Feb. 22, 1966 D. P. GRIGAS ETAL 3,236,932

APPARATUS FOR APPLYING METALLIC SIDING

Filed Feb. 19, 1963

2 Sheets-Sheet 1

FIG. 1

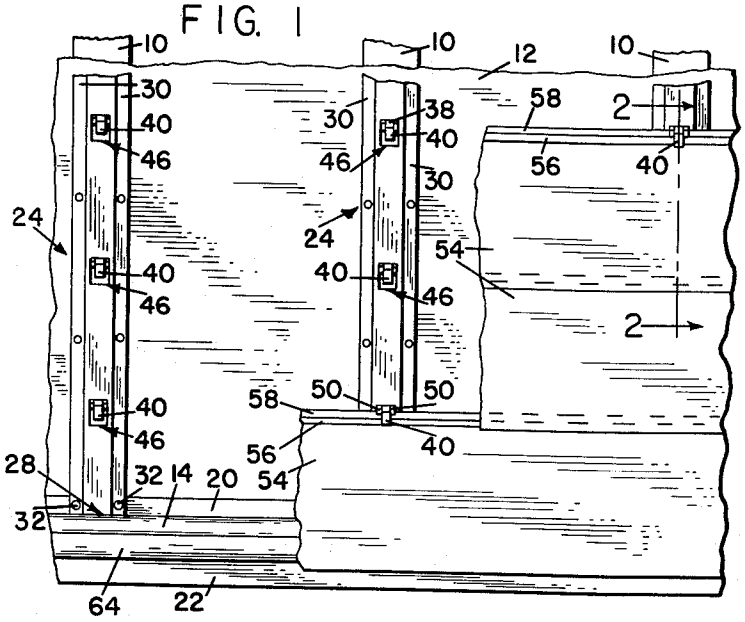

FIG. 2

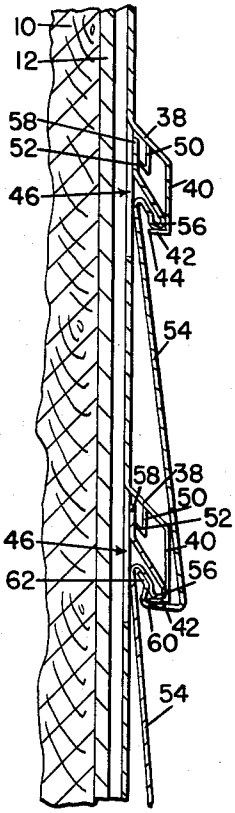

FIG. 3

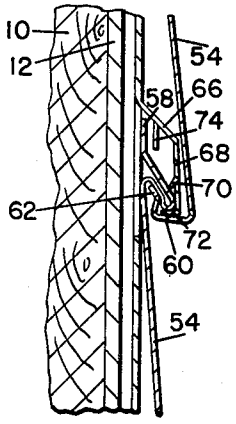

FIG. 5

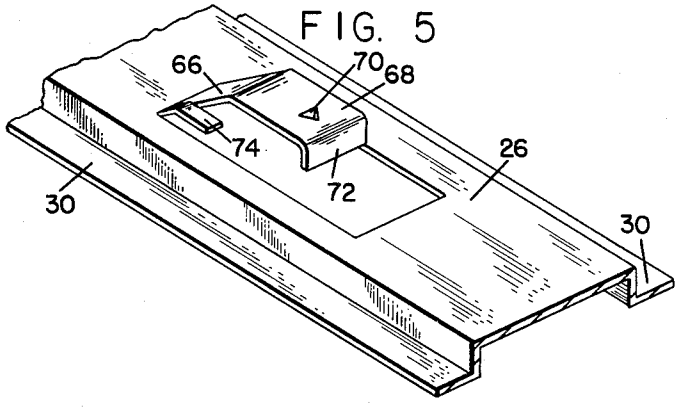

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FIG. 7

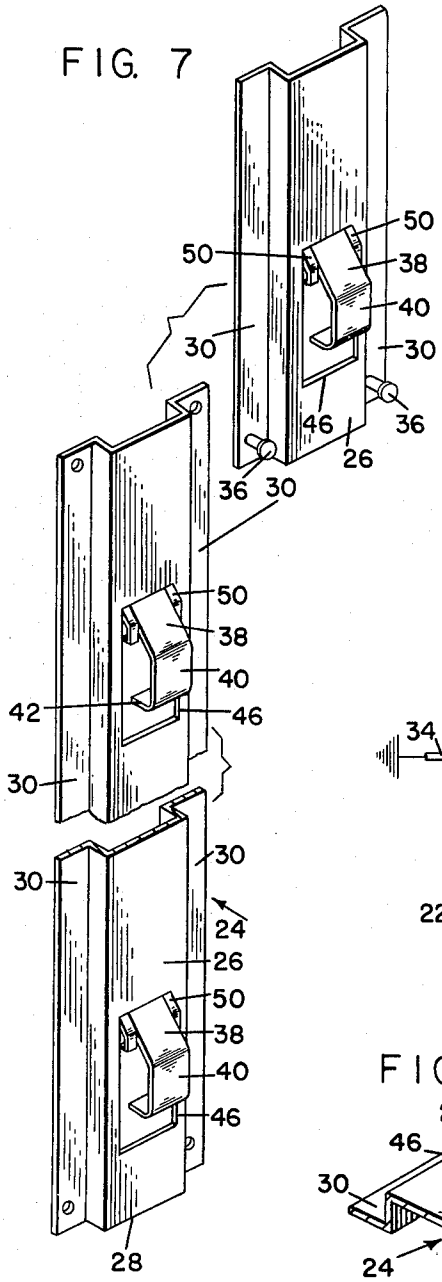


FIG. 6

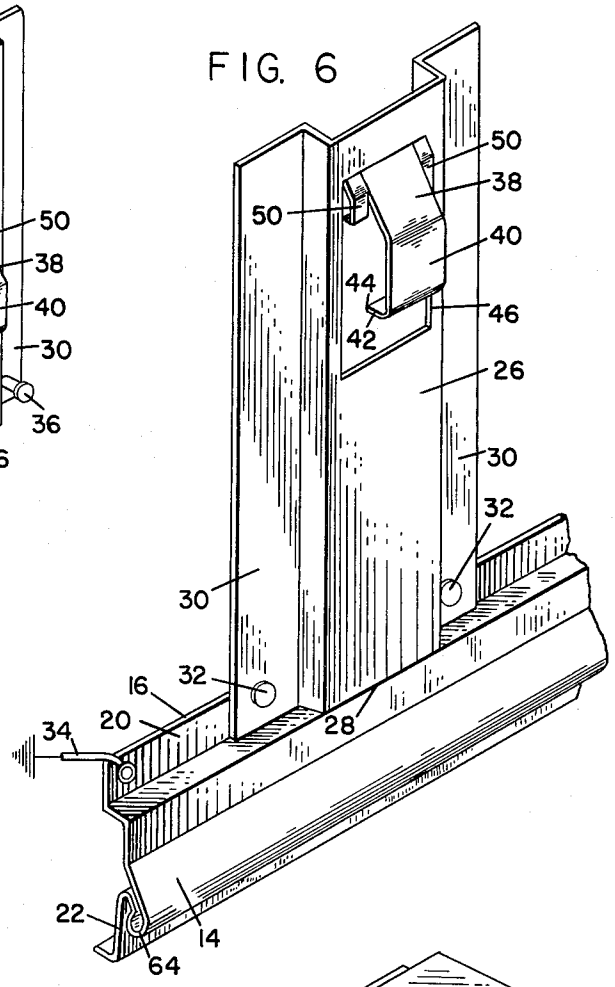
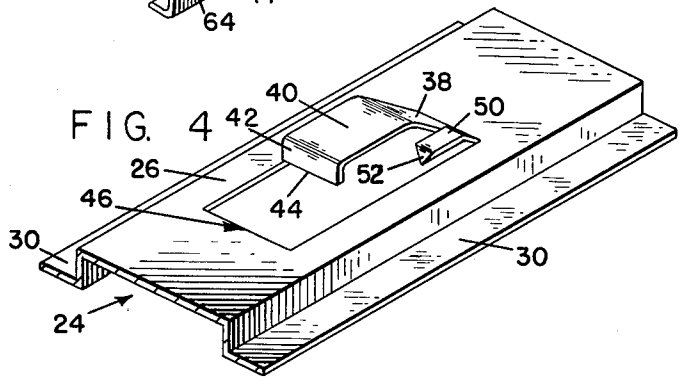


FIG. 4



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APPARATUS FOR APPLYING METALLIC SIDING

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2 Claims. (Cl. 174—2)

This application is a continuation-in-part of our prior application Serial No. 85,546 filed January 30, 1961, now Patent No. 3,131,513 and relates to a new and improved apparatus for applying metallic siding without the use of nails or other fasteners causing penetration of the siding at any point; the provision of means for applying siding to a wall or uprights in general by which means the individual siding clapboards are quickly and easily accurately installed; and the provision of means for applying metallic siding including furring uprights which are square cut at their ends and are adapted to be arranged on a horizontal base starter strip which may be leveled so that the uprights are exactly vertical, each upright including equally spaced clip members thereon which clip members are adapted to engage and hold each clapboard at the top edge thereof without any other fastening means and with no penetration, the lower edge of each piece of siding underlying and concealing the clip; and the provision of a construction as above described whereby any desired piece of siding may be removed from the assembly by sliding it endwise without disturbing the clapboards above or below it.

Further objects of the invention include the provision of means for applying metallic sidings such as aluminum siding or clapboards of conventional construction to side wall, furring strips, or studs, comprising a main base starter strip which is adapted to be mounted in a level, horizontal relationship at the bottom of the construction and including a series of preferably metallic spaced vertical furring strips which are square cut at the ends thereof for resting upon the starter strip in parallel alignment; each of the furring strips being provided with a series of integral or secured clips each comprising a portion extending outwardly away from its upright, then extending downwardly and inwardly forming an abutment, in combination with generally conventional aluminum siding clapboards, which are provided with forwardly extending downwardly opening hook-like edge members at the top or uppermost edge thereof and having an inwardly extending flange at the bottom edge, the hook-like members being quickly and easily snapped into the aforementioned clip and being presented thereto in a reverse direction, being securely hooked and engaged therewith; and the provision of a structure as above described in which said clips are vertically spaced so that the upper hooked edge of the aluminum siding is attached to a horizontal row of clips and the bottom edge flange thereof extends under and conceals the next lower horizontal row of clips, whereby all piercing fasteners are completely obviated and the siding is arranged in substantially perfect horizontal alignment.

A further object of the invention resides in the provision of a special new and improved means for electrically grounding the entire siding structure, the ground connections being incorporated in the clips which are formed as a part of or are connected to the upright furring strips and are provided with means for electrically connecting each piece of siding with each furring strip, and the furring strips being electrically connected with respect to the starter strips which in turn are easily connected to ground as to a pipe, etc. whereby the entire aluminum portions of the edifice whether on the siding or on the roof of the building are grounded for the protection of the building against any kind of electrical discharge such as lightning.

The invention further relates to arrangements and combinations of parts which will be hereinafter described and more particularly set forth in the appended claims.

Reference is to be had to the accompanying drawings, in which

FIG. 1 is a view in front elevation showing the general construction of the invention;

FIG. 2 is a view on an enlarged scale, taken on a section on line 2—2 of FIG. 1 and showing the siding in position;

FIG. 3 is a view similar to FIG. 2 showing a modification;

FIG. 4 is a perspective view of one form of clip;

FIG. 5 is a similar view showing a modified clip;

FIG. 6 is a perspective view illustrating the starter strip construction, and

FIG. 7 is a perspective view illustrating the connection of a plurality of furring strips.

As an illustration of the present invention there are shown upright studs 10 to which a sheathing 12 may be applied. This represents any kind of building construction to which siding such as clapboards of the class described herein may be applied. The clapboards are ordinarily of aluminum, but they may be of any metal or other suitable materials having some degree of resiliency.

Applied directly to the studs or to the sheathing, there is in the first place an elongated starter strip 14 which is applied to its support in exactly level relationship so that its top edge 16 is exactly horizontal.

The starter strip which is best shown in FIG. 6 is preferably extruded with the outline shown in FIG. 6 or a similar outline to provide a certain amount of rigidity and strength. One important characteristic is that it is provided with a forwardly extending shelf or the like 18 just below the top edge 16 thereof and this shelf terminates in an upright portion at 20 which together with the portion at 22 may be applied as desired to the sheathing or to any other convenient part of the building, but in level relationship so that the shelf 18 is also horizontal.

A series of furring strips generally indicated by the reference numeral 24 are provided with a central longitudinal struck-up rectangular box portion at 26 providing a forwardly extending box-like lower edge at 28 which is adapted to rest on the shelf 18 while the flange areas 30 of the furring strips are then capable of being held as at 32, 32 to the underlying support and flatly against the portion 20 of the starter strip 14. The starter strip 14 is thus electrically connected to all the furring strips as by nails and itself may be directly grounded or have a cable or the like indicated at 34 for this purpose. The cable may extend to a water pipe, upright stake, or any other grounded element as is well known.

By the aforesaid construction, the upright furring strips 24 are thus located in exactly upright and parallel condition and may be secured to the underlying sheathing or to studs as desired by screws or nails such as those at 32 and also as shown at 36 in FIG. 7. Also the furring strips 24 are provided with pre-punched nail holes for the purpose of automatically setting the increment between any two adjoining furring sections and the nails 36 also electrically connect these sections so that all of the furring sections are electrically connected with respect to the starter strip 14.

The furring strips 24 are provided with equally spaced outstanding clips. The clip shown in FIG. 4 is struck up as clearly illustrated and first extends outwardly at an incline as at 38 merging into a generally flat piece 40 which is parallel to the furring strip in general and terminates in a flange 42 having a free edge 44 parallel to the furring strip and extending in spaced relation with respect thereto as is clearly shown in FIGS. 2 and 4.

The strip **40** is a little narrower than the hole **46** from which it is struck, and a pair of spurs, one at each side of member **40** and as illustrated at **50**, can be thus provided, the spurs extending only part way from the furring strip with regard to the member **40**, being based intermediate the furring and the member **40**. These spurs terminate in reversely or inwardly extending sharpened points **52** for a purpose to be described.

The siding as shown in FIG. 2 and also as well in FIG. 3 comprises in general the main body portion of the clapboard which is illustrated at **54** and which has at its upper edge a reversely bent hook-shaped portion **56** which then extends rearwardly and upwardly in a terminal tab **54**. The lower edge of the siding extends inwardly as at **60** terminating in a springy reversely bent snap edge portion at **62**.

In assembling the structure, the first thing done is to apply and level the base strip **14** and then apply the upright furring strips **24** in parallel substantially evenly spaced relationship as is shown in FIG. 1 or as in FIG. 7 if strips longer than those provided are needed.

The lowermost clapboard or siding as above described is then applied by inserting the lower flange at **60** under the forwardly projecting elongated longitudinal hook-shaped formation at **64** (see FIG. 6), this hook-like structure being similar to that at **56**. Then the upper edge portion of the siding is slid in under and past edges **44** of flanges **42** of a horizontal row of clips described. The tab **58** then is scraped by the sharp points **52** on tabs **50**, thus providing electric contact between the siding and clip and hence also between the furring strips and the starter strip. This scratches any painted surface which is present and also provides for additional holding power to make the furring section more durable.

The next clapboard or siding strip is then applied with its flange **60** extended under the flange **42**, etc. and the reversely bent spring hook **62** encompasses the nose portion of hook **56** (see FIG. 2), this action being repeated until the wall is completed.

The invention also contemplates the use of other forms of clips and in FIG. 5 there is shown a modification. The clip in FIG. 5 is struck up in more or less the same way and is connected to its furring strip by means of the inclined strip indicated at **66** proceeding into the flat parallel area **68** which has a downturned or struck sharp point **70**. This clip also has the flange **72** comparable to that at **42**. In this case as shown in FIG. 3 the spur **70** scratches the forwardly projected portion of the hook-shaped member **56** so that each siding member is thus electrically connected to its clip, etc. The tabs **74** are provided on each side of the springy tab **68** providing additional holding power to make the furring section more durable. In this case the assembly of the edifice is in the same manner as above described.

The application of the clapboards is thus seen to be without tools and without fasteners which penetrate, mar, or damage the clapboards in any way and the time of application of the clapboards is very greatly reduced. The clapboards are of course arranged in absolutely horizontal alignment because the clips themselves act as markers and limit members for positioning the individual clapboards as the work progresses from the bottom to the top of the wall being treated. Also, if for any reason any one clapboard has to be removed, this can be done by sliding it lengthwise out of its row of clips because there are no through fasteners holding it to the wall and this reduces time and effort required for replacement if such should become necessary.

By providing for a scratch or penetration of the tabs **52** or **70** with respect to the corresponding clapboards or siding members, the entire aluminum or other metallic construction is electrically connected so that any electric discharges applied anywhere to the building will be carried down to the ground through the starter strip **14** as described.

Of course other forms of clips may be utilized without departing from the scope of the invention and as is well known certain ribs, etc. may be formed therein in order to strengthen the same as is found to be desirable, but it is to be understood that the invention contemplates the use of such modifications and variations as come within the scope of the appended claims, and it is to be noted that the invention relates to any kind of exterior finishing materials such as the siding described and also shingles, etc. whether used on the side wall of a building or on the roof thereof.

Having thus described our invention and the advantages thereof, we do not wish to be limited to the details herein disclosed, otherwise than as set forth in the claims, but what we claim is:

1. Siding for the wall of a building comprising an elongated base strip mounted horizontally adjacent the lower portion of said wall, said base strip including an elongated outwardly projecting shoulder, a plurality of spaced furring strips mounted at their lower ends of the shoulder, said furring strips having square ends and extending along said wall upwardly from the base strip,

and horizontally aligned clips equally spaced on each of said furring strips, each clip comprising a resilient short strip struck up from the face of its furring strip and extending outwardly and then downwardly terminating in an inwardly extending flange having its terminal edge spaced from its furring strip,

in combination with horizontal, parallel metallic siding members, each metallic siding member being coated, reversely bent locking flanges at the upper and lower elongated side edges of each siding member, said locking flanges engaging the horizontally aligned clips in pairs, the locking flange at the upper edge of one siding member lying behind the short resilient strip of each clip and being engaged behind the clip flanges, the locking flange at the lower edge of the next adjacent siding member extending over the clip and under the flange of the clip and past the same to engage the locking flange of the said one siding member,

and means on the clips electrically connecting the siding members to the furring strips, the furring strips being in turn electrically connected with respect to said base strip, means grounding the base strip, the means on the clips electrically connecting the siding to the furring strips penetrating the coating of the siding members when the latter are applied to the clips.

2. The siding of claim **1** wherein the means on the clips for the electric connection of the siding members to the furring strip includes relatively sharp prongs.

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JACOB SHAPIRO, EARL J. WITMER, *Examiners.*