

Jan. 29, 1952

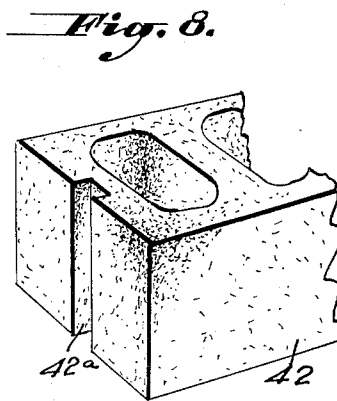
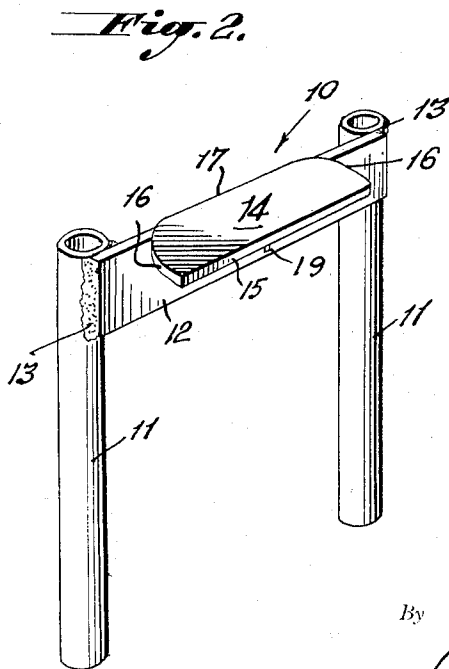
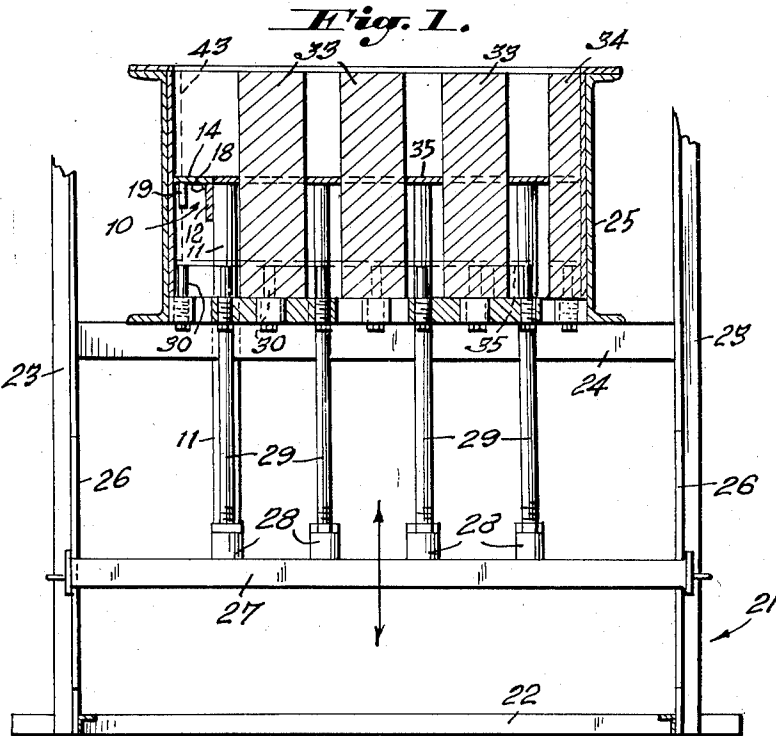
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2,583,818

PALLET ADAPTER UNIT FOR BLOCK MOLDING MACHINES

Filed Sept. 13, 1950

2 SHEETS—SHEET 1



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2 SHEETS—SHEET 2

Fig. 4.

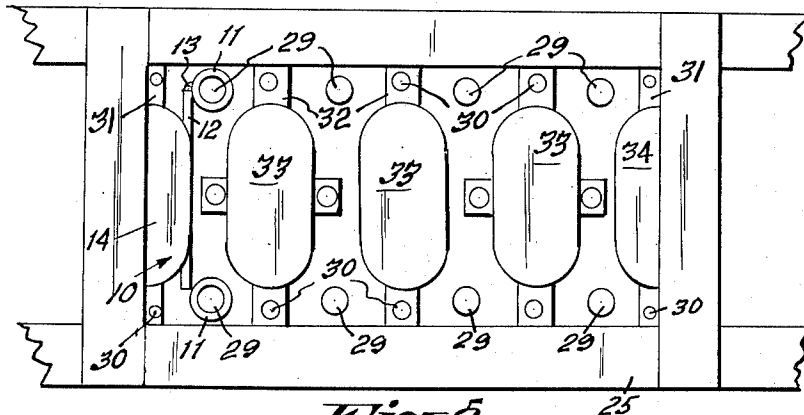


Fig. 5.

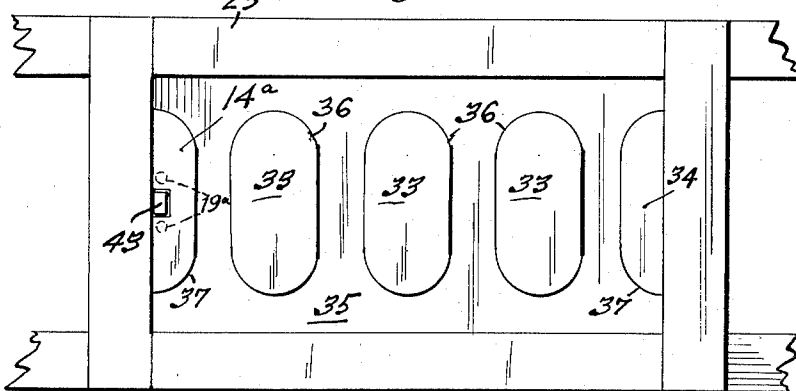


Fig. 6.

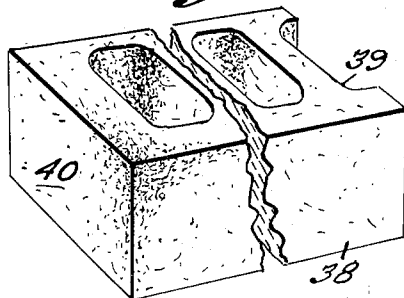
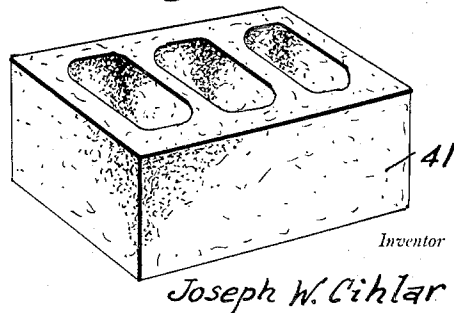


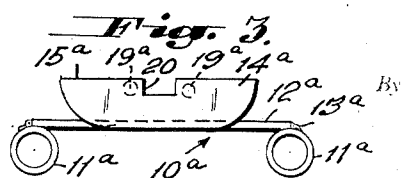
Fig. 7.



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Fig. 8.



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UNITED STATES PATENT OFFICE

2,583,818

PALLET ADAPTER UNIT FOR BLOCK
MOLDING MACHINES

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Application September 13, 1950, Serial No. 184,694

9 Claims. (Cl. 25—1)

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This invention relates to an adaptor unit for use with a strip up-type concrete block machine for the purpose of producing single corner, double corner, single steel sash, double steel sash and corner sash blocks as well as conventional blocks all with one set of conventional pallets, thus effecting a substantial saving in pallet cost by eliminating the need for separate sets of pallets for producing each of the aforementioned types of blocks of any given size and similarly effecting a substantial saving in connection with the storing and handling of pallets.

Still a further object of the invention is to provide an adaptor unit of extremely simple construction capable of being readily mounted in a mold of a strip up-type block machine and which is partially supported by a portion of the mold and partially by a part of the pallet actuating means whereby the adaptor unit will move up and down in the mold with a pallet and partially support the concrete within the mold and while it is being compacted to form a block and while the block is being stripped from the mold.

Various other objects and advantages of the invention will hereinafter become more fully apparent from the following description of the drawings, illustrating a presently preferred embodiment thereof, and wherein:

Figure 1 is a side elevational view, partly in vertical section showing a portion of a strip up-type concrete block machine with one form of the adaptor unit applied thereto and in a partially raised position;

Figure 2 is an enlarged perspective view of one section or form of the adaptor unit, shown removed from the machine;

Figure 3 is a top plan view, on a smaller scale, of a different section or form of the adaptor unit;

Figure 4 is an enlarged top plan view of a conventional core box of the block machine and showing the adaptor as illustrated in Figure 2 in top plan applied thereto and before the pallet is applied;

Figure 5 is a top plan view of the mold box after the pallet is applied but showing the adaptor as illustrated in Figure 3;

Figure 6 is a fragmentary perspective view of a single corner block as produced by the adaptor of Figure 2;

Figure 7 is a perspective view of a double corner block produced by using two of the adaptors as illustrated in Figure 2; and

Figure 8 is a fragmentary perspective view of a portion of one end of a single or double steel sash block or corner sash block produced by using

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either one or two of the adaptors as illustrated in Figures 3 and 5.

Referring more specifically to the drawings, one type of the adaptor designated generally 10 is illustrated in detail in Figure 2 and includes two pipes or rigid tubes 11 which are connected adjacent their corresponding upper ends by a bar 12 which extends therebetween and which is secured at its ends to the pipes 11 in any suitable manner as by welding as seen at 13, so that the pipes 11 will be disposed on the same side of the bar 12. A plate 14 is provided with a long straight edge 15, corresponding curved ends 16 and a shorter straight edge 17. The ends 16 curve away from the ends of the straight edge 15 to merge with the ends of the shorter straight edge 17. The portion of the plate 14 adjacent the shorter straight edge 17 is disposed on the upper edge of the bar 12 intermediate of the ends thereof and is secured thereto in any suitable manner as by welding, as indicated at 18 in Figure 1. A peg 19 is suitably secured at one end thereof to the underside of the plate 14 intermediate of its ends and adjacent its outer edge 15 and said peg 19 extends downwardly from the plate 14 to form a supporting leg, as will hereinafter become apparent.

The adaptor, as illustrated in Figure 3 and designated generally 10a, includes a pair of tubes or pipes 11a, corresponding to the pipes 11, a bar 12a, corresponding to the bar 12 and which is similarly secured to the pipes 11a by welds 13a, and a plate 14a which is mounted on the upper edge of the bar 12a in the same manner as the plate 14 is mounted on the bar 12. The adaptor 10a differs from the adaptor 10 in that the outer, longer straight edge 15a of the plate 14a is provided intermediate of its ends with a notch 20 and in lieu of the single peg 19, the plate 14a is provided with two pegs 19a which are disposed one on either side of the notch 20 and adjacent the edge 15a.

Referring particularly to Figures 1 and 4, for the purpose of illustrating the application and use of either the adaptor 10 or the adaptor 10a, a portion of a conventional strip up-type block molding machine has been illustrated and is designated generally 21. The machine 21 includes a supporting frame 22 having spaced uprights 23 between which is supported a bar 24 on which is mounted the mold box 25 of the machine 21. Beneath the bar 24, the uprights 23 are provided with vertical guides 26 for reciprocally supporting and guiding a crosshead bar 27 which is vertically movable toward and away from the

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mold box 25. A plurality of stripper finger bars 28 are mounted on the crosshead bar 27, each of which supports two upwardly extending stripper fingers 29 which extend upwardly therefrom reciprocally through the bar 24 and the mold box bottom. The mold box 25 contains a plurality of pallet supporting pegs 30. The pegs 30 located adjacent each end of the mold box 25 engage end core bars 31 and the intermediate pegs 30 engage intermediate core bars 32. The core bars 31 and 32 extend transverse to the mold box 25 and the intermediate core bars 32 each support a conventional whole core 33 and the end core bars 31 ordinarily each supports an end or half core 34, however, when either the adaptor 10 or 10a is utilized at least one of the end cores 34 is removed and, for example, if the adaptor 10 is employed as illustrated in Figures 1 and 4, the tubes 11 thereof are slidably positioned over the two stripper fingers 29 disposed adjacent the end core bar 31 from which an end core has been removed and so that the plate 14 will be disposed in the same position in the mold box as was previously occupied by the removed end core. As seen in Figure 4, the plate 14 is of the same shape as the top surface of the end core 34. The lower ends of the tubes 11 rest upon one of the end stripper finger bars 28, as seen in Figure 1 and are of substantially the same length as the stripper fingers 29 for supporting the plate 14 at the same level in the mold box as a conventional pallet 35, which is supported on the upper ends of the stripper fingers 29, as seen in Figures 1 and 5. The pallet 35 is of a type usually employed for producing a conventional building block and has corresponding openings 36 for slidably engaging the three cores 33 and corresponding notches 37 in the ends thereof, each of which is sized to slidably engage an end, half core 34. One of the notches 37 slidably engages the single half core 34 and the other notch 37 is engaged by the plate 14 or 14a which fills the space or opening provided by said notch. The parts 21 to 37, inclusive, are of conventional construction and have been illustrated and briefly described merely to afford a better understanding of the use of the adaptors 10 and 10a.

Assuming that it is desired to form a single corner block, the adaptor 10 is applied as illustrated in Figures 1 and 4 so that its plate 14 will fill one of the end notches 37 of the pallet 35. When the crosshead bar 27 is moved downwardly in the guides 26 the pallet 35 and also the adaptor 10 will move downwardly therewith and when the pallet comes to rest upon the pegs 30, the peg 19 will at the same time come to rest upon the end core bar 31, which is disposed beneath the plate 14, to support said plate in the same plane as the pallet. The upper part of the mold box is then filled with concrete which is thereafter compacted. It will be readily apparent that the plate 14 will support the concrete at one end of the mold box so that the completed block when removed from the mold box and as seen in Figure 6 and designated 38 will have a recessed end, the notch 39 of which will be formed by the end core 34 and a flat opposite unnotched end 40, the concrete of the intermediate portion of which will have been supported by the plate 14 during molding of the block. In removing the single corner block 38 from the mold box 25 the crosshead bar is elevated in a conventional manner to cause the stripper fingers 29 to move upwardly carrying with them the pallet 35 and the adaptor 10, which is supported on one of the

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end stripper finger bars 28. After the pallet and block have been elevated through the open top of the mold box 25, the block and pallet are removed from the stripper fingers 29 by the conventional off bearer mechanism, not shown, of the machine 21, and the crosshead bar 27 thereafter moves downwardly with the adaptor 10, after which another pallet 35 is applied, as illustrated in Figure 1, and the molding operation is then repeated.

If it is desired to form a double corner block 41, as illustrated in Figure 7, this may be readily accomplished by removing the other end or half core 34 and applying another adaptor 10 to the other two end stripper fingers 29 and the plate 14 of which, not shown, will then fill the other pallet notch 37. By thus utilizing two adaptors, not shown, simultaneously, a double corner or pier block 41 may be molded by the machine 21 in the same manner as heretofore described.

To form a single steel sash block 42, as illustrated in Figure 8, having an opposite end, not shown, corresponding to the notched end 39 of the block 38, the adaptor unit 10a is employed in lieu of the adaptor 10 at one end of the mold box 25 and with an end core 34 disposed in the opposite end of the mold box. Additionally, a strip 43 of the proper cross sectional size to snugly fit the notch 20 is disposed in the end of the mold box 25 adjacent to which the adaptor 10a is disposed and extends upwardly from the end core bar 31 to the open top of the mold and is slidably engaged by said notch 20. Accordingly, when the block 42 is molded in the manner as previously described in detail in reference to the block 38, the end of the block 42 which is supported by the plate 14a will be formed with a groove 24a extending from the top to bottom of the end wall thereof which was supported on the plate 14a and which notch receives a part of the frame of a metal window. It will be readily obvious that the two pegs 19a will function in the same manner as the peg 19, as previously described, for supporting the plate 14a when the pallet 35 and adaptor 10a are in their lowermost positions and by resting on an end core bar 31. The other end of the block 42 will correspond to the notched end 39a of the block 38 if the core 34 is employed at the opposite end of the mold box 25 or a double steel sash block may be formed by utilizing two of the adaptors 10a and a second strip 43 at the opposite end of the mold box. If the block 42 is thus molded, each end will correspond to the end as illustrated and will be provided with a groove 42a. Likewise, a corner sash block may be formed by utilizing the adaptor 10a at one end of the mold box and the adaptor 10 at the opposite end thereof and in which case the opposite end of the block 42 will correspond with either end of the block 41.

Obviously, the adaptors 10 and 10a may be made in various sizes for use with mold boxes and pallets of different sizes for producing different size building blocks and it will be readily apparent that only one type of pallet 35 will be required for each size block 38, 41 or 42 when the adaptors 10 and 10a are employed whereas it is conventional to employ six types of pallets for each size block.

Various modifications and changes are contemplated and may obviously be resorted to, without departing from the spirit or scope of the invention as hereinafter defined by the appended

75 claims.

I claim as my invention:

1. A pallet adaptor for block molding machines of the stripper type, said adaptor comprising a plate shaped and sized to fit and fill an end notch of a mold box pallet, a bar supporting said plate to which the plate is secured at a right angle to the plane of the bar, a pair of tubes connected one to each end of said bar and having corresponding upper ends disposed below the level of said plate, said tubes being adapted to engage a pair of stripper fingers of the machine and being adapted to be supported at their lower ends on a stripper finger bar, each of the tubes being of the same length as the stripper fingers for supporting the plate in the mold box and in the same plane as the pallet which is supported on the upper ends of the stripper fingers.

2. A pallet adaptor as in claim 1, and a peg fixed to and extending downwardly from the plate remote to said bar and adapted to engage a core bar of the mold box for supporting the plate when the stripper fingers are displaced downwardly and the pallet is supported by pallet supporting pegs of the mold box and adjacent the mold box bottom, whereby the plate will be maintained in the same plane as the pallet.

3. A pallet adaptor as in claim 1, said plate having an outer longitudinal edge spaced outwardly from the bar and adapted to normally engage an end wall of the mold box, said plate being provided with a notch opening outwardly of said outer edge and adapted to slidably engage an upright core strip disposed against the inner side of said end wall of the mold box.

4. A pallet adaptor unit as in claim 3, and a pair of pegs fixed to and depending from said plate and disposed one on either side of the notch, said pegs being adapted to engage an end core bar of the mold box for supporting the adaptor in a lowermost position in the mold box and in the same plane as the pallet when the pallet is supported by the pallet supporting pegs of the mold box.

5. A pallet adaptor comprising a plate adapted to fit an end notch of a mold box pallet and to be disposed therewith in a mold box, said plate being sized to fill the end notch of the pallet, a pair of tubes adapted to slidably engage a pair of stripper fingers and having lower ends adapted to normally rest upon a supporting bar of the stripper fingers, and a cross bar connected to

the plate and to said tubes, said plate being disposed above the cross bar and above the level of the upper ends of the tubes.

6. A pallet adaptor as in claim 5, said plate projecting from one side of said cross bar and said tubes being secured to the opposite side of the cross bar.

7. A pallet adaptor as in claim 5, said plate projecting from one side of said cross bar and said tubes being secured to the opposite side of the cross bar, said plate having a notch opening outwardly of an edge thereof disposed remote to the bar and adapted to engage an upright core strip disposed in the mold box against one end wall thereof.

8. A pallet adaptor as in claim 5, said plate projecting from one side of said cross bar and said tubes being secured to the opposite side of the cross bar, a peg fixed to and depending from the plate and adapted to engage a core bar disposed in the bottom of the mold box for supporting the plate adjacent the bottom of the mold box and in the same plane as the pallet when the pallet is supported on the pallet supporting pegs of the mold box.

9. Mechanism for ejecting concrete blocks from the molds of block casting machines, which comprises, in combination, a pallet of conventional indented end configuration, pallet raising means comprising a horizontal lifter bar and a plurality of vertically extending fingers carried thereby and adapted to contact the underside of said pallet and raise the latter, a pallet extension attachment comprising a horizontal plate adapted to occupy the indentation in the pallet and a pair of tubular supporting legs extending downwardly from said plate and surrounding two of said lifter fingers, means for raising said lifter bar and thereby said pallet and said attachment for ejecting the block.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,577,383	Straub	Mar. 16, 1926
1,905,619	Carton	Apr. 25, 1933