

Description

The invention relates to a louvre system of the type having adjustable slats, which features removable, modular slat clips.

Systems of the type, having slats or vanes which can be angled at will, have found widespread use in the building trade for window and ventilation fixtures.

The most common embodiment of such a system is one that consists essentially of a metal frame in which the slats are supported between riveted swivel mounts and clips. The single mount, which is located inside a U-shaped upright frame member, consists in essence of a plate rotatable about its own axis and riveted at one side to two rods which produce the opening and closing movement of the slat; the other side of the mount incorporates a circular projection that fits into a corresponding hole in the upright.

The clip is formed with a pair of parallel lips designed to grip the respective slat from either side, and a pair of top and bottom teeth the purpose of which is to prevent the slat from sliding in relation to the parallel lips.

The control rods are also located within the U profile of the upright, and a lever, riveted to the rods and projecting from the upright, provides the means of rotating mounts and slats together in one direction or the other.

Such louvre systems certainly provide economy from the construction standpoint, but can prove impractical, especially during assembly, since the entire unit must be put together prior to its location in the fixture; riveting operations likewise present practical problems.

In order to avoid such drawbacks, and at the same time provide the option of utilizing extruded aluminium slats (in response to a steadily increasing demand for that material), a second type of louvre system has been developed, in which the single clip exhibits a first insertable part that fits into an axial socket in the slat, and a second insertable part that fits into a socket offered by a respective swivel mechanism, the swivel mechanism itself being lodged in a longitudinal channel incorporated into the upright frame member.

The single swivel mechanisms are located one above the other in the channel of the upright, and lock together in such a way that rotation of one of the slats causes the remainder to rotate simultaneously in like manner. A system of this second type is disclosed in EP-A-0 119 369.

A system of this type must also be assembled before it can be lodged in the fixture, though the alternative does exist of exploiting the uprights of the fixture itself as upright louvre frame members, provided that these incorporate a channel in which to accommodate the swivel mechanisms, and have holes affording passage to the second insertable part of the clips.

With this second type of system, one gains a certain advantage in terms of modular design, though the result is lacking in economy by reason

of the complex constructional nature of parts such as the uprights and the swivel mechanisms; what is more, no solution is offered to the problem of how slats may be removed without dismantling the entire louvre, a problem which remains similarly unsolved in the type of system first mentioned.

The object of the invention described herein is that of eliminating those drawbacks outlined in the fore-going preamble.

The stated object is realised with a louvre system as described in the following specification and as characterised in the appended claims, i.e. a system which permits economical embodiment of a louvre or the first-mentioned type, wherein the angle of the slats is adjustable, and wherein one or more single slats, or even all the slats, can be replaced without there being any need to dismantle the entire louvre frame.

One of the advantages offered by the invention is that of marked simplicity in terms of design, construction and assembly, a feature which invests the system with genuine economy and dependability.

Another advantage of the invention is that it affords the option of fitting the slats with the louvre frame already positioned in the fixture; this signifies that the frame can be accurately squared up with and adapted to the fixture before fitment of the slats, which is then accomplished in rapid time.

The speed with which such fitment is possible is obtained by virtue of the fact that the locking method adopted, a simple sliding fit, is one whereby the clip half-sections located outermost are fixed to their respective swivel mounts without any obstruction whatever from the slats, whereas the innermost half-sections can be fitted to the slats independently of the frame. The final step of fitting the slats into the frame is particularly swift, since all that is required is to slide the keys of the half-sections fitted to the slats into the grooves offered by the half-sections fixed to the swivel mounts, and urge home so that their respective catches engage.

A further advantage of the invention is that it permits changing the slats swiftly and simply, say, according to the season, or to preferred visual effect. It thus becomes possible with the system as disclosed herein to purchase two types of slat, one of which transparent, such as glass or plastic, and the other non-transparent, such as aluminium or wood.

The non-transparent slats could be fitted during the summer season to attenuate light, whilst affording a degree of ventilation, whereas the transparent slats will provide a double glaze window during winter if kept in the closed position. Again, slats differing in colour and/or design one from the other could be fitted to the frame, and similarly, the slats could be removed altogether for a given period to permit installation of, say, an air conditioner.

Yet another advantage of the invention is that by providing the clips with lips and beads, one

obtains total exclusion not only of the light, but also of draft, rain and dust.

An embodiment of the invention will now be described by way of example, with reference to the accompanying drawings, in which:

- fig 1 is an exploded view of the essential parts of a louvre system with adjustable slats according to the invention, seen in perspective;
- fig 2 is the axial section through a slat clip, seen fitted to the respective mount and without the slat;
- fig 3 shows the swivel mount-clip-and-rod assembly of a louvre system according to the invention, viewing from the side and in isolation from the fixture;
- fig 4 shows the clip of a louvre system according to the invention, viewed in section corresponding to the cross section of the slat, and seen in the fully closed position.

Fig 1 provides an illustration of a louvre system with adjustable slats, which is limited to a pair of uprights 1, a set of slats 4 with respective clips 5 and swivel mounts 3 and two swivel rods 20.

In effect, the two uprights 1 are U-section members, positioned with open side directed outwards and provided with a series of holes 2 the spacing of which defines the distance between adjacent slats 4, as will become apparent. The slats 4 in the example illustrated are extruded aluminium, exhibiting a substantially S-shaped cross-section the hollow centre of which creates a longitudinal socket 15.

The clips 5, which are twice as many in number as the slats 4, are of shape similar to that of the slats 4, and have an insertable part, or plug 14 at one side which is designed to fit into the longitudinal socket 15 at one respective end of the slat 4.

The other side of the clip incorporates a circular boss 21 of diameter slightly less than that of the holes 2 in the uprights 1.

Each mount 3 is substantially in the form of a plate with pins 19 projecting at the side farthest from the uprights, which engage the swivel rods 20.

The side of the swivel mount 3 opposite the pins 19 incorporates a shallow spigot 24 the axial length of which is marginally less than the thickness of the frame upright 1 and the diameter of which matches that of the boss 21 offered by the clip 5. With the clip 5 locked to a respective swivel mount 3, and the upright 1 in between them, the assembled clip 5 and mount 3 can be rotated relative to the upright by operation of the swivel rods 20.

Besides engaging the mounts 3, the swivel rods 20 are interconnected by lever 22 projecting from the upright 1 which serves to select the angle of the slats 4.

In the louvre system disclosed, each clip 5 comprises two half-sections 51 and 52 the opposed surfaces of which incorporate matching

profiles 6 and 7 that serve to lock the two together. The half-section denoted 52 (see also fig 2) is provided at one side with the aforementioned insertable plug 14 which slots into one end of the slat 4, and at the other side with a slide-fitting key 6, whereas the half-section denoted 51 is provided at one side with the boss 21, and at the other with a slide-fitting groove 7 having one open end which, with the frame installed, is located uppermost. In order to ensure that the two half-sections 51 and 52 may slide only in reciprocal fashion with the key 6 located in its corresponding groove 7, the key and groove will be dovetailed or similarly restricted, as in fig 2.

The two half-sections 51 and 52 are further provided with a catch mechanism which in the example of fig 1 consists of a pin 8 projecting from the top surface of the key 6, integral with one of the half-sections 52, and a corresponding hole 9 set in the base of the groove 7 of the other half-section 51.

16 denotes a recess incorporated into the slat half-section 52 and surrounding the insertable plug 14, the outermost edge of which is bounded by a raised excluder bead 17 projecting from the half-section 52 itself, and exhibiting a shape that substantially matches the profile of a slat 4. As the slat 4 will normally project beyond the edges of the clip at top and bottom, the bead 17 is divided into two parts, one of which, denoted 17a, will remain on the inside of the room enclosed by a fixture incorporating the louvre system disclosed; the remaining part 17b will be situated on the outside, following fitment of the slats. Such beads 17 prevent infiltration of air, water, light and dust between a slat 4 and a corresponding clip 5 in the event that these do not mate with 100 % accuracy along their joined surfaces.

Each half-section 51 and 52 is provided further with a lip 18 projecting perpendicularly from one of its longitudinal edges, which is designed to cover the corresponding longitudinal side face of the other half-section, and thus prevent infiltration of water, air, light or other foreign matter between the half-sections themselves. An additional purpose of these lips 18 is that of creating a close fit of the clips 5 with the uprights 1, thereby preventing infiltration of air, water, light or dust, without obstructing smooth rotation of the clip.

It will be observed in fig 1 that the key 6 of half-section 52 and the groove 7 of half-section 51 are angled in relation to the longitudinal axis of the half-sections themselves; the lips 18 thus act as stops when the two half-sections 51 and 52 are slid together. Each single half-section 51 and its respective swivel mount 3 are joined by a snap fit (see figs 2 and 3) between a through hole, or socket 10 of polygonal shape in the swivel mount 3, and a matching polygonal element 12 integral with the outermost half-section 51 which engages therein; the socket 10 illustrated, by way of example, is quadrangular. The quadrangular socket 10 in each mount 3 is enlarged at the side

farthest from the spigot 24, in order to create a similarly quadrangular seat 11. The quadrangular element 12 of each half-section 51 is divided into four component parts comprising two opposed and offset matching pairs. Two of these component parts 121 may be defined as tongues, issuing from opposite corners of the quadrangular element, each of which is provided with a retaining lip 13 designed to engage in the quadrangular seat 11 of a respective swivel mount 3. The remaining two component parts 122 of the quadrangular element 12 exhibit an L shape, and constitute the two remaining corners of the element 12.

It will be obvious that the component parts denoted 122 make no contact with the other two component parts 121 of the quadrangular element 12, as the two parts 121 in question must be drawn together when slotted into or extracted from the quadrangular hole 10 of the respective mount 3. The configuration of the quadrangular element 12 is such that it can be freed from the swivel mount 3 only by applying a certain pressure to the two component parts 121 with the retaining lips 13 in simultaneous fashion, so as to urge them together until close enough to clear the inside walls of the quadrangular hole 10.

Each swivel mount 3 engages with the rods 20 by way of two pins 19 set in positions on the mount which are diametrically opposed in relation to its axis, the rods 20 being provided with corresponding holes 23. The diameter of the pins 19 is marginally less than that of the holes 23 in order to permit rotation of the swivel mount 3 relative to the rod 20; the pins 19 are provided with heads 25 that prevent their accidental separation from the rods 20 once fitted, the size of which, however, is such as to permit such separation by application of a given pressure.

In order to obtain economy of manufacture, and also to build a certain degree of flexibility into snap-fitted parts such as the quadrangular element 12 of the outer half-section 51, the half-section 51 itself, and the heads 25 of the pins 19, the entire swivel assembly comprising clip 5 and mount 3 would be fashioned from plastic or synthetic material, or at all events a material possessing the requisite flexibility.

The assembly of a louvre system with adjustable slats thus disclosed is swift and simple, and is accomplished as described below.

First, the spigots 24 of the swivel mounts 3 are located in their respective holes 2 in the uprights 1, whereupon each single clip half-sections 51 are fitted to the mounts 3 by inserting the quadrangular element 12 of each one into the quadrangular socket 10 of the respective mount 3. Next, the swivel rods 20 are connected to the mounts 3 by location of the pins 19 of the mounts 3 in the holes 23 of the rods 20; this done, the control lever 22 is fitted to the rods 20. The entire frame is now assembled, offered to the fixture and squared up. The remaining half-sections 52 are fitted to the louvre slats 4 independently of the frame-assembly operation, slotting the plugs

14 of the half-sections 52 into the sockets 15 offered by the slats 4.

The assembly of the louvre can now be completed, according to the invention, by sliding the keys 6 of the half-sections 52 fitted to the slats into the corresponding grooves 7 of the half-sections 51 fitted to the swivel mounts 3, hence to the frame. The key 6 of the one half-section 52 slides along the groove 7 of the other half-section 51 until the lip 18 of each half-section 51 and 52 locates against the corresponding longitudinal side face of the matching half-section 52 and 51; on arrival of the slat half-section 52 at this point, its catch pin 8 snaps into the hole 9 of the respective frame half-section 51.

A louvre system according to the invention is thus assembled in a short time, and the slats 4 can be removed simply by separation of the two clip half-sections 51 and 52 to a degree that will permit disengagement of the catch pins 9 from their respective holes 9.

The entire system likewise can be dismantled without damaging any part, since all components are joined together by snap fits.

Claims

1. A louvre system with adjustable slats featuring removable modular slat clips, comprising: a frame with two parallel uprights (1), each upright (1) having an identical series of holes (2) which are spaced a predetermined distance apart; a series of single swivel mounts (3), each swivel mount (3) being rotatably accommodated within a hole (2) in one of the uprights (1); a set of single clips (5), each clip (5) being insertable into a swivel mount (3); and a set of slats (4) supported by and between a pair of the clips (5) by connection of each end of a single slat (4) to a respective clip (5), each single clip (5) has a first half-section (51) and a second half-section (52); characterized in that each first half-section (51) is snap-fitted to a respective swivel mount (3), and only each second half-section (52) is insertable into one respective end of a slat (4), with the mutually opposed surfaces of the half-sections (51, 52) having matched sliding-fit profiles (6, 7) for permitting the half-sections (51, 52) to slide bodily relative to one another from a first position in which one profile (6) locates in the other (7) to a second position in which the two half-sections (51, 52) of the clip lock together; and in that the half-sections (51, 52) of each clip (5) are locked together by a releasable snap-fit catch mechanism (8, 9) incorporated into the clip (5).

2. Louvre system as in claim 1, characterized in that each of the single swivel mount (3) exhibits a centrally-aligned through polygonal socket (10) from which a similarly polygonal seat (11) extends at the side of the mount (3) farthest from the respective clip (5); and that the first half-section (51) of each clip (5) connected with the



farthest from the spigot 24, in order to create a similarly quadrangular seat 11. The quadrangular element 12 of each half-section 51 is divided into four component parts comprising two opposed and offset matching pairs. Two of these component parts 121 may be defined as tongues, issuing from opposite corners of the quadrangular element, each of which is provided with a retaining lip 13 designed to engage in the quadrangular seat 11 of a respective swivel mount 3. The remaining two component parts 122 of the quadrangular element 12 exhibit an L shape, and constitute the two remaining corners of the element 12.

It will be obvious that the component parts denoted 122 make no contact with the other two component parts 121 of the quadrangular element 12, as the two parts 121 in question must be drawn together when slotted into or extracted from the quadrangular hole 10 of the respective mount 3. The configuration of the quadrangular element 12 is such that it can be freed from the swivel mount 3 only by applying a certain pressure to the two component parts 121 with the retaining lips 13 in simultaneous fashion, so as to urge them together until close enough to clear the inside walls of the quadrangular hole 10.

Each swivel mount 3 engages with the rods 20 by way of two pins 19 set in positions on the mount which are diametrically opposed in relation to its axis, the rods 20 being provided with corresponding holes 23. The diameter of the pins 19 is marginally less than that of the holes 23 in order to permit rotation of the swivel mount 3 relative to the rod 20; the pins 19 are provided with heads 25 that prevent their accidental separation from the rods 20 once fitted, the size of which, however, is such as to permit such separation by application of a given pressure.

In order to obtain economy of manufacture, and also to build a certain degree of flexibility into snap-fitted parts such as the quadrangular element 12 of the outer half-section 51, the half-section 51 itself, and the heads 25 of the pins 19, the entire swivel assembly comprising clip 5 and mount 3 would be fashioned from plastic or synthetic material, or at all events a material possessing the requisite flexibility.

The assembly of a louvre system with adjustable slats thus disclosed is swift and simple, and is accomplished as described below.

First, the spigots 24 of the swivel mounts 3 are located in their respective holes 2 in the uprights 1, whereupon each single clip half-sections 51 are fitted to the mounts 3 by inserting the quadrangular element 12 of each one into the quadrangular socket 10 of the respective mount 3. Next, the swivel rods 20 are connected to the mounts 3 by location of the pins 19 of the mounts 3 in the holes 23 of the rods 20; this done, the control lever 22 is fitted to the rods 20. The entire frame is now assembled, offered to the fixture and squared up. The remaining half-sections 52 are fitted to the louvre slats 4 independently of the frame-assembly operation, slotting the plugs

14 of the half-sections 52 into the sockets 15 offered by the slats 4.

The assembly of the louvre can now be completed, according to the invention, by sliding the keys 6 of the half-sections 52 fitted to the slats into the corresponding grooves 7 of the half-sections 51 fitted to the swivel mounts 3, hence to the frame. The key 6 of the one half-section 52 slides along the groove 7 of the other half-section 51 until the lip 18 of each half-section 51 and 52 locates against the corresponding longitudinal side face of the matching half-section 52 and 51; on arrival of the slat half-section 52 at this point, its catch pin 8 snaps into the hole 9 of the respective frame half-section 51.

A louvre system according to the invention is thus assembled in a short time, and the slats 4 can be removed simply by separation of the two clip half-sections 51 and 52 to a degree that will permit disengagement of the catch pins 9 from their respective holes 9.

The entire system likewise can be dismantled without damaging any part, since all components are joined together by snap fits.

Claims

1. A louvre system with adjustable slats featuring removable modular slat clips, comprising: a frame with two parallel uprights (1), each upright (1) having an identical series of holes (2) which are spaced a predetermined distance apart; a series of single swivel mounts (3), each swivel mount (3) being rotatably accommodated within a hole (2) in one of the uprights (1); a set of single clips (5), each clip (5) being insertable into a swivel mount (3); and a set of slats (4) supported by and between a pair of the clips (5) by connection of each end of a single slat (4) to a respective clip (5), each single clip (5) has a first half-section (51) and a second half-section (52); characterized in that each first half-section (51) is snap-fitted to a respective swivel mount (3), and only each second half-section (52) is insertable into one respective end of a slat (4), with the mutually opposed surfaces of the half-sections (51, 52) having matched sliding-fit profiles (6, 7) for permitting the half-sections (51, 52) to slide bodily relative to one another from a first position in which one profile (6) locates in the other (7) to a second position in which the two half-sections (51, 52) of the clip lock together; and in that the half-sections (51, 52) of each clip (5) are locked together by a releasable snap-fit catch mechanism (8, 9) incorporated into the clip (5).

2. Louvre system as in claim 1, characterized in that each of the single swivel mount (3) exhibits a centrally-aligned through polygonal socket (10) from which a similarly polygonal seat (11) extends at the side of the mount (3) farthest from the respective clip (5); and that the first half-section (51) of each clip (5) connected with the



swivel mount (3) exhibits a polygonal element (12) fashioned to match the shape of the polygonal socket (10) offered by the mount (3), the polygonal element (12) being divided into a number of component parts (121, 122) certain of which are offset, flexible, and provided with respective retaining lips (13) that engage in the polygonal seat (11).

3. Louvre system as in claim 1, characterized in that the slats (4) are hollow, and each single clip (5) exhibit an insertable plug (14) matching the shape of a socket (15) offered by each single slat (4) and in that the half-section (52) of the clip that engages with one respective end of each single slat (4) is provided with a recess (16) circumscribed internally by the insertable plug (14) and is bounded externally by a raised excluder bead (17) that projects from the surface of the half-section (52) and is of a shape substantially matching the profile of the slat (4).

4. Louvre system as in claim 1, characterized in that each one of the half-sections (51, 52) of each single clip (5) exhibits a lip (18), projecting perpendicularly from a longitudinal edge and covering a corresponding longitudinal side face of the matching half-sections (51, 52) of the clip (5) and is designed to prevent infiltration of water, air, light and/or other foreign matter between the half-sections (51, 52) of each single clip (5), and between the assembled clip (5) and the respective upright (1).

5. Louvre system as in claim 1, characterized in that the two matched profiles (6, 7) are rectilinear, and angled slightly with respect to the longitudinal axis of each single clip (5) with which they are integral.

6. Louvre system as in claim 5, characterized in that the two matched profiles (6, 7) are disposed through a path that lies substantially in the same plane as that which defines the angle of the slat (4).

7. Louvre system as in claim 1, characterized in that each one of the half-sections (51, 52) of each single clip (5) exhibits a lip (18), projecting perpendicularly from a longitudinal edge and covering a corresponding longitudinal side face of the matching half-sections (51, 52) of the clip (5) and is designed to prevent infiltration of water, air, light and/or other foreign matter between the half-sections (51, 52) of each single clip (5) and in that the two matched profiles (6, 7) are rectilinear, and angled slightly with respect to the longitudinal axis of each single clip (5); and in that the perpendicular lip (18) of each clip half-sections (51, 52) functions as a stop when the half-sections (51, 52) are slid together toward the position in which they are locked together.

8. Louvre system as in claims 1, 5, 6 and 7, characterized in that the matched slide-fitting profiles of the half-sections (51, 52) of each clip (5) are in the form of a key (6) and a corresponding groove (7) the shape of the key and the groove being such that, when slotted together, the two half-sections (51, 52) may slide relative to one another, but are prevented from separating.

9. Louvre system as in claim 2, characterized in that the catch mechanism consists of a pin (8) integral with one of the half-sections (51 or 52) of each single clip (5) projecting perpendicularly therefrom at one end, at least, of the matched profile (6, 7), and a corresponding hole (9) offered to the pin by the remaining half-section (51, 52) of the same clip (5).

10. Louvre system as in claim 2, characterized in that the polygonal socket (10) of each swivel mount (3) and the polygonal element (12) of the clip half-section (51) inserted therein are quadrangular; and in that the component parts (121) of the polygonal element (12) that are provided with a retaining lip (13) are disposed at opposite sides thereof.

11. Louvre system as in claims 1 and 2, characterized in that at least the clips (5) are fashioned from plastic or synthetic material, or at all events from a material possessing sufficient flexibility to permit release both of each single clip half-sections (51, 52) one from the other, and of the clips (5) themselves from their respective swivel mounts (3).

12. Louvre system as in claim 1, characterized in that the swivel mounts (3) are caused to rotate by way of parallel rods (20) accommodated in the uprights (1) and in that a side of each mount (3) facing toward the rods (20) is provided with a pair of pins (19) disposed in positions diametrically opposed in relation to the axis of the mount (3) and which are insertable by snap-fitting into corresponding holes (23) offered by the rods (20) in such a way as to remain rotatable within the holes (23).

Patentansprüche

1. Jalousiesystem mit verstellbaren Lamellen und mit auswechselbaren modularen Lamellenhaltern, wie folgt enthaltend: Einen Rahmen mit zwei parallelen senkrechten Seiten (1), jede senkrechte Seite (1) mit der gleichen Serie von Bohrungen (2) versehen, die in einem bestimmten Abstand voneinander angeordnet sind; eine Reihe von einzelnen Schwenksupporten (3), jede Schwenksupporten (3) drehbar in einer Bohrung (2) in einer der senkrechten Seiten (1) angeordnet; einen Satz einzelner Halter (5), jeder Halter (5) in einen Schwenksupport (3) einsetzbar; und einen Satz Lamellen (4), welche von und zwischen einem Paar von Haltern (5) getragen werden, und zwar durch die Verbindung eines jeden Endes einer einzelnen Lamelle (4) mit einem jeweiligen Halter (5), wobei jeder einzelne Halter (5) eine erste Hälfte (51) und eine zweite Hälfte (52) hat, dadurch gekennzeichnet, dass jede erste Hälfte (51) durch Einschnappen an einem jeweiligen Schwenksupport (3) befestigt und jede zweite Hälfte (52) in ein jeweiliges Ende einer Lamelle (4) einsetzbar ist, wobei die sich gegenseitig gegenüberliegenden Oberflächen der Hälften (51, 52) passende Gleitsitzprofile (6, 7)



haben, um es den Hälften (51, 52) zu erlauben, entsprechend zueinander als Ganzes aus einer ersten Position, in der ein Profil (6) in dem anderen (7) liegt, in eine zweite Position zu gleiten, in der die beiden Hälften (51, 52) der Halter zusammenschliessen, und dadurch, dass die Hälften (51, 52) eines jeden Halters (5) durch einen lösbaren Schnappverbindungsmechanismus (8, 9) zusammengeschlossen werden, der in den Halter (5) eingearbeitet ist.

2. Jalousiesystem nach Patentanspruch 1, dadurch gekennzeichnet, dass jeder der einzelnen Schwenksupporte (3) einen zur Mitte ausgerichteten durchgehenden mehreckigen Sockel (10) aufweist, von dem aus sich ein ähnlich mehreckiger Sitz (11) auf der Seite des Supportes (3) und entfernt von dem jeweiligen Halter (5) erstreckt, und dadurch, dass die erste Hälfte (51) eines jeden mit dem Schwenksupport (3) verbundenen Halters (5) ein mehreckiges so geformtes Element (12) aufweist, dass es zu dem Profil des von dem Support (3) gebotenen mehreckigen Sockel (10) passt, wobei das mehreckige Element (12) in eine Anzahl von Bestandteilen (121, 122) getrennt ist und bestimmte davon gebogen, flexibel und mit entsprechenden Haltelippen (13) versehen sind, welche in den mehreckigen Sitz (11) greifen.

3. Jalousiesystem nach Patentanspruch 1, dadurch gekennzeichnet, dass die Lamellen (4) hohl sind und jeder einzelne Halter (5) einen einsetzbaren Zapfen (14) aufweist, welcher dem Profil eines von jeder einzelnen Lamelle (4) gebotenen Sockels (15) angepasst ist, und dadurch, dass die Hälfte (52) des Halters, die mit einem entsprechenden Ende eines jeden einzelnen Lamelle (4) verbunden wird, mit einer Vertiefung (16) versehen ist, die innen durch den einsetzbaren Zapfen (14) umschrieben und aussen durch einen erhöhten Sperrwulst (17) abgegrenzt wird, der aus der Oberfläche (52) herausragt und ein Profil hat, dass sich im wesentlichen dem Profil der Lamelle (4) anpasst.

4. Jalousiesystem nach Patentanspruch 1, dadurch gekennzeichnet, dass jede der Hälften (51, 52) eines jeden einzelnen Halters (5) eine Lippe (18) aufweist, die lotrecht von einer Längskante hervorsticht und eine entsprechende längsverlaufende Seitenfläche der passenden Hälften (51, 52) des Halters (5) abdeckt und dazu bestimmt ist, einem Eindringen von Wasser, Luft, Licht und/oder anderen Fremdkörpern zwischen die Hälften (51, 52) eines jeden einzelnen Halters (5) sowie zwischen den zusammengesetzten Halter (5) und die entsprechende senkrechten Seite (1) vorzubeugen.

5. Jalousiesystem nach Patentanspruch 1, dadurch gekennzeichnet, dass die beiden passenden Profile (6, 7) geradlinig und im Verhältnis zu der Längsachse eines jeden einzelnen mit diesen verbundenen Halters (5) leicht angewinkelt sind.

6. Jalousiesystem nach Patentanspruch 5, dadurch gekennzeichnet, dass die beiden passenden Profile (6, 7) durch eine Bahn hindurch angeordnet sind, die sich im wesentlichen auf der

gleichen Ebene befindet wie die, welche den Winkel der Lamelle (4) beschreibt.

7. Jalousiesystem nach Patentanspruch 1, dadurch gekennzeichnet, dass jede der Hälften (51, 52) eines jeden einzelnen Halters (5) eine Lippe (18) aufweist, die lotrecht von einer Längskante hervorsticht und eine entsprechende längsverlaufende Seitenfläche der passenden Hälften (51, 52) des Halters (5) abdeckt und dazu bestimmt ist, einem Eindringen von Wasser, Luft, Licht und/oder anderen Fremdkörpern zwischen die Hälften (51, 52) eines jeden einzelnen Halters (5) vorzubeugen; und dadurch, dass die beiden passenden Profile (6, 7) geradlinig und im Verhältnis zu der Längsachse eines jeden einzelnen Halters (5) angewinkelt sind; und dadurch, dass die lotrechte Lippe (18) einer jeden Halterhälfte (51, 52) als Anschlag dient, wenn die Hälften zusammen in die Position gleiten, in der sie zusammengeschlossen werden.

8. Jalousiesystem nach den Patentansprüchen 1, 5, 6 und 7, dadurch gekennzeichnet, dass die passenden Gleitsitzprofile der Hälften (51, 52) eines jeden Halters (5) die Form eines Schlüssels (6) und einer entsprechenden Rinne (7) haben, wobei das Profil des Schlüssels und der Rinne ein solches ist, dass, wenn sie ineinanderliegen, die beiden Hälften (51, 52) entsprechend aufeinanderzugleiten können, je doch das Trennen verhindert wird.

9. Jalousiesystem nach Patentanspruch 2, dadurch gekennzeichnet, dass der Fangmechanismus aus einem Zapfen (8) besteht, der mit einer der Hälften (51, 52) eines jeden Halters (5) fest verbunden ist und aus diesem an einem Ende des passenden Profils (6, 7) herausragt, sowie aus einer entsprechenden Bohrung (9), die für den Zapfen in der verbleibenden Hälfte (51, 52) desselben Halters (5) vorgesehen ist.

10. Jalousiesystem nach Patentanspruch 2, dadurch gekennzeichnet, dass der mehreckige Sockel (10) eines jeden Schwenksupportes (3) und das mehreckige Element (12) der Halterhälfte (51), das in diese eingesetzt ist, viereckig ist, und dadurch, dass die Bestandteile (121) des mehreckigen Elementes (12) mit einer Haltelippe (13) versehen sind, die an entgegengesetzten Seiten derselben angeordnet sind.

11. Jalousiesystem nach Patentanspruch 1 und 2, dadurch gekennzeichnet, dass wenigstens die Halter (5) aus Kunststoff oder synthetischem Material geformt sind oder auf alle Fälle ausreichend flexible Materialeigenschaften haben, um ein Lösen von beiden der einzelnen Halterhälften (51, 52) voneinander und der Halter (5) selbst von deren entsprechendem Schwenksupport (3) zu erlauben.

12. Jalousiesystem nach Patentanspruch 1, dadurch gekennzeichnet, dass die Schwenksupporte (3) durch parallele Stangen (20) zum Drehen gebracht werden, die in den senkrechten Seiten (1) angeordnet sind, und dadurch, dass eine Seite eines jeden Supportes (3) den Stangen (20) zugewandt und mit einem Paar von Zapfen (19) versehen ist, die sich im



Verhältnis zu der Achse des Supportes (3) diametral-gegenüberliegend angeordnet befinden, und die durch eine Schnappbefestigung in entsprechende Bohrungen (23) einsetzbar sind, die in die Stangen (20) auf solche Weise eingearbeitet wurden, dass sie in den Bohrungen (23) drehbar bleiben.

Revendications

1. Système de jalousie à lattes ajustables et à attaches de latte remplaçables modulaires comportant: un cadre avec deux montants parallèles (1), chaque montant (1) étant pourvu d'une série identique de trous (2) qui sont espacés l'un de l'autre d'une distance prédéterminée; une série d'éléments tournants de support individuels (3), chaque élément tournant de support (3) étant logé à rotation dans un trou (2) dans l'un desdits montants (1); une série d'attaches individuelles (5), chaque attache (5) pouvant être insérée dans un élément de support tournant (3); et une série de lattes (4) supportées par et disposées entre une paire d'attaches (5) moyennant la liaison de chaque extrémité d'une latte (4) à une attache respective (5), chaque attache individuelle (5) se composant de deux parties, une première moitié (51) et une seconde moitié (52); caractérisé en ce que chaque première moitié (51) est emboîtée par frottement à force dans un respectif élément de support tournant (3) et seulement chaque seconde moitié (52) est destinée à être insérée dans l'une des extrémités d'une respective latte (4), les deux surfaces réciproquement opposées des deux moitiés (51, 52) ayant des profils complémentaires (6, 7) qui s'engagent à coulissement pour permettre aux deux moitiés (51, 52) de coulisser en engagement, l'une par rapport à l'autre, d'une première position dans laquelle un profil (6) se situe dans l'autre (7) à une seconde position dans laquelle les deux moitiés (51, 52) de l'attache sont verrouillées ensemble; et en ce que les deux moitiés (51, 52) de chaque attache (5) sont verrouillées ensemble par un mécanisme de prise (8, 9) à emboîtement par frottement à force incorporé dans l'attache (5), ledit mécanisme étant susceptible de dégagement.

2. Système de jalousie selon la revendication 1, caractérisé en ce que chaque élément de support tournant (3) présente une cavité polygonale de passage (10) à alignement central de laquelle s'étend un logement également polygonal (11) sur le côté de l'élément de support (3) le plus éloigné de la respective attache (5); et en ce que la première moitié (51) de chaque attache (5) reliée à l'élément de support tournant (3) est pourvue d'un élément polygonal (12) façonné de manière à épouser la forme de la cavité polygonale (10) présentée par l'élément de support (3), l'élément polygonal (12) étant divisé en une pluralité de parties composantes (121, 122) dont certaines sont décalées, flexibles et pourvues de respectives lèvres de retenue (13) qui s'engagent

dans le logement polygonal (11).

3. Système de jalousie selon la revendication 1, caractérisé en ce que les lattes (4) sont creuses et chaque attache individuelle (5) est pourvue d'une pièce enfichable (14) épousant la forme d'une cavité (15) présentée par chaque latte (4) et en ce que la moitié (52) de l'attache qui s'engage avec une respective extrémité de chaque latte (4) est pourvue d'un creux (16) encerclé à son intérieur par ladite pièce enfichable (14) et est limitée à l'extérieur par une moulure de protection (17) en relief qui fait saillie de la surface de la moitié (52) et dont la forme épouse celle du profil de la latte (4).

4. Système de jalousie selon la revendication 1, caractérisé en ce que chacune desdites moitiés (51, 52) de chaque attache (5) est pourvue d'une lèvre (18) dépassant perpendiculairement d'un bord longitudinal et couvrant une face latérale longitudinale correspondante des moitiés en engagement (51, 52) de l'attache (5), cette lèvre étant destinée à empêcher l'infiltration d'eau, d'air, de lumière et/ou de tout autre corps étranger entre les deux moitiés (51, 52) de chaque attache (5) et entre l'attache (5) et le respectif montant (1), quand assemblés.

5. Système de jalousie selon la revendication 1, caractérisé en ce que les deux profils (6, 7) qui s'épousent sont rectilignes et ont une légère inclinaison angulaire par rapport au plan longitudinal de chaque attache individuelle (5) de laquelle ils sont solidaires.

6. Système de jalousie selon la revendication 5, caractérisé en ce que les deux profils (6, 7) qui s'épousent sont disposés selon une direction qui se trouve sensiblement dans le même plan que celle définissant l'angle de la latte (4).

7. Système de jalousie selon la revendication 1, caractérisé en ce que l'une des deux moitiés (51, 52) de chaque attache (5) est pourvue d'une lèvre (18) dépassant perpendiculairement d'un bord longitudinal et couvrant une face latérale longitudinale correspondante des moitiés (51, 52) en engagement de l'attache (5), ladite lèvre étant destinée à empêcher l'infiltration d'eau, d'air, de lumière et/ou de tout autre corps étranger entre les moitiés (51, 52) de chaque attache (5); et en ce que les deux profils (6, 7) qui s'épousent sont rectilignes et ont une légère inclinaison angulaire par rapport au plan longitudinal de chaque attache (5); et en ce que la lèvre perpendiculaire (18) des moitiés (51, 52) de chaque attache fait fonction d'un arrêt quand on cause le coulissement simultané des moitiés (51, 52) vers la position dans laquelle elles sont verrouillées ensemble.

8. Système de jalousie selon les revendications 1, 6 et 7, caractérisé en ce que les profils s'engageant par emboîtement à coulissement des moitiés (51, 52) de chaque attache (5) comportent une clavette (6) et une rainure correspondante (7), lesdites clavette et rainure étant conformées de telle sorte que quand elles sont assemblées les deux moitiés (51, 52) sont en mesure de coulisser l'une par rapport à l'autre



mais elles ne peuvent pas se séparer.

9. Système de jalousie selon la revendication 2, caractérisé en ce que le mécanisme de prise comporte une cheville (8) solidaire de l'une des deux moitiés (51 ou 52) de chaque attache (5), faisant saillie perpendiculairement de celle-ci au moins en correspondance de l'une des extrémités des profils en engagement (6, 7) et un trou correspondant (9) présenté par l'autre moitié (51, 52) de la même attache (5) et situé en regard de ladite cheville.

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10. Système de jalousie selon la revendication 2, caractérisé en ce que la cavité polygonale (10) de chaque élément de support tournant (3) et l'élément polygonal (12) de la première moitié (51) de l'attache (5) introduit dans celle-ci sont quadrangulaires; et en ce que les parties composantes (121) de l'élément polygonal (12) qui sont pourvues d'une lèvre de retenue (13) se trouvent aux deux côtés opposés de celui-ci.

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11. Système de jalousie selon les revendications 1 et 2, caractérisé en ce qu'au moins les attaches (5) sont produites en utilisant une matière plastique ou synthétique ou en tout cas une matière offrant une souplesse suffisante pour permettre que les deux moitiés (51, 52) de chaque attache puissent se dégager l'une de l'autre et pour permettre également le dégagement des attaches (5) de leurs respectifs éléments de support tournants (3).

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12. Système de jalousie selon la revendication 1, caractérisé en ce qu'on cause la rotation des éléments de support tournants (3) au moyen de tiges parallèles (20) logées dans les montants (1) et en ce qu'un côté de chaque élément de support (3) situé en regard des tiges (20) est pourvu de deux pivots (19) disposés en positions diamétralement opposées par rapport à l'axe de l'élément de support (3) et qui sont enfichables par frottement à force dans des trous correspondants (23) présentés par les tiges (20) de telle sorte qu'ils sont en mesure de tourner dans les trous (23).

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