Oct. 31, 1961 A. B. THIEDE ET AL 3,006,498

AIR-CONDITIONER COVER

Filed Jan. 15, 1959 2 Sheets-Sheet 1

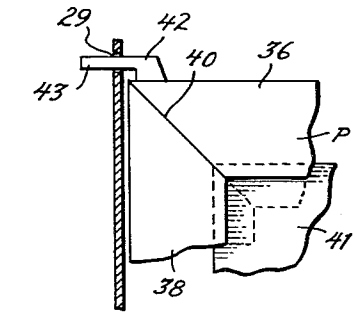


Fig. 8.

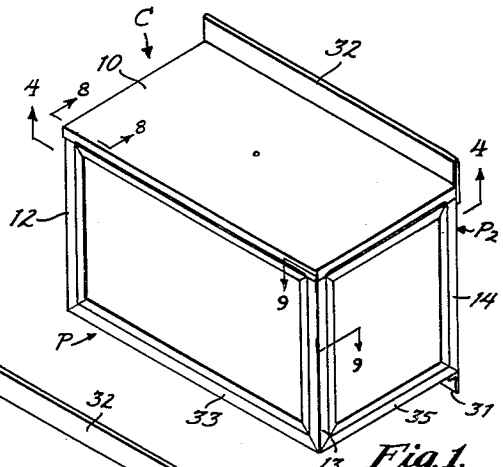


Fig. 1.

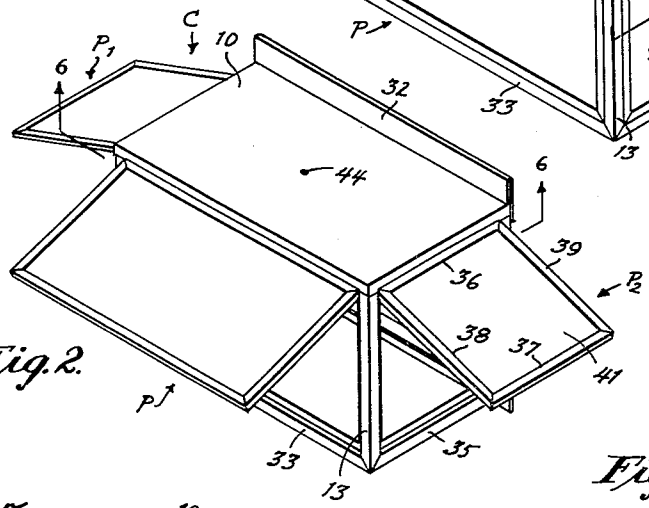


Fig. 2.

Fig. 3.

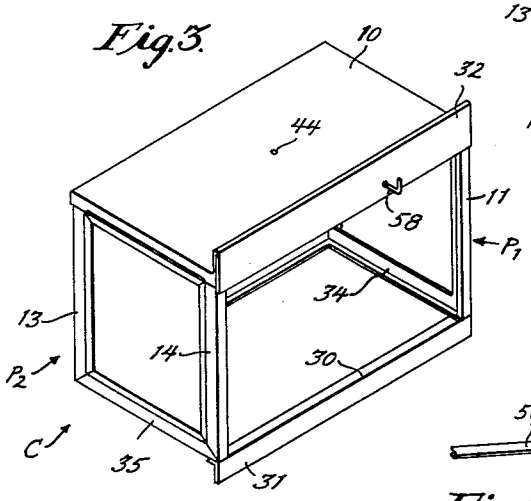
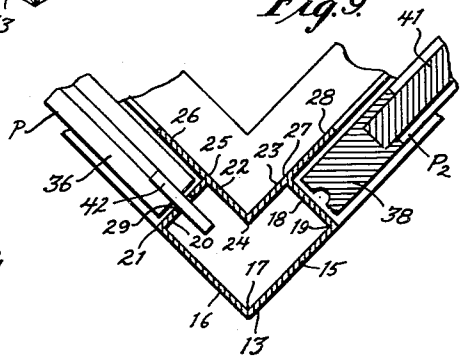


Fig. 9.



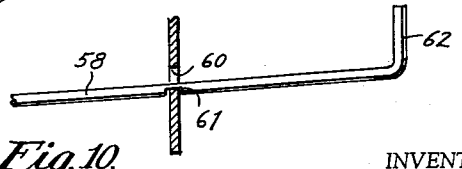


Fig. 10.

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AIR-CONDITIONER COVER

Filed Jan. 15, 1959 2 Sheets-Sheet 2

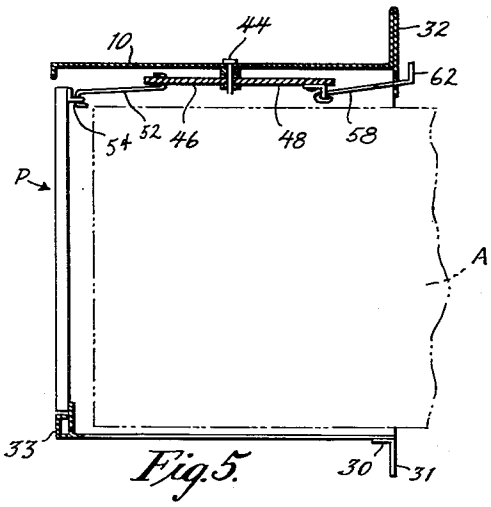


Fig. 5.

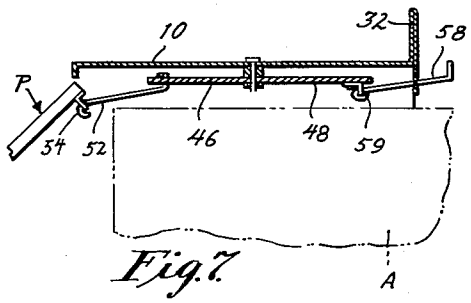


Fig. 7.

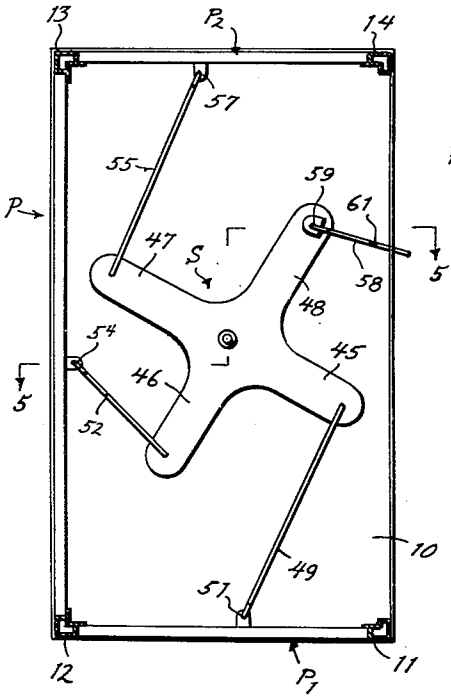


Fig. 4.

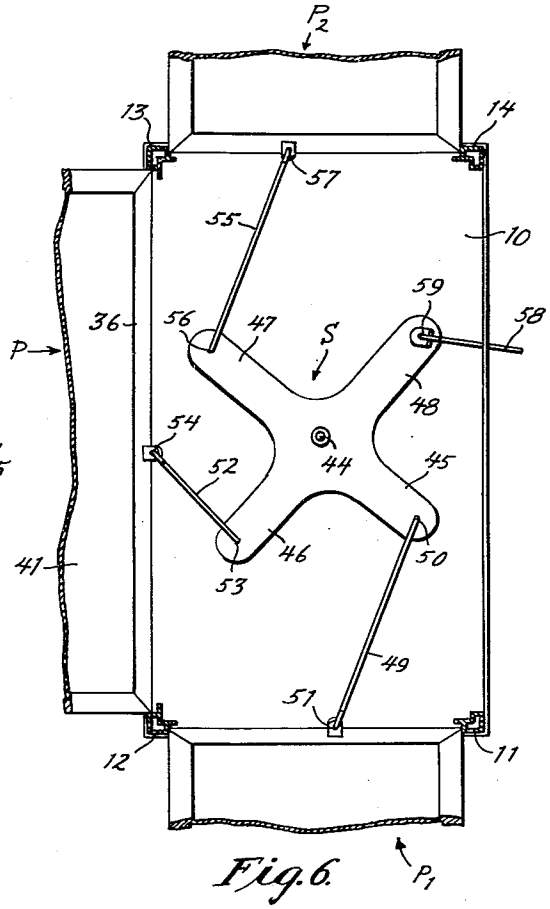


Fig. 6.

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3,006,498

AIR-CONDITIONER COVER

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Filed Jan. 15, 1959, Ser. No. 787,008
3 Claims. (Cl. 220—36)

The present invention relates to a cover for an air conditioner and is concerned primarily with a cover designed to afford adequate protection for the air conditioner during periods of nonuse, but which may be readily operated or shifted into an open position during those periods when the air conditioner is in use.

At the present time, the conventional air-conditioner unit that is installed in a window or similar opening has a large extent which projects exteriorly of the building. This outwardly extending portion includes an end wall and side walls that are ordinarily formed with louvers or vents through which air is admitted into the air conditioner.

An air conditioner is, of course, used only during the warmer seasons; yet, as a practical matter they remain installed the entire year around. Thus during the periods of nonuse there is no protection for the outwardly projecting portion, and there is danger of dirt, rain, sleet, or other foreign matter entering into the air ports.

With the foregoing conditions in mind, the present invention has in view as its foremost objective the provision of a cover for an air conditioner which consists essentially of a skeleton framework designed to be fitted over the projecting part of the air conditioner and which framework has a top wall, an open bottom, an open outer-end wall, and open sides. Means for anchoring the cover in position preferably takes the form of an upwardly extending flange mounted on the inner edge of the top wall which engages the window sash, which has been partially opened to accommodate the air conditioner.

An important object of the invention is to provide an air-conditioner cover of the character aforesaid with movable protective panels for the outer-end wall and side walls, together with operating mechanism accessible from the interior which may be operated to move the panels into or out of open position as occasion demands.

A somewhat more detailed object of the invention is to provide a common operating member for all of the movable panels whereby they all may be opened or closed by a single operation.

Another object of the invention is to provide, in an air-conditioner cover of the type indicated, protective panels for the end and side walls each of which is pivotally mounted at the opposite ends of its top edge, with the operating member taking the form of a star wheel that is pivotally mounted in a horizontal plane beneath the top of the cover. This star wheel presents four arms. Three of these arms are connected by push rods to the three pivotally mounted panels below the axis of the pivotal mounting thereof, while a link is connected to the fourth arm and extends inwardly through an opening in the flange aforesaid, with the inner end thereof terminating in a grip. It is evident that by exerting a pull on the link the star wheel is rotated to cause the other arms to exert a thrust on the push rods to move the panels into open position.

Another detailed yet important object of the invention is to provide the link and flange aforesaid with cooperating elements of a disengageable detent. Thus, after the link has been pulled inwardly to open the panels, the detent is engaged to maintain the open position. However, upon releasing the detent and relieving the force on the link, the panels will fall down into closed position.

Various other more detailed objects and advantages of the invention, such as arise in connection with carrying out the above-noted ideas in a practical embodiment, will in part become apparent and in part be hereinafter stated as the description of the invention proceeds.

The invention therefore comprises an air-conditioner cover consisting essentially of a framework designed to encompass the projecting part of an air conditioner and which framework includes a top wall having an anchoring flange on its inner edge and movable panels constituting the end and side walls of the cover, together with a common operating member accessible from the interior to move the panels into or out of open position.

For a full and more complete understanding of the invention, reference may be had to the following description and accompanying drawings, wherein:

FIGURE 1 is a perspective view of an air-conditioner cover designed in accordance with the precepts of this invention and depicting the panels in closed position;

FIGURE 2 is another perspective similar to FIGURE 1, illustrating the cover with the panels opened;

FIGURE 3 is a perspective looking at the rear or inner end of the cover;

FIGURE 4 is a horizontal section taken on an enlarged scale just beneath the top, and is taken about on the plane represented by the line **4—4** of FIGURE 1;

FIGURE 5 is a vertical section taken about on the plane represented by the line **5—5** of FIGURE 4;

FIGURE 6 is a view similar to FIGURE 4, but depicting the position of the parts with the panels opened;

FIGURE 7 is a fragmentary section similar to FIGURE 5, with the end panel in opened position;

FIGURE 8 is a detailed vertical section at one corner, depicting the pivotal mounting that is common to all the panels, and is taken about on the plane represented by the line **8—8** of FIGURE 1;

FIGURE 9 is another detailed section, taken about on the planes represented by the lines **9—9** of FIGURE 1; and

FIGURE 10 is a detail of the operating link.

Referring now to the drawings, wherein like reference characters denote corresponding parts, the air-conditioner cover of this invention is illustrated in closed position in FIGURES 1 and 3, and is referred to in its entirety by the reference character C.

The cover C comprises a fixed framework made up of a top wall **10** and from which depends structure defining an open frame for the outer-end wall and the side walls. Thus, four columns, designated **11, 12, 13,** and **14,** each has its upper end permanently secured to the top wall **10** in any preferred manner, such as by welding or soldering. Each of these columns **11–14,** inclusive, is hollow and of angular formation.

The construction of one of the columns **11–14,** inclusive, is more clearly shown in FIGURE 9, wherein the column **13** is shown as comprising outer faceplates **15** and **16** arranged normal to one another and integrally joined at a corner **17.** An end wall **18** is arranged normal to the faceplate **15** and is integrally joined thereto at the corner **19.** Another end wall **20** is arranged normal to the face **16** and is integrally joined thereto at the corner **21.** Inner faceplates **22** and **23** are arranged normal to one another and are integrally joined at a corner **24.** The faceplate **22** is joined to the end wall **20** at the inner edge of the latter, as by welding, along the line **25,** and projects or extends beyond this line of joinder, the projecting portion being indicated at **26.** Likewise, the inner faceplace **23** is joined to the inner edge of the end wall **18** along the line indicated at **27,** and includes a portion **28** which projects inwardly therebeyond.

It will be understood that this basic construction described above in detail in connection with the pillar **13**

is repeated in each the pillars **11**, **12**, **13**, and **14**. In the construction illustrated, the end walls **20** of the pillars **12** and **13** are in confronting relation, and closely adjacent to their top ends are formed with openings **29** which are in alignment and which constitute bearings for pivots to be later described. So far as the pillars **13** and **14** are concerned, the end walls **18** of these pillars are arranged in confronting relation and are formed with pivot-bearing openings comparable to the openings **29**. This is also true of the pillars **11** and **12**.

Upon referring more particularly to FIGURE 3, it will be noted that the pillars **11** and **14** are connected at their lower ends by an angle member **30** which presents a flange **31** that is designed to fit over the sill of a window in which the air conditioner to be protected is mounted. Moreover, the top **10**, which is preferably made of sheet metal, is formed with a double-thickness flange at **32** which projects above the inner edge and constitutes an anchoring flange. Thus the flanges **31** and **32** cooperate in securing the cover C in position about an air conditioner, such as depicted in phantom outline in FIGURES 5 and 7, and designated A. In order to install the air conditioner A, it is essential that the window sash be raised from the sill. Thus, with the flange **31** engaging the sill and the flange **32** the sash, and the remaining framework fitted over the air conditioner A, it is evident that the cover is securely held in position.

A protective panel for the outer-end wall is designated P, and protective panels for the two side walls are designated **P1** and **P2**. The panels **P1** and **P2** are substantial duplicates, while the panel P is somewhat longer than the side panels in that it is designed to accommodate the end wall, which is longer than the side wall.

The panel P is pivotally mounted within a frame defined by the outer-end edge of the top **10**, pillars **12** and **13**, and a bottom crosspiece **33**. The panel **P1** is pivotally mounted in a frame defined by a side edge of the top **10**, pillars **11** and **12**, and a bottom end piece **34**. The panel **P2** is mounted in a frame defined by the other side edge of the top **10**, pillars **13** and **14**, and a bottom end piece **35**.

Each of the panels P, **P1**, and **P2** may be of any construction providing the desired protective effects. In a preferred embodiment, each is shown as comprising four frame members; namely, a top frame member **36**, a bottom frame member **37**, and side frame members **38** and **39**. These members are joined at mitered corners in a well-known manner, such as illustrated at **40**. The frame members carry a sheet **41** of any protective material such as Fiberglas, fiberboard, mesh, or just about any material which will afford the desired protective effects.

The top frame member **36** of each of the panels P, **P1**, and **P2** carries on its upper edge a bracket **42** which includes as an integral part an outwardly extending pivot pin **43**. Each of these pivot pins **43** is received in one of the pivot-bearing openings **29** to pivotally mount the respective panels in a suspended position.

A star wheel is illustrated in FIGURES 4 and 6 and is referred to in its entirety by the reference character S. The star wheel S is pivotally mounted on the underside of the top **10** by a pivot pin **44**. The star wheel S includes four arms **45**, **46**, **47**, and **48**. A link **49** has one end pivotally connected to the outer end of the arm **45**, as indicated at **50**; and its other end is pivotally connected to a tab **51** that is secured to the top frame member **36** on the panel **P1** below the pivotal axis as defined by the pins **43**.

Likewise, another push rod **52** has one end pivotally connected to the outer end of the arm **46**, as indicated at **53**, and its other end pivotally connected to a tab **54** that is secured to the top frame member **36** on the panel P. Still another thrust rod **55** has one end pivotally attached to the outer end of the arm **47** as indicated at **56**, and its other end is pivotally connected to a tab **57** that is mounted on the top frame member **36** of the panel **P2**.

A link **58** has one end pivotally connected to the outer end of the arm **48** as indicated at **59**, and this link **58** passes through an opening **60** (see FIGURE 10) which is somewhat larger than the link **58**. The link **58** is formed with a notch **61** that is designed to receive an edge of the opening **60** to function as a detent. The inner end of the link **58** is turned outwardly at right angles thereto to provide a handle **62**.

Operation

It is evident that the cover C may be permanently positioned over that portion of the air conditioner A which projects outwardly of the building at a window, with the flanges **31** and **32** anchoring the cover in position.

Assuming that the cover is in the closed position depicted in FIGURE 1 and it is desirable to open the panels P, **P1**, and **P2**, the operator grasps the handle **62** and exerts a pull on the link **58**. This causes the star wheel S to rotate in a clockwise direction (speaking with reference to the showing of FIGURES 4 and 6). This movement of the star wheel causes each of the arms **45**, **46**, and **47** to exert a thrust on the push rods **49**, **52**, and **55**. This outward thrust is transmitted to the panels P, **P1**, and **P2** below the axes of their pivotal mountings as determined by the pins **29**. Thus, the panels are moved outwardly into the opened position depicted in FIGURE 2. When this opened position has been achieved, the link **58** is laterally moved to cause the notch **61** to engage an edge of the opening **60** to establish a detent holding the panels opened.

When it is desired to restore the panels to closed position, all that is necessary is to disengage the notch **61** from the edge of the opening **60** and relieve any stress or pull from the link **58**. The weight of the panels P will now cause them to swing downwardly into closed position. If desired, a final push may be exerted on the link **58** to insure that a completely closed position is established. If desired, the link **58** may be provided with a second notch comparable to that shown in **61** for the closed position.

While a preferred specific embodiment of the invention is hereinbefore set forth, it is to be clearly understood that the invention is not to be limited to the exact constructions, mechanisms, and devices illustrated and described, because various modifications of these details may be provided in putting the invention into practice within the purview of the appended claims.

What is claimed is:

1. In an air-conditioner cover, a fixed framework comprising a top wall, an end frame, and side frames depending from said top wall; a protective panel pivotally mounted on each of said frames at its top edge, a star wheel pivotally mounted on the underside of said top wall and including four arms, a thrust rod connecting each of said panels to one of said arms below the axis of the pivotal mounting of that panel, a link connected to the other of said arms and extending inwardly of said fixed framework to an accessible position, and cooperating elements of a detachable detent on said link and fixed framework.

2. In an air-conditioner cover, a fixed framework comprising a top wall, an end frame, and side frames depending from said top wall; an anchoring flange on the edge of said top wall remote from said end frame, a second anchoring flange connecting the lower inner ends of said end frames, a protective panel pivotally mounted in each of said frames at its upper edge, a star wheel pivotally mounted on the underside of said top wall and including four arms, a push rod connecting each of said panels to one arm of said star wheel at a point below the axis of the pivotal mounting of that panel, a link having one end connected to the other of said arms, passing through an opening in the first said anchoring flange and formed with a handle at its free end.

3. In an air-conditioner cover, a fixed framework comprising a top wall of rectangular formation, a pillar depending from each corner of said top wall, each pillar being of a hollow angular construction providing end walls with each of said end walls being formed with a bearing opening adjacent to its upper end, bottom members connecting the lower ends of said pillars to provide an end frame and side frames, a protective panel in each of said frames, each of said panels having a bracket at each upper corner including a pivot pin received in one of said bearing openings, a star wheel pivotally mounted on the underside of said top wall and including four arms, a push rod connecting each

of said panels to one of said arms below the axis of the pivotal mounting of that panel as defined by said pivot pins, and an operating link connected to the other of said arms.

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