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SLAT TYPE AWNING AND KIT THEREFOR

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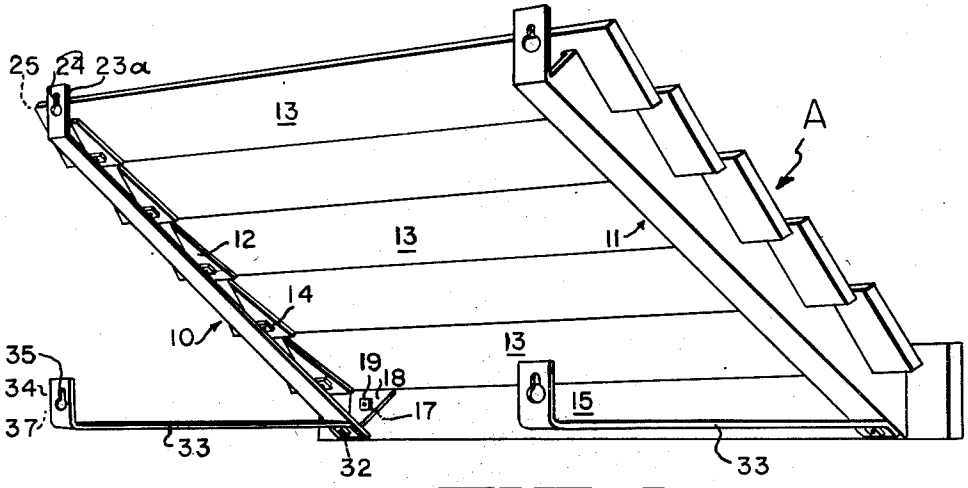


FIG_1

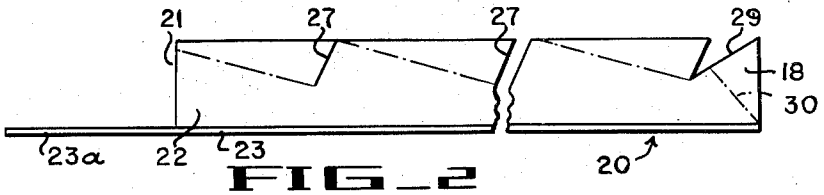


FIG_2

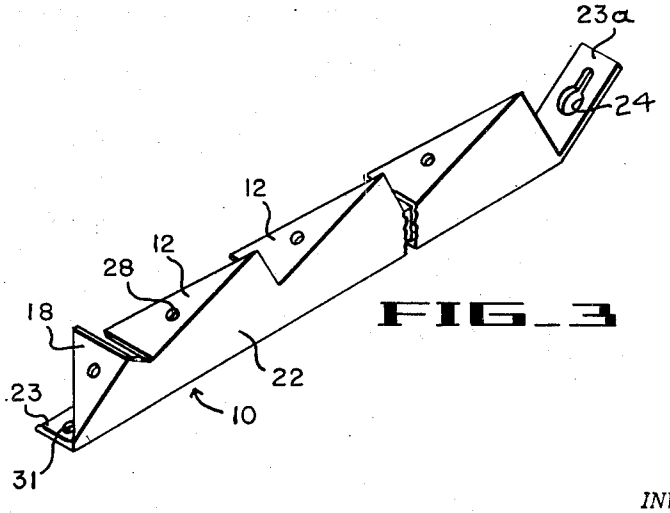


FIG_3

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SLAT TYPE AWNING AND KIT THEREFOR

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7 Claims. (Cl. 20—57.5)

The present invention relates to a slat type awning, and pertains more particularly to a side frame member for use in the making of slat type awnings, or a kit therefor.

It is a common practice in the manufacture of slat type awnings to use a pair of side frame members having sloping steps formed thereon for supporting individual transversely extending slats so that the slats are tilted relative to each other and extend, in general, along a predetermined plane. An awning thus formed is covered with individually tilted slats, separated by air gaps so that heated air may escape upwardly therethrough. Such an awning shields the window or door opening over which it is mounted from the direct rays of the sun, but does not trap the heated air therebeneath as does a closed awning.

An awning of this general character is shown in Patent No. 2,458,619. It is important from a business standpoint that these awnings be made as cheaply as possible compatible with sturdy construction, good appearance, and ease of assembly. From this standpoint it is important to note that many of these awnings are assembled by home owners who purchase from the manufacturer either complete kits or only the preformed side frame members. In the latter case the purchaser cuts and mounts his own transversely extending slats of suitable material such as wood or plastic.

The present invention contemplates the manufacture of a simple and improved type of side frame member for a slat type awning. The invention also provides a simple, strong and attractive looking side frame member for a slat type awning which can be easily fabricated from a length of conventional angle metal. A further object of the invention is to provide a simple and improved side frame structure for a slat type awning.

These and other objects of the invention will be apparent from the following description and the accompanying drawings, wherein:

Fig. 1 is a rear or inner view of an awning constructed with side frame members embodying the present invention.

Fig. 2 is an enlarged side elevational view of the end portions of a length of angle metal cut to form a blank for the fabrication of the side frame members of the awning shown in Fig. 1, a central portion thereof being broken away, and lines of bend being indicated in dot-dash lines.

Fig. 3 is a perspective view of the portions of the frame member shown in Fig. 2 when completed.

Referring to the drawings in detail, the awning A shown in Fig. 1 comprises a pair of side frame members **10** and **11** formed with relatively sloping triangular tabs **12** cut and formed therein. These side frame members **10** and **11** are similar to, but opposite from each other as shown in Fig. 1, so that the slat-supporting tabs **12** extend inwardly from both side frame members to present smooth exterior side walls of both side members.

Upon each laterally opposite pair of sloping triangular tabs **12** of both side frame members **10** and **11** is mounted a transversely extending slat **13**, which may be of wood or other suitable material. Slats **13** are secured in position on their respective tabs by bolts **14**. An end facing slat **15** is secured by bolts **17** in upright position to extend transversely across the lower ends of the side frame members **10** and **11**. The end slat **15** is secured to a pair of triangular tabs **18**, one of which is provided in inwardly bent condition on the lower end of each side frame member, by bolts **19**.

Each side frame member **10** and **11** is formed from a work piece **20** of angle metal which may be aluminum. Since, as mentioned previously herein, the side frame members **10** and **11** are similar to, but opposite from each other, the work pieces for fabricating one or the other thereof will be similar, except that they will be reversed, end for end, to make a right and a left hand one. It will be necessary therefore, to describe the details of manufacture of one only thereof.

A rectangular notch **21** is formed in one end of the upright side flange **22** of the angle iron work piece **20** to leave only a tab end portion **23***a* of the lower flange **23** extending outwardly at one end of the work piece. The tab end portion **23***a* is bent upwardly at an acute angle to the plane of the bottom flange **23** which is supplementary to the desired downward slope of the side member **10** relative to the plane of a building wall (not shown) upon which the awning is to be mounted.

An inverted key-hole slot **24** is provided in the tab portion **23***a* to receive a mounting screw **25**, as shown in broken lines in Fig. 1, for suspending the awning on a wall.

For forming the tabs **12**, a plurality of parallel slits **27** are cut at predetermined spaced intervals along the upstanding flange **22** of the work piece **20**. These slits preferably are inclined toward the lower end of the work piece to avoid interference with the lower edges of the slats **13** when mounted on the tabs **12** as shown in Fig. 1. A hole **28** is provided at a predetermined point in each of the triangular tabs **12** to receive the bolts **14** (Fig. 1) by which the slats **13** are secured in position.

For forming the triangular lower end tabs **18**, a notch **29** is provided in the lower end portion of the upright side flange **22** of the angle metal work piece **20**. The tab **18** then is bent inwardly at right angles to the plane of the side flange **22** along the line of bend **30** (Fig. 2). This line of bend, and therefore the plane of the lower triangular tab **18**, is parallel to the plane of the upper mounting tab **23***a*, so that when the side frame members **10** and **11** are mounted on an upright wall as shown in Fig. 1, the lower end slat **15**, mounted on the tabs **18** will be vertical.

A hole **31** (Fig. 3) is provided near the lower end of the lower flange **23** to receive a bolt **32** (Fig. 1) for securing a strap brace member **33** of band iron to the lower end of each side frame member to extend horizontally toward the supporting wall. Each brace member **33** has an upturned inner end portion **34** with an inverted keyhole slot **35** therein for receiving a mounting screw **37** similarly to the slot in the angularly bent upper tab portion **23***a* of the side frame members **10** and **11**.

A kit for making the awning and including the side frame members **10** and **11** and the lower bracing members **33**, **33** preferably is packed for sale in a long, narrow carton (not shown) of a size to receive these parts closely therein. For thus packing the parts, the brace members **33**, **33** are separated from their respective side frame members **10** and **11**. Bolts **14** and **19** of suitable size and in suitable numbers are provided for assembling the top slats **13** and lower end slat **15** on the side frames **10** and **11**. Bolts **32** and screws **25** and **37** also are

provided for mounting the brace members 33, 33 on the side frame members 10 and 11 and for suspending the assembled structure as shown in Fig. 1.

The kit consisting of the foregoing enumerated parts, less the slats 13 and 15 is intended for sale to home owners or other persons who desire to make an awning. The awning is completed by cutting and assembling the slats 13 and 15 of desired or recommended dimensions as illustrated and described herein.

The side members 10 and 11 embodying the present invention are of simple construction and are very easy and inexpensive to manufacture, requiring only the simplest of metal cutting and bending machinery for their fabrication. They form a neat and sturdy support for the slats of any desired length, within obvious workable limits, which complete the awning. Thus a single size of kit as illustrated and described herein will provide for the making of awnings within a wide range of widths.

While I have illustrated and described a preferred embodiment of my present invention, it will be understood, however, that various changes and modifications may be made in the details thereof without departing from the spirit and scope of the invention as set forth in the appended claims.

Having thus described the invention, what I claim as new and desire to protect by Letters Patent is defined in the following claims.

1. An awning side frame member comprising a length of angle metal for mounting at an acute angle to a supporting wall with one flange thereof upright, a portion of said upright flange being notched out for a predetermined length at one end thereof to leave the other flange of said frame member projecting endwise to form a mounting tab, a plurality of slits cut in the free edge of the upright flange of said frame member at predetermined spaced intervals lengthwise thereof, a plurality of step tabs formed at equal predetermined angles to the length of said side frame member by bending angularly inwardly at right angles to said side flange portions of the upright flange disposed between adjacent ones of said slits along lines of bend extending from the lower end of each slit to the upper end of the slit upwardly adjacent thereto, and means for mounting a transversely extending slat flat upon each opposite pair of said step tabs in a pair of said awning side members mounted in laterally spaced, parallel relation.

2. An awning side frame member comprising a length of angle metal for mounting at an acute angle to a supporting wall with an exterior side flange thereof upright, a portion of said upright flange being notched out for a predetermined length at one end thereof to leave the other flange of said frame member projecting at one end thereof to form a mounting tab, a plurality of slits cut in the upper edge of the upright flange of said frame member at predetermined spaced intervals lengthwise thereof, a plurality of step tabs formed at equal angles to the length of said side frame member by bending angularly inwardly at right angles to said side flange portions of the upright flange disposed between adjacent ones of said slits along lines of bend extending from the lower end of each slit to the upper end of the slit upwardly adjacent thereto, and means for mounting a transversely extending slat flat upon each opposite pair of said step tabs in a pair of said awning side members mounted in laterally spaced relatively reversed, parallel relation.

3. An awning side frame member comprising a length of angle metal for mounting at an acute angle to a supporting wall with an exterior side flange thereof upright, a portion of said upright flange being notched out for a predetermined length at one end thereof to leave the other flange of said frame member projecting at one end therof to form a mounting tab, a plurality of slits cut in the upper edge of the upright flange of said frame member at predetermined spaced intervals lengthwise thereof, a plurality of step tabs formed at equal angles to the length of said side frame member by bending angularly inwardly at right angles to said side flange portions of the upright flange disposed between adjacent ones of said slits along lines of bend extending from the lower end of each slit to the upper end of the slit upwardly adjacent thereto, means for mounting a transversely extending slat flat upon each opposite pair of said step tabs in a pair of said awning side members mounted in laterally spaced relatively reversed, parallel relation, a notch formed in the free edge of said upright flange adjacent the lower end thereof, a tab formed by bending inwardly the portion of the upright flange below the notch therein with said latter tab disposed in an upright plane with the side frame member mounted at a predetermined angle of slope, and means for securing a bottom slat in upright position flat against said latter tabs.

4. In a kit for making a slat-type awning, a pair of similar but opposite side frame members, each formed of angle metal with a side flange thereof formed for mounting upright and a bottom flange thereof formed to extend inwardly toward the vertical transverse mid-plane of an awning to be constructed therefrom, a mounting tab formed at an upper end of each side frame member by notching out the side flange thereof at the upper end of each angle member to leave the bottom flange projecting endwise beyond the side flange, said tab being bent angularly upwardly at an angle to the plane of the remainder of the bottom flange which is supplementary to a desired angle of slope of the side frame member when mounted, each mounting tab having an inverted key-hole slot therein for receiving a mounting screw, a plurality of sloping, inwardly extending slat supporting step portions formed along the upper edge of each side flange, each step portion being formed by slitting the metal of the side flange downwardly from its upper edge to a predetermined depth and at predetermined spaced intervals lengthwise of said side flange, the side flange material being bent inwardly along a line of bend extending from the bottom of each such slit to the upper end of the slit upwardly adjacent thereto, each inwardly bent step portion having a hole therein for receiving a mounting element for securing a slat on such step and the corresponding step of the frame member opposite thereto, each side flange being notched adjacent its lower end to provide a tab at the lower end of the vertical side flange of each side frame member, each such tab being bent inwardly along a line of bend parallel to the plane of the upper mounting tab, each lower end tab having a hole therein to receive a mounting element for mounting a lower slat in upright position on the lower end tabs of both side frame members.

5. In a slat type awning, a pair of similar but opposite side frame members each comprising a length of structural metal having an upright exterior flange free at its upper edge, a plurality of slits formed in said upright flange to extend downwardly into the flange from the free upper edge thereof, a plurality of relatively parallel steps formed from the material of the vertical flange each step consisting of a portion of the flange bent inwardly toward the vertical transverse mid-plane of the awning along a line of bend extending from the bottom of one slit to the top of the slit next adjacent thereto, corresponding steps in said side members being laterally opposite each other, means for securing a slat in transversely extending position across each laterally opposite pair of said steps, means supporting the upper end of each side frame member on a wall upon which the awning is to be mounted, brace means mounted to support the lower end of each side frame member in predetermined sloped position on a supporting wall, a tab formed on the lower end of each side frame member and disposed at a predetermined angle to the side frame member, and means for securing a bottom slat transversely across said lower end tabs.

6. In a slat type awning, a pair of similar but opposite side frame members each comprising a length of structural metal having an upright exterior flange free at its upper edge, a plurality of slits formed in said upright flange to extend downwardly into the flange from the free upper edge thereof, a plurality of relatively parallel steps formed from the material of the vertical flange each step consisting of a triangular portion of the flange bent inwardly toward the vertical transverse mid-plane of the awning, corresponding steps in said side members being laterally opposite each other, means for securing a slat in supported position on each laterally opposite pair of said steps, means for supporting the upper end of each side frame member on a wall upon which the awning is to be mounted, brace means mounted to support the lower end of each side frame member in predetermined sloped position on a supporting wall, a tab formed on the lower end of each side frame member and disposed at a predetermined angle to the side frame member, and means for securing a bottom slat transversely across said lower end tabs.

7. In a slat type awning, a pair of similar but opposite side frame members each comprising a length of structural metal having an upright exterior flange free at its upper edge, a plurality of slits formed in said upright flange to extend downwardly into the flange from the free upper edge thereof, a plurality of relatively parallel steps formed from the material of the vertical flange each step consisting of a portion of the flange bent inwardly toward the vertical transverse mid-plane of the awning, corresponding steps in said side members being laterally opposite each other, means for securing a slat in transversely extending position across each laterally opposite pair of said steps, means for supporting the upper end of each side frame member on a wall upon which the awning is to be mounted, support means mounted to support each side frame member in predetermined sloped position on a supporting wall, a notch in the upper edge of said upright flange adjacent the lower end of each frame member, the portion of flange material below said notch being bent at right angles to form a tab disposed at a predetermined angle to the side frame member, and means for securing a bottom slat transversely across said lower end tabs.

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