be stripped in a vertical position with one end resting on the plate **35** of the pull bar **20** and the frame members **40** of the pallets extending up between the two spaced channels **22** and between stops **15,** the motor **31** is started, the cables will be wrapped around the drum **30** and will exert a force on the pull bar **20,** which will force the frame members **40** of the pallet between the two spaced channels **22.** The planks **41** on the pallet will engage the stripping plates **15** and strip the boards from the frame members of the pallet.

The apparatus disclosed carries out a method of removing the planks from the frame members of a pallet by supporting the frame members and the planks of the pallet and applying a force to the planks of the pallet and a second force to the frame members of the pallet whereby a shear force is applied between the planks and the frame, and increasing the force on the frame members and on the planks until the shear force exerted between the frame and the planks is sufficient to strip the planks from the frame members.

The foregoing specification sets forth the invention in its preferred practical forms but the structure shown is capable of modification within a range of equivalents without departing from the invention which is to be understood is broadly novel as is commensurate with the appended claims.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A machine for stripping the planks from frame members of pallets comprising

a base beam,

two spaced columns fixed to said base beam and extending upwardly therefrom,

a top beam fixed to said columns in spaced relation to said base beam,

said top beam being made of two laterally spaced structural members adapted to allow the frame members of said pallets to pass therebetween,

and means on said spaced structural members to engage said planks of said pallets,

a pull bar supported in parallel relation to said base and slidably engaging said columns,

two cables,

one said cable extending downwardly through each of said columns and the other cable being attached to said pull bar,

a roller fixed to the upper end of each said column,

each said cable passing over said rollers,

said cables each having a first end and a second end,

said first ends of said cables each being fixed to said pull bar,

said second ends of said cables each being connected to a tension means.

2. A machine for stripping pallets made up of a top beam and transverse planks supported on a longitudinal frame member comprising

said machine having a beam comprising two spaced members adapted to have the said longitudinal frame members of said pallet pass therebetween,

said spaced members having means thereon adapted to engage the said plank members of said pallet,

and a pull bar spaced from said top beam,

said pull bar being adapted to engage said frame members of said pallet,

and means to force said pull bar toward said beam member whereby said frame members are forced between said spaced members and said planks are stripped from said frame members,

said beam is supported by two spaced tubular column members,

and said means to force said pull bar comprises rollers fixed to the top of said tubular members and a cable passing through said tubular members and fixed to said pull bar at the first end of said cable,

and means engaging the second end of said cable for exerting a force thereon.

3. The machine recited in claim **2** wherein means is provided on the ends of said pull bar for guiding said pull bar relative to said column members.

4. The machine recited in claim **2** wherein said beam comprises two laterally spaced channel members,

and longitudinally spaced board stops fixed to the bottom of each said spaced channel member and adapted to engage boards fixed to said pallets whereby said pallets are stripped.

5. The machine recited in claim **4** wherein said pull bar comprises a channel member extending substantially from one said post to the other said post,

and a plate fixed to said channel member on the back thereof adapted to engage said frame members on said pallets.

6. The machine recited in claim **5** wherein a plate is fixed to each side of said pull bar adjacent said posts whereby said pull bar is guided up and down on said posts.

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