March 24, 1959 M. W. HALE 2,878,845

MEANS FOR FASTENING TRIM FOR FINISHING INTERIOR SURFACES OF WALLS, ETC.

Filed May 23, 1956

Fig. 1

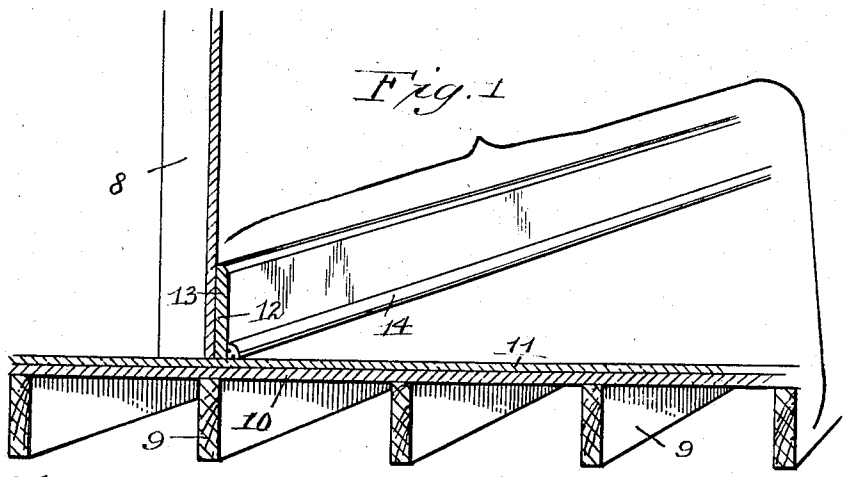


Fig. 2

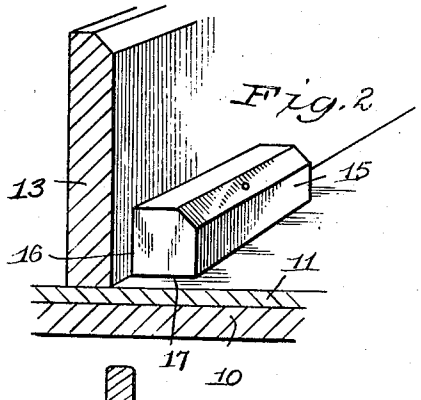


Fig. 3

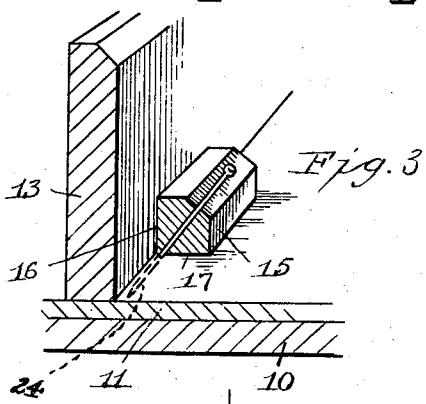


Fig. 4

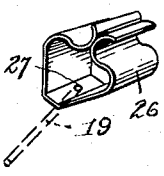


Fig. 8

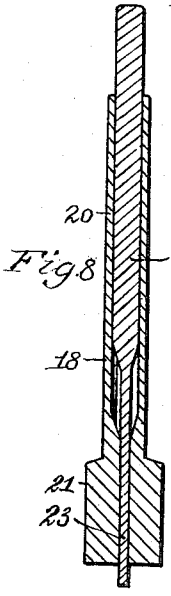


Fig. 5

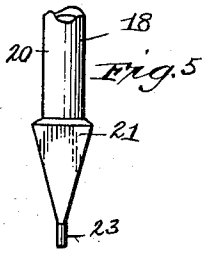


Fig. 6

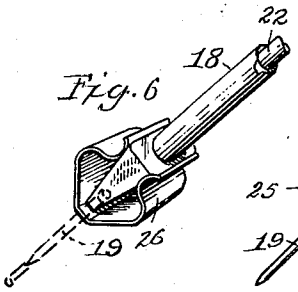
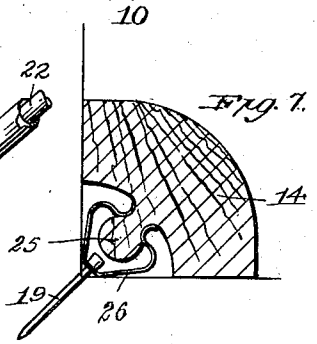


Fig. 7



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MEANS FOR FASTENING TRIM FOR FINISHING INTERIOR SURFACES OF WALLS, ETC.

Merritt W. Hale, East Aurora, N.Y.

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4 Claims. (Cl. 145—1)

This invention relates to wall trim in the form of moldings applied to the angles between wall surfaces and to the method of preparing for the attaching of such trim in place; and to the preparation for and application of said trim to the angles formed in the surfaces of walls and other foundation elements.

The invention has for its primary object to prepare the walls of a building for attachment thereto of trim in the form of molding in a manner so as to permit the easy detachment of the molding from the baseboard or other portion of a building or from any other foundation to which a trim element may be attached, to the end that the baseboard of a building or the foundation of any other object may be uncovered and be conveniently cleaned, restored, and/or painted, without the possibility of the baseboard or other foundation becoming spattered with paint or otherwise having the exposed portions of the foundation ruined, such as by sanding or the like.

A further object is to utilize a shoe or molding to form part of a baseboard serving as interior trim for dwellings and the like; the invention being usable as original installation and as molding where previously installed so that a baseboard of a wall or partition is capable of being painted without any possibility of the paint dripping onto the shoe or onto the floor adjacent the baseboard and the paint then reaching the plastered or unpainted area of a room when repainting work is done.

A still further object of this invention is to utilize a drill jig in the form of a heavy steel block approximately four inches in length and having a cross sectional formation with two adjacent sides at a right angle to each other and an intervening bevel side at approximately 45° to the right angular sides; the drill jig having a nail hole drilled therethrough extending from the bevel side of the drill jig between the two right angular sides of the latter, as appears in the drawing.

In the drawings:

Fig. 1 is a sectional elevation showing a portion of a building structure having the molding strip or shoe trim in position against the baseboard fastened or waiting to be fastened along its lower edge.

Fig. 2 is a sectional perspective view of a portion of a building structure showing my improved drill jig placed in position in an open angle of the structure.

Fig. 3 is a view similar to Fig. 2 showing a nail partially entered into a previously formed hole in the building structure and extending through the inclined bore of the jig block, this view illustrating the angle of the bore of the jig block and the corresponding angle of a nail hole relative to the building structure when the nail hole has been made through the use of the jig block.

Fig. 4 is a detached perspective view of one of the flexible metallic clips adapted to engage a complementary part formed on the shoe or ornamental strip used for embellishing the interior of the building structure.

Fig. 5 is a side elevation of the inner end of the nailer

employed for fastening the metallic retainer clips in place.

Fig. 6 is a detached perspective view of one of the flexible retainers having the spreading and puncturing end of the nailer inserted thereinto showing a nail within said retainer adapted to be driven into the base or other foundation element when the walls of the retainers are spread apart preparatory to fastening the clips rigidly along the base at intervals in the length of the latter and/or to the foundation material in the building structure.

Fig. 7 is a cross section through a trim member, such as a molding strip, applied to the open angle of two parts of a building structure.

Fig. 8 is a longitudinal section through the nailer of the spreading and nailing device.

Referring to the drawings in detail as applied to a building structure, as an example, the reference numeral 8 designates a wall or partition which may be constructed of studs and plaster; a wall or partition being usually employed to separate one room from another.

The joists 9 of the floor are usually covered with subflooring material 10 which in turn is covered with a finishing hardwood flooring material 11, the upper face of which is disposed at a right angle to the side 12 of the wall or partition and in this right angle the baseboard 13 is positioned. The baseboard 13, from an economical point of view, is usually of soft wood, but invariably the upper layer of the flooring 11 along the lower marginal portion of the baseboard is constructed of hardwood, as is the trim material, and the use of my invention possesses many advantages in that it enables the shoe 14 to be fastened to the baseboard without the necessity of driving nails through the shoe. For this purpose I provide resilient sheet metal clips which are already formed to desired shape and have nail holes in them. These clips are arranged at spaced-apart intervals along the wall or other foundation element and fastened in place by suitable nails 19.

Where studs are used for wall or partition structures these studs are spaced 16" or any other regular distance apart and it is the purpose of this invention to drive these nails 19 obliquely into the lower ends of the studs so as to assure a solid construction in which this invention is embodied.

The hardwood surface layer of flooring 11 is also difficult to penetrate with nails and consequently in prior practice a bit brace or drill jig has been employed to drill a hole through the shoe 14 and into or through the baseboard 13 and in most instances into the studs and any foundation or building member or material structure lying in the path of the nail being hammered in place. Instead of a bit brace, a drill jig, such as 15, is utilized for locating and forming the nail hole at the desired angle.

This drill jig is formed of steel and is so shaped that two side faces 16, 17, which I term contact or pressure faces are provided which are designed to be positioned against the face of the baseboard while resting on the floor. In the particular embodiment of the invention illustrated in the drawing, the jig block 15 is square shaped in cross section and it has an upper flat transversely inclined longitudinal face portion at the corner of the block diagonally opposite the lower corner thereof at the juncture of its side and bottom contact faces 16 and 17, said upper flat face portion extending at an angle of approximately 45° to the contact faces 16 and 17. The jig block is provided with a bore or hole 24 extending transversely substantially diagonally therethrough from its upper inclined corner face portion to the line of intersection of the vertical side and bottom horizontal contact faces 16 and 17 as it may be termed. A tool is

provided which comprises a tube 20 having an exterior tapered head 21 and a plunger 22 within said tube which is provided with a wire penetrator 23 to be driven into the floor and baseboard at the angle of the two so that this wire penetrator forms a nail hole 24 in the wall and floor structure at the exact angle of the face of the base with the upper surface of the hardwood floor layer 11 or as near thereto as possible, as best shown in Fig. 3.

When the baseboard 13 and the shoe 14 are incorporated in a wall or partition and the wall or partition is completed, the shoe, which is provided with a retainer rib 25 extending along its full length on its inner face and while fastening the shoe in place at the angle formed by the floor and the adjacent side of the wall or partition, the nailer 18 is utilized to fasten the shoe 14 in place, as best shown in Fig. 7. The tool is utilized to fasten a longitudinal series of retainer clips 26 to the baseboard and/or the floor, as the case may be, the tapered end of the nailer head 18 being positioned within the retainer and by means of a hammer, the wire penetrator 23 is driven downwardly to form a nail hole in the floor and the wire clips thus forcibly positioned in the angle part of the floor and the face of the baseboard at the same time.

The retainers which are stamped out of spring steel, are of general V-shaped configuration in cross section, each clip having at its free ends reversely curved substantially semi-circular end portions normally disposed close together. Each retainer clip is provided with a nail hole 27 through which the penetrator 23 of the nailer is driven so that this hole is continued into the baseboard and any supporting element behind the same so as to form a nail hole in the floor. The plunger of the tool or nailing device is then moved back into position in the tapered head after which this tapered head will be guided in the grooved portion of the retainer which is later to receive the retainer rib 25 formed on the inner side of the shoe and by hammering the plunger 22 down, the nail will be driven through the retainer and enter the floor at the angle of the latter to hold the shoe firmly in place.

When a professional is engaged to paint the interior of a house, or when this is carried out by one not experienced in this line of work, the cost of repainting can be reduced considerably and even if the paining is done by an amateur, it will have the appearance of a professional job.

When it is desired to paint the interior trim of a house, the shoe is taken hold of and pulled out so that the retainer ribs 25 will be dislodged from the groove or grooves extending along the baseboard. This leaves the face of the baseboard without obstructions and easy to repaint.

Even if the paint runs down the baseboard and into the space originally occupied by the shoe 14, it will be covered up when putting the shoe back into place. The same application is resorted to when the parts are originally installed in a house. When the jig block 15 rests on the floor and is positioned against the baseboard, the wire penetrator 23 is passed successively through the inclined bore in the jig and driven into the wall structure so as to form a nail hole in the latter. The angle at which this nail hole is formed in the structure is determined by the angle of the inclined bore or hole in the jig after which the clips are placed against the floor and baseboard and the tapered head 21 of the nailer 18 entered into the grooves of the clips with the nail partly driven into the floor.

In another application of my invention to a medium priced dwelling equipped with hardwood floor border-regions and softwood or other cheaper baseboards having molding strips applied to the baseboard where it adjoins the hardwood floor border-region, my improved drill jig 15 is placed in the angle of the partition and flooring; it having a nail hole 24 formed obliquely therethrough

so as to bring the inner end of said hole a trifle above the angle formed by the partition or baseboard of the floor with the drill jig so positioned. After so positioning the drill jig, the bit of a drill is passed through the nail hole in the drill jig preparatory to forming an opening for the nail to enter, after which the drill is placed in the nail hole in the drill jig so as to guide the drill and guard against breakage of the same. So arranged it is an easy matter to flexibly connect the parts of wall trim in the form of moldings so that other parts or foundation elements beneath the molding will be completely exposed for painting and matching trim with the finish of the part uncovered retained for unaltered surfaces or may be otherwise used and/or worked upon. For example, refinishing the hardwood floor regions which may be subjected to the action of a disk sander used for finishing the edges and corners and be capable of reaching into the corner and close to the baseboard.

Another specific exemplification of the use of my invention is to utilize the drill jig to drill a hole in the corner or angle formed by the baseboard and the floor; the hole so formed being through a part or parts which require drilling preparatory to driving a nail through the same. After drilling the hole in the angle or corner formed by the base member and the floor, the drill jig is removed and a retainer clip placed in position with a hole registering with the hole drilled in the building structure.

The molding element is provided with a bead or projection 25 on its inner face designed to be received and embraced by the flexible metallic clips so that they may be forced into place by mere pressure application or may be removed under reverse force.

Having thus described my invention, what I claim is:

1. Means for attaching trim material in corners at the juncture of adjoining walls in buildings including a drill jig comprising an elongate metal block of angular cross sectional form having adjoining flat vertical side and horizontal bottom contact faces extending at a right angle to each other, the jig block being of a size to fit into adjoining wall corners with said contact faces bearing against the wall surfaces, and said block having a bore extending transversely obliquely therethrough from an upper outer face portion thereof substantially in line with a point in the region of the apex of said side and bottom contact faces, and a tool comprising a tube having a part at its lower end to engage upon an upper face portion of the jig block, and a driving plunger slidable in said tube and having a wood penetrator rod-like element extending from its lower end in line therewith slidable in the bore of said jig block and guided thereby to form a nail hole in the wall structure at the desired angle, said plunger projecting outwardly beyond the upper end of said tube, and the upper end of the plunger being adapted to receive driving impacts from a hammer.

2. Means for attaching trim material in corners at the juncture of adjoining walls in buildings including a drill jig comprising an elongate metal block of angular cross sectional form having adjoining flat vertical side and horizontal bottom contact faces extending at a right angle to each other, and a relatively narrow transversely inclined upper face portion opposite the apex of said bottom and side contact faces, the jig block being of a size to fit into adjoining wall corners with its contact faces bearing against the wall surfaces, and said block having a bore extending transversely obliquely therethrough from its upper inclined face portion substantially in line with a point in the region of the apex of said side and bottom contact faces, a tool comprising a tube having at its lower end intergral therewith an elongate head of general wedge shaped form, said head being broadest at the point of juncture of the same with said tube, the outer narrower end of said head having a flat end face adapted to be engaged with said upper inclined face portion of the jig block, and said head having a bore ex-

tending lengthwise through the same, said last mentioned bore being of less diameter than the interior diameter of said tube and extending in alignment with and communicating with the interior of the tube, a driving plunger slidable in said tube and having a combined wood penetrator and nail driving rod-like element extending from the lower end thereof in alignment therewith, said rod-like element being of a diameter to slidably engage the bore in the head of the tool and also the bore in the jig block and be guided by the latter to form a nail hole in the wall structure at the desired angle, said plunger projecting outwardly from the upper end of said tube and the upper end of the plunger being adapted to receive driving impacts from a hammer.

3. Means for attaching trim material in corners at the juncture of adjoining walls in buildings including a drill jig comprising an elongate metal block of angular cross sectional form having adjoining flat vertical side and horizontal bottom contact faces extending at a right angle to each other, and a relatively narrow transversely inclined upper face portion opposite the apex of said bottom and side contact faces, the jig block being of a size to fit into adjoining wall corners with its contact faces bearing against the wall surfaces, and said block having a bore extending transversely obliquely therethrough from its upper inclined face portion substantially in line with a point in the region of the apex of said side and bottom contact faces, a tool comprising a tube having at its lower end integral therewith an elongate head of general wedge shaped form, said head being broadest at the point of juncture of the same with said tube, the outer narrower end of said head having a flat end face adapted to be engaged with said upper inclined face portion of the jig block and said head having a bore extending lengthwise through the same, said last-mentioned bore being of less diameter than the interior diameter of said tube and extending in alignment with and communicating with the interior of the tube, a driving plunger slidable in said tube and having a combined wood penetrator and nail driving rod-like element extending from the lower end thereof in alignment therewith, said rod-like element being of a diameter to slidably engage the bore in the head of the tool and also the bore in the jig block and be guided by the latter to form a nail hole in the wall structure at the desired angle, said plunger projecting outwardly from the upper end of said tube and the upper end of the plunger being adapted to receive driving impacts from a hammer, and a spring trim engaging and retainer clip of general V-shaped configuration in cross section and of a size to fit into adjoining wall corners, said clip having at its free ends reversely curved substantially semi-circular end portions normally disposed close together, and said clip having a flat intermediate portion provided with an aperture for a nail to fasten the clip to the wall structure, said tool being adapted to be positioned with the outer end of its head disposed between the outermost portions of the reversely curved end portions of the retainer clip positioned within an adjoining wall corner, and the tool then moved inwardly so that the reversely curved end portions of the retainer clip are spread apart by the tool head and the latter enters the clip in position for operation of its driving plunger to complete the driving of a nail to secure the retainer clip to the wall structure, the reversely curved end portions of the retainer clip embracing the tool head at opposite sides acting to maintain the tool head in proper centered relation with the clip during the driving of the nail.

4. Means for attaching trim material in corners at the juncture of adjoining walls in buildings including a drill jig comprising an elongate metal block of generally square shaped cross sectional form having adjoining flat vertical side and horizontal bottom contact faces extending at a right angle to each other, and said block having an upper transversely inclined flat face portion at the corner of the block diagonally opposite the lower corner thereof at the juncture of said vertical side and horizontal bottom contact faces, the jig block being of a size to fit into adjoining wall corners with said side and bottom contact faces thereof bearing against the wall surfaces, and said block having a bore extending transversely substantially diagonally therethrough from said upper inclined corner face portion to the line of intersection of said vertical side and horizontal bottom contact faces, and a wood penetrator rod-like element slidable in the bore of said jig block and guided thereby to form a nail hole in the wall structure at the desired angle, and driving means for said penetrator element.

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