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(12) # NEW EUROPEAN PATENT SPECIFICATION

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(54) **Pivoting gauze screen door.**

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Description

The invention relates to a pivotable gauze screen door, i.e. a device for shutting a doorway by means of wire gauze, to keep out any insects, as described in the prior art portion of the claim.

Gauze screens to keep out insects are known of old; they have been attached either with bars in front of the window or in the form of binds attached by means of a bar at the upper threshold of the window-frame, to be shut from the upper to the lower end and to be opened from the lower to the upper end.

Similar constructions in the form of rising and descending roll up blind curtains have several disadvantages.

They are appropriate only for window-frames and not for doorways and they are not shutting off completely such that nevertheless insects might penetrate.

With such a construction at the doorway of the kitchen or of a shed the passage would be impeded too much.

Therefore a construction has been sought which does not have such disadvantages.

In the Netherlands patent application 7614313 a roller gauze device has been described, which can be positioned at sliding doors and sash-windows only and which comprises a roll-up shaft affixed against the vertical members of the doorway, from which a gauze screen is rolled.

However, no guide-rails or the like are provided along the upper and the lower edge of the gauze, such that penetration of insects cannot be prevented in a reliable manner.

The gauze roll-up door as characterized in the claim consists mainly of a pivotable roll-up shaft affixed in the vertical position against one of the door-frame bars, said shaft having at one end a torsion spring fixed at the shaft circumferentially, which can be held in any desired position by means of a cog-wheel and rack with a locking lobe pitching into the dents, said shaft being enclosed by a longitudinal box, also being, affixed in the vertical position against the said door-frame bar and having a U-shaped profile in cross-section, the side face of same at the doorway side being shorter than the opposite side, and the first-mentioned side face having a smoothly beaded edge, said profile being kept by cradles affixed upon the door-frame, while the roll up shaft is provided with a bearing in bushes at its ends protruding through a ring bolt, and the insects-stopping gauze being higher and wider than the doorway, being affixed with one end at the roll-up shaft and winding and unwinding around it, with the other end affixed between a hollow beam having a rectangular cross-section kept by rubber brackets and a flat strip with a bent brim, while the rims of the gauze screen slide in top and bottom rails, guided with said brackets. The longitudinal box, its roll-up shaft, the U-shaped frame, the hollow beam and the strip with bent brim may be made of a metal, like steel or aluminium, or wood, or a plastic appropriate for constructions.

The gauze may consist of a ventilating but insects-stopping windable material such as woven or extruded gauze with small mesh width, for example consisting of a metal, expanded metal, nylon or other plastic screen, cloth or of a textile fabric.

The side face of the U-shaped frame against the unwinding part of the gauze is lower than the opposite one and it is provided with a beaded edge, such that the gauze screen can be unwound in a pefectly shutting manner and that, in the closed position tightly towards the door-frame, the penetration of insects will be prevented in a reliable manner.

Almost in the middle of the hollow beam being affixed at one end of the gauze screen two handles are positioned, one at either side, so that the gauze door can be handled easily.

The device as described can be fit up at any doorways, such as mentioned and described in I. W. Nortier, "General Constructions for Architects and Engineers", Stam Publishers, (Culemborg-Cologne), 2. edition, pages 106-107, provided that the gauze length will be larger than the maximum width of the doorway and the width of the gauze will be larger than the maximum height of the doorway, such dimensions as reproduced in said literature and in standard specifications.

It will be understood that the motion of the gauze takes place in a horizontal direction along the vertical level of the doorway and along the door-frame, such that it can be used for any doorway and door type.

The top and bottom rails in which the upper and lower rim of the gauze screen respectively will slide guided by the brackets, as a windable sliding door, present utmost locking.

The invention is further elucidated with the enclosed drawing. The drawing depicts an isometric elevation of the device according to the present invention dismounted in parts, wherein the following parts are reproduced: (1) is the roll-up shaft with a spindle and ring, which can be held in any desired position by means of a cogwheel and rack with a locking lobe pitching into the dents, (2) are cradles, (3) is the U-shaped profile frame placed against the unwinding part of the gauze with this side face lower than the opposite one and being provided with a beaded edge (4), (5) is the rectangular gauze screen, (6) is a square hollow beam, (7) is a flat strip with bent brim at one side, (8) are top and bottom rails respectively, in which the rims of the screen will slide, (9) are rubber brackets, and (10) are the handles.

The device according to the invention is not restricted to any dimension or to typical finishing, and the drawing shows an embodiment only to elucidate the present invention.

The use of unwindable gauze screen doors according to the present invention is simple, and it does not impede the passage through the doorway, while an effective shutting off against insects, at the same time with an improved ventilation, is obtained.

The device can be manufactured at a low price and in large standardized series.

Thus it will be a deliverance in particular for climatological circumstances, which favour the appearance of insect like gnats.

It is possible to assemble the device on different types of doorways, on sliding doors as well as on swinging doors, and in existing dwellings as well as in new buildings.

Claims

1. A gauze screen door to keep out insects, comprising a rectangular wire gauze (5) being higher and wider than the doorway and affixed with one end at a roll-up shaft (1) and winding and unwinding around it and with the other end to a beam (6) said roll-up shaft having at one end a torsion spring and being enclosed by a longitudinal box (3), affixed in a vertical position against the door frame bar, said box having a substantially U-shaped profile in cross-section and being kept by cradles (2) affixed upon the door frame, characterized in that the torsion spring is held in any desired position by means of a cog-wheel and rack with a locking lobe pitching into the dents, while the side face of said longitudinal box (3) at the doorway side is shorter than the opposite side, said side face having a smoothly beaded edge (4), and the roll-up shaft (1) is pivotable by bearings in bushes at its ends, protruding through a ring bolt, the wire gauze (5) being affixed at the other end between a hollow beam (6) having a rectangular cross-section, and a flat strip (7) having a bent fixing brim, and the rims of the screen when unwound, slide in top and bottom rails (8) respectively, which are provided at the upper and lower edge of said wire gauze (5), said hollow beam (6) being provided with rubber brackets (9) at each end guided in said rails (8), and with two handles (10).

Patentansprüche

1. Tür mit Gazevorsatz zum Schutz gegen Insekten, mit einem rechteckigen Drahtgewebe (5), welches in Höhe und Breite die Türöffnung überragt, und am einen Ende an einem Rollschaft (1), um den es sich ein- und ausrollt, und am anderen Ende an einer Stange (6) befestigt ist, wobei der Rollschaft am einen Ende mit einer Torsionfeder verbunden ist und dieser von einem länglichen Gehäuse (3) umgeben ist, welches senkrecht am Türrahmen angebracht ist, im Querschnitt im wesentlichen ein U-Profil darstellt und mittels Stützen (2) am Türrahmen anliegt, dadurch gekennzeichnet, dass die Torsionsfeder mittels Zahnrad und in das Zahnrad eingreifender Sperrklinke in jeder gewünschten Position gehalten wird, während die Seitenfläche des länglichen Gehäuses (3) an der Seite der Türöffnung kürzer ist als an der gegenüber liegenden Seite, und diese Seitenfläche einen glatt abgerundeten Rand (4) besitzt, und der Rollschaft (1) gelagert in endständigen Buchsen durch einen Ringbolzen schwenkbar ist, das Drahtgewebe (5) am anderen Ende zwischen einer hohlen Stange (6) mit rechteckigem Querschnitt und einer flachen Schiene (7) befestigt ist, die einen gerichteten Befestigungsrand hat, und die Ränder des Drahtgewebes beim Ausrollen in oberen beziehungsweise unteren Schienen (8) gleiten, welche entlang dem oberen und unteren Ende des Drahtgewebes (5) angebracht sind, indem die hohle Stange (6) mit Gummiklampen (9) an beiden Enden in diesen Schienen geführt wird und mit zwei Handgriffen (10) ausgestattet ist.

Revendications

1. Une porte à gaze moustiquaire protectrice contre les insectes comprenant un treillis de fil rectangulaire (5) dépassant le panneau de la porte en haut et en largeur, et rattaché à son bout au rouleau (1) d'une manière entortillante et à l'autre extrémité au bâton (6), ledit rouleau relié au bout à un ressort à torsion et entouré d'un boîtier oblong (3), essentiellement d'un profil de forme U et installé verticalement au chambranle touchant à ceci au moyen de supports (2), caracterisée en ce que ledit ressort à torsion s'est arrêté en position de choix au moyen d'une roue dentée et clenchette, la face du boîtier oblong latéral au côté du panneau étant plus courte que celle au côté opposé, ladite face bordée d'une façon arrondie (4), et que le rouleau (1) est gisant à son bout en douilles et tournant autour d'un boulon annulaire, le treillis de fil (5) étant relié à l'autre bout entre le bâton creux (6) d'un profil rectangulaire et une bande plate (7), qui a un bord portant sur la fixation, et les bords du treillis de fil glissant en roulant dans des bandes (8) respectivement au dessus et en bas, qui sont montées le long du bout en haut et en bas du treillis de fil, (5) pendant que le bâton creux (6) soit dirigé aux deux bouts au moyen de crampes de caoutchouc (9) dans lesdites bandes, et qu'il soit muni de deux poignées (10).

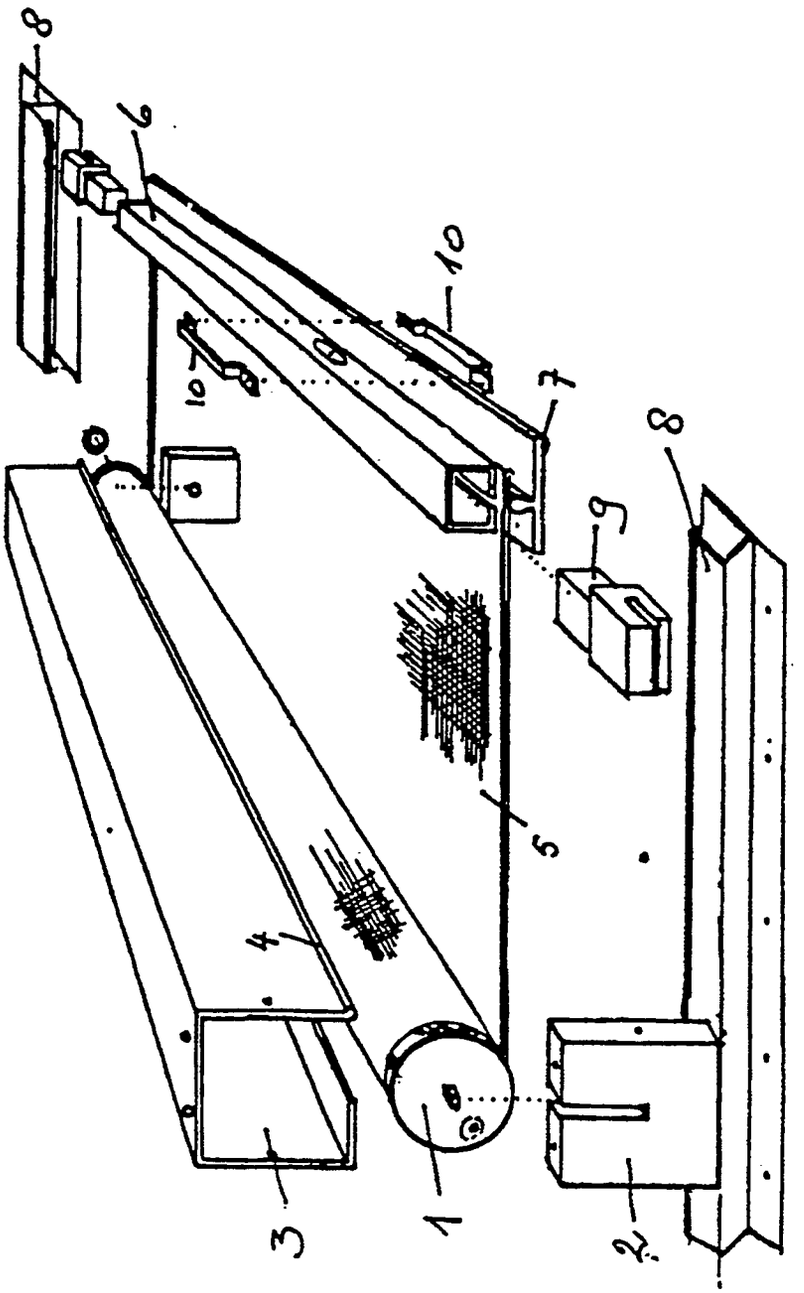

Figure.