United States Patent [19]

Martin et al.

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[54] **BUILDING EXTERIOR PANELLING WITH END-TO-END OVERLAP**

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[22] Filed: **May 14, 1973**

[21] Appl. No.: **359,759**

Related U.S. Application Data

[63] Continuation of Ser. No. 164,775, July 21, 1971, abandoned.

[52] **U.S. Cl.** **52/540,** 52/557

[51] **Int. Cl.** **E04d 1/26**

[58] **Field of Search** 52/540, 535, 519, 592, 52/541, 555, 557

[56] **References Cited**

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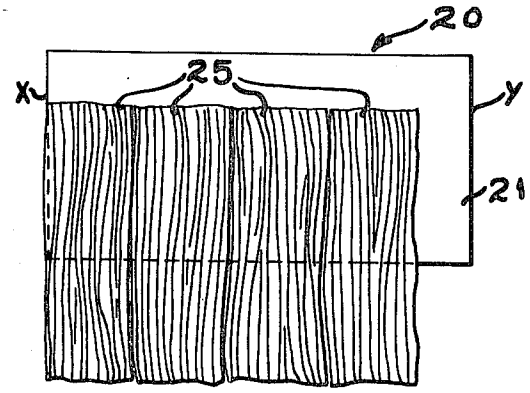
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[57] **ABSTRACT**

A panel for the constructing of a building exterior comprising facing material secured to a sheathing so as to be contiguous with one end edge of the sheathing and to approach the opposite end edge of the sheathing in spaced relation to provide a blank space. Such panels are joined in end-to-end overlapping relation with the sheathing of one panel disposed in the blank space provided at the opposite end edge of the other panel over the sheathings of the other panel and with the facing material contiguous with the one edge of the one panel disposed in the blank space provided at the opposite end edge of the other panel and in side-by-side relation with the facing material of the other panel.

3 Claims, 9 Drawing Figures



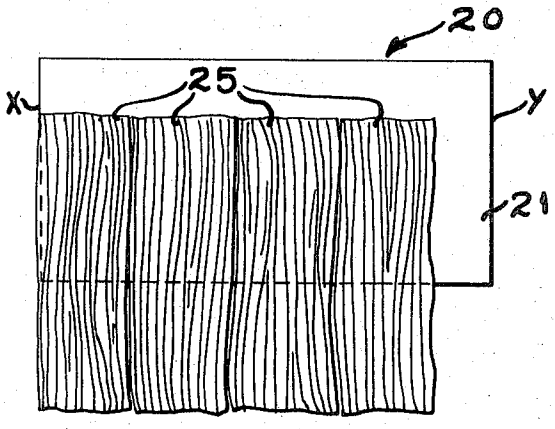


FIG_1

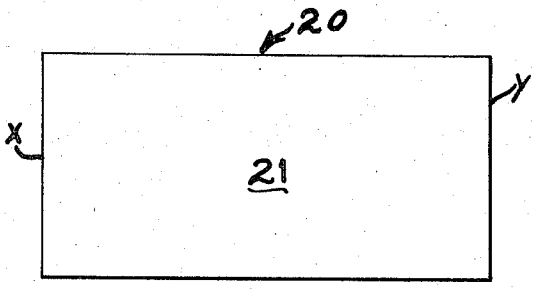


FIG_2

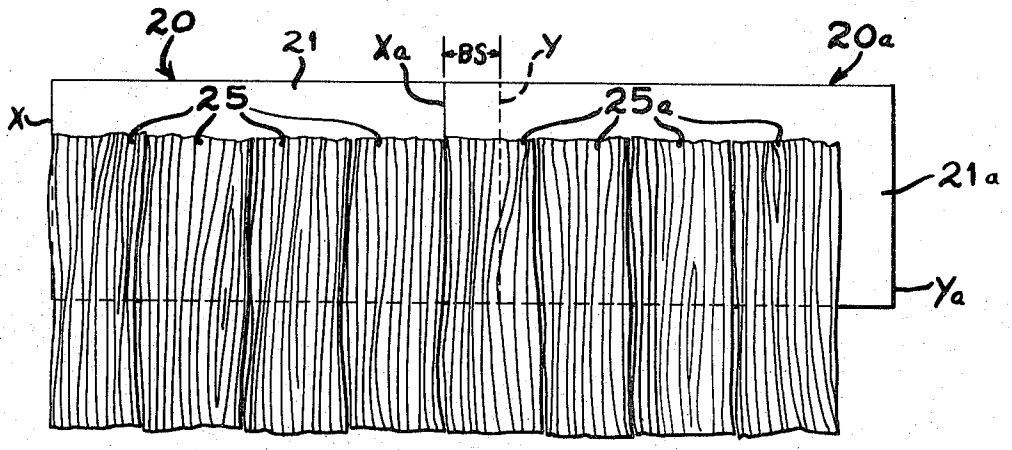


FIG_3

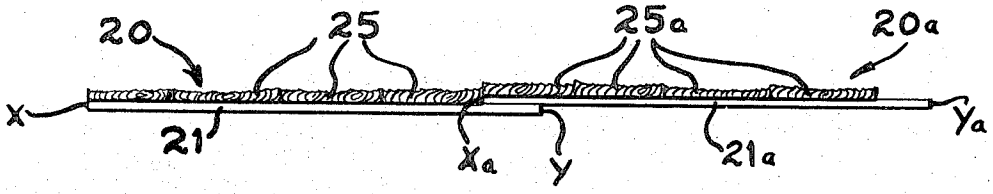


FIG_4

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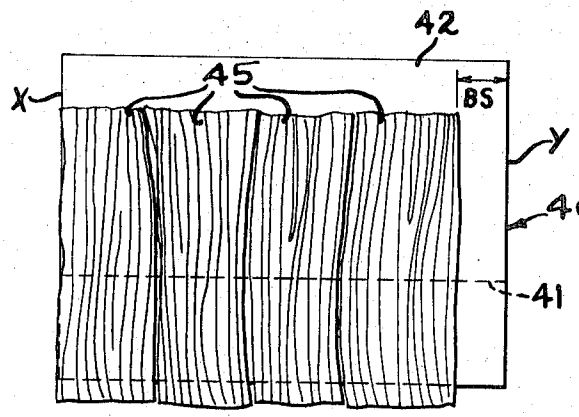


FIG_5

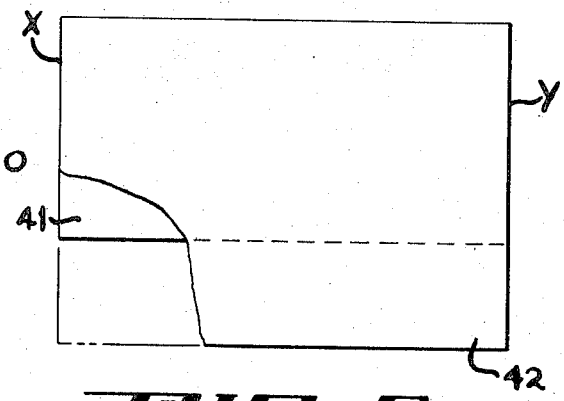


FIG_7

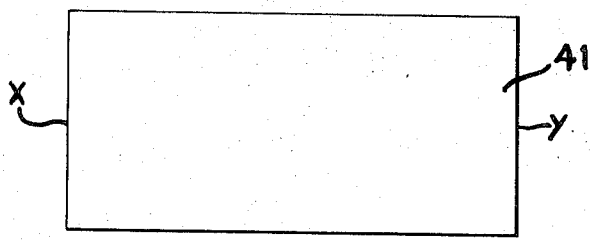


FIG_6

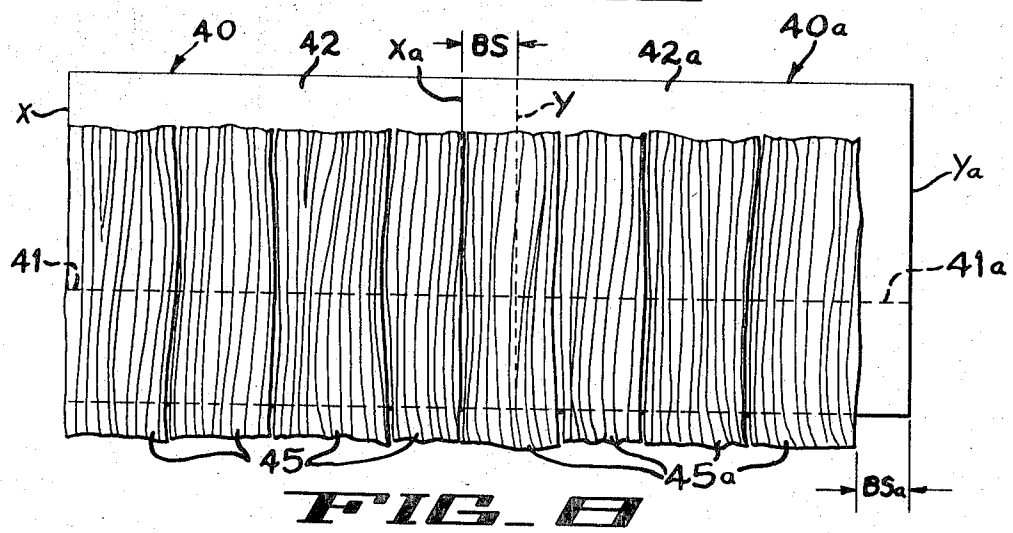


FIG_8

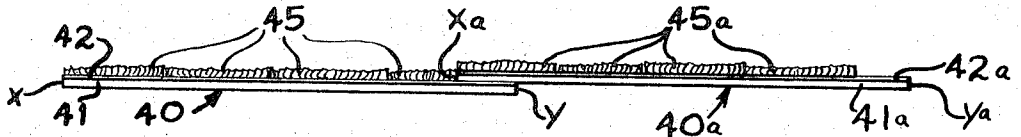


FIG_9

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BUILDING EXTERIOR PANELLING WITH END-TO-END OVERLAP

This is a continuation of application Ser. No. 164,775 filed July 21, 1971, and now abandoned.

BACKGROUND OF THE INVENTION

The present invention relates in general to panels for the construction of a building exterior, and more particularly to panels for the construction of a building exterior employing an overlap joint between adjacent end edges of the panels.

Heretofore, end-to-end joints in exterior building panels were at times formed with various tongue and groove connections. Such an arrangement lacked flexibility to accommodate the particular dimension requirement for a given installation. Flexibility was lacking because of the inability to cut a portion of the end section to fit the required dimension.

At other times, the sheathings were disposed in end-to-end abutting relation with facing material disposed in the space adjacent to and over the joined end edges. This arrangement did not provide the ultimate in waterproofing seals or structural strength. It has been found that abutting end edge joints were rather difficult to seal against water seepage. In addition, the strength of the roof was determined by the strength of the facing material. The shutter shake overlying the abutting end edges had rough under-surfaces and coupled with the space between the contiguous end edges, rain was able to seep into the structure.

At still other times, there was an end-to-end overlap with joined edges of the panels forming alternative vertical layers of sheathings and facing material. When such an arrangement was cut to accommodate a job requirement as to size, both the sheathing and the facing material were cut causing an impairment of the panel, which required compensation in the installation of the end-to-end joint between adjacent panels. As a consequence thereof, the strength of the panels were deficient. Further, such joints were lacking in waterproofing capacity, as well as causing inconvenience in the installation thereof.

One type of end-to-end panel joint is disclosed in a pending application, Ser. No. 51,922, filed on July 2, 1970 by Otis M. Martin, now abandoned in favor of Ser. No. 236,259, filed Mar. 20, 1972, for Method Of And Prefabrication Panel Closure For The Construction Of A Building Exterior and assigned to the assignee of the present invention. Horizontal overlap arrangements for joining adjacent panels in the construction of a building exterior are disclosed in U.S. Pat. No. 3,440,777, issued to Otis M. Martin on Apr. 29, 1969, (Reissue 27,502) for Shake Strip Assembly For Roofing And Siding. The panels shown in U.S. Pat. No. 3,440,777 have a base strip such that when the panels are assembled on a roofing structure the base strips form the structural sheathing for the roof.

SUMMARY OF THE INVENTION

A panel for the construction of a building exterior in which each panel comprises a layer of facing material secured to a sheathing strip adjacent one end edge thereof and approaching an opposite end edge thereof in spaced relation to provide a blank space and in which panels to be joined are disposed in end-to-end overlapping relation with the sheathing strip of one panel disposed over the sheathing of the other panel in the blank space of the other panel and with the facing material of the one panel that is adjacent to the one end edge of the one panel adjacent to the facing material of the other panel that is spaced from the opposite end edge of the other panel.

By virtue of the present invention, an improved weatherproofing or waterproofing joint is provided. With overlapping of sheathing over sheathing, there are two relatively smooth surfaces confronting one another as distinguished from a shutter shake surface confronting a sheathing surface. As a consequence thereof, water seepage through the panels is reduced.

Flexibility in installation is attained by the present invention, because correction of the panels to fit the size requirements of a given job is achieved by merely cutting off a portion of the end of the panel. Therefore, there is no impairment of the strength of the panel and the actual cutting of the panel to reduce the size thereof to fit a job requirement is greatly facilitated.

DESCRIPTION OF THE DRAWINGS

FIG. **1** is a plan view of a panel for the construction of a building exterior embodying the present invention.

FIG. **2** is a plan view of a sheathing employed in the panel shown in FIG. **1.**

FIG. **3** is a plan view of a plurality of panels each of which is illustrated in FIG. **1** disposed in end-to-end overlapping relation.

FIG. **4** is a side elevation view of the end-to-end overlapping panels shown in FIG. **3.**

FIG. **5** is a plan view of a panel that is a modification of the panel shown in FIG. **1.**

FIG. **6** is a plan view of a sheathing employed in the panel shown in FIG. **5.**

FIG. **7** is a plan view of the sheathing with a membrane thereon employed in the panel shown in FIG. **5,** with a portion of the membrane cut away to show a portion of the sheathing.

FIG. **8** is a plan view of a plurality of panels each of which is illustrated in FIG. **5** disposed in an end-to-end overlapping relation.

FIG. **9** is a side elevation view of the end-to-end overlapping panels shown in FIG. **8.**

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Illustrated in FIG. **3** are prefabricated panels **20** and **20***a* of the present invention, which are joined together for the construction of a building exterior. It is to be understood that in the exemplary embodiment, the prefabricated panels **20** and **20***a* and panels similar thereto are joined in a horizontal overlapping relation for the construction of a building exterior in the manner described in the aforementioned U.S. Pat. No. 3,440,777 (Reissue 27,502) or in the manner described in the aforementioned application, Ser. No. 236,259, after the sheathing strips of the panels have been joined in an end-to-end overlapping relation to form a series of horizontal extending panels.

The panels **20** and **20***a* are similar in construction and function. Hence, the panel **20** will be described in detail with like parts of the panel **20***a* designated with a suffix "*a.*"

The panel **20** comprises a waterproof sheathing strip **21,** which in the exemplary embodiment, may be a sheet of plywood weather treated for waterproofing by

glue, a plaster coating or the like. In the preferred embodiment, the sheathing strip **21** is a relatively thin sheet of plywood in the neighborhood of 3/8 inch or 5/16 inch plywood to provide sufficient flexibility in the panels during the installation thereof to form a building exterior.

Fixed to the sheathing strip **21** is a layer of facing material **25**, the units of which are disposed side-by-side. The facing material **25** may comprise one of the following facing materials: shingles, shakes, tiles, peeler strips, veneer, asbestos composition and the like.

The facing material **25** has the upper edges thereof spaced downwardly a selected distance from the upper edge of the sheathing strip **21**, such as 2 inches–3 inches, and has the lower edge thereof extending beyond the lower edge of the sheathing strip **21** a selected distance, such as 6inches–8inches.

According to the present invention, the facing material **25** has an end edge disposed contiguous to or adjacent to an end edge X of the sheathing strip **20** and continues therefrom to approach in spaced relation the end edge Y of the sheathing strip **21**, thereby providing a blank space BS between the corresponding end of the layer of facing material **25** and the end edge Y. In the preferred embodiment, the width of the blank space BS shown by the arrows in FIG. **3** is in the neighborhood of 3 inches. The panel **20***a* is joined to the panel **20** by end-to-end overlapping of the sheathing strips (FIGS. **3** and **4**). Toward this end, the end edge X*a* of the sheathing **21***a* of the panel **20***a* is disposed on the sheathing strip **21** of the panel **20** in the blank space BS so that the sheathing strip **21***a* overlaps the sheathing **21**. In addition, the end edge X*a* of the panel **21***a* is adjacent the last unit of the layer of facing material **25** of the panel **20** so that the first unit of the layer of facing material **25***a* is disposed to overlie the blank space BS of the panel **20**.

Illustrated in FIG. **8** are prefabricated panels **40** and **40***a*, which are modifications of the panels **20** and **20***a* previously described. The ends of the adjacent panels **40** and **40***a* are joined together in overlapping relation for the construction of a building exterior. It is to be understood that in the exemplary embodiment, the prefabricated panels **40** and **40***a* and other panels similar thereto are also joined in a horizontal overlapping relation for the construction of a building exterior in the manner described in the aforementioned U.S. Pat. No. 3,440,777 (Reissue 27,502) or in the manner described in the aforementioned application Ser. No. 236,259, after the panels are joined in an end-to-end overlapping relation as disclosed in the present application to form a series of horizontally extending panels.

The panels **40** and **40***a* are similar in construction and function. Hence, the panel **40** will be described in detail with like parts of the panel **40***a* designated with a suffix "*a*."

The panel **40** comprises a sheathing strip **41** made of suitable material, such as a sheet of plywood. In the preferred embodiment the sheathing strip **41** is a relatively thin sheet of plywood in the neighborhood of 5/16 inch or 3/8 inch plywood to provide sufficient fleixibility in the panels during the installation thereof to form a building exterior.

A membrane **42** of suitable material, such as asbestos, tarred felt or the like, is secured to the upper surface of the sheathing **41** in a manner coterminal with end edge X and Y of the sheathing **41** and also coterminal with the upper edge of the sheathing **41**. In the exemplary embodiment, the membrane **42** extends 4 inches–6 inches beyond the lower edge of the sheathing strip **41**.

Fixed to the sheathing strip **41** in overlying relation to the membrane **42** is a layer of facing material **45**, the units of which are disposed side-by-side. The facing material **45** may comprise one of the following facing materials: shingles, shakes, tiles, peeler strips, veneer, asbestos composition and the like.

The facing material **45** has the upper edges thereof spaced downwardly a selected distance from the upper edge of the sheathing **41**, such as 2 inches–3 inches, and has the lower edges thereof extending beyond the lower edge of the sheathing **41** a selected distance, such as 6 inches–8 inches.

According to the present invention, the facing material **45** is disposed contiguous to or adjacent to the end edge X of the panel **40** and continues therefrom to approach in spaced relation the end edge Y of the panel **40**, thereby providing a blank space BS between the end of the layer of facing material **45** and the end edge Y (FIG. **8**). In the preferred embodiment, the width of the blank space BS, shown by the arrows in FIG. **5**, is in the neighborhood of 3 inches. The panel **40***a* is joined to the panel **40** in an end-to-end overlapping relation (FIGS. **8** and **9**). Toward this end, the end edge X*a* of the sheathing **41***a* of the panel **40***a* is disposed on the membrane **42** of the panel **40** in the blank space BS so that the sheathing **41***a* confronts the sheathing **41**. In addition, the end edge X*a* of the panel **41***a* is adjacent the last unit of the layer facing material **45** of the panel **40** so that the first unit of the layer of facing material **45***a* overlies or is disposed in the blank space BS of the panel **40**.

We claim:

1. A panel assembly for a building exterior comprising first and second panels, each of said panels comprising a horizontally extending structural sheathing strip and facing material fixedly secured to said sheathing strip, said facing material being spaced from one end edge of said sheathing strip to form a blank space on the sheathing strip between said one end edge of the sheating strip and the corresponding edge of the facing material but extending coterminously with the other end edge of said sheathing strip, said first and second panel arranged in end-to-end overlapping relationship with said other end of said second panel sheathing strip overlying the blank space on said one end of said first panel sheathing strip so that a double thickness of structural sheathing material is formed and the facing material at the other end of said second panel sheathing is immediately adjacent the end edge of the facing material that is spaced from the said one end edge of said first panel sheathing strip.

2. A panel construction in according with claim **1** wherein each of said panels includes a membrane of waterproof material disposed on and generally coextensive with said sheathing, said membrane being between said sheathing and said facing material fixedly secured thereto.

3. A panel assembly for a building exterior comprising a plurality of structural panels, including first and second panels, each of the panels comprising a horizontally extending sheathing strip and facing material fixedly secured to said sheathing strip, said facing material being spaced from one end edge of said sheathing

strip to form a blank space on the sheathing strip between said one end edge and the corresponding edge of the facing material but extending coterminously with the other end edge of said sheathing strip, said first and second panels arranged in end-to-end overlapping relationship with said other end of said second panel sheathing strip overlying the blank space of said one end of said first panel sheathing strip so that a double thickness of sheathing material is formed and the facing material at the other end of said second panel sheathing is immediately adjacent the end edge of the facing material that is spaced from the said one end edge of said first panel sheathing strip, the surfacing material of each panel being disposed on the corresponding sheathing strip with the upper horizontal edge of the material spaced from the corresponding upper edge of the sheathing strip to provide an upper sheathing margin and with the other lower horizontal edge portions of the surfacing material extending beyond the corresponding lower horizontal edge of the sheathing strip to form a lower extension, the upper sheathing margin being adapted to overlie the lower edge portion and the lower extension of a next like upper panel, the lower extension and the lower edge portion of the sheathing strip being adapted to overlie the upper edge portion of the sheathing strip of the next lower panel and the lower extension of the surfacing material being adapted to overlie the upper portion of the surfacing material of the next lower panel.

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