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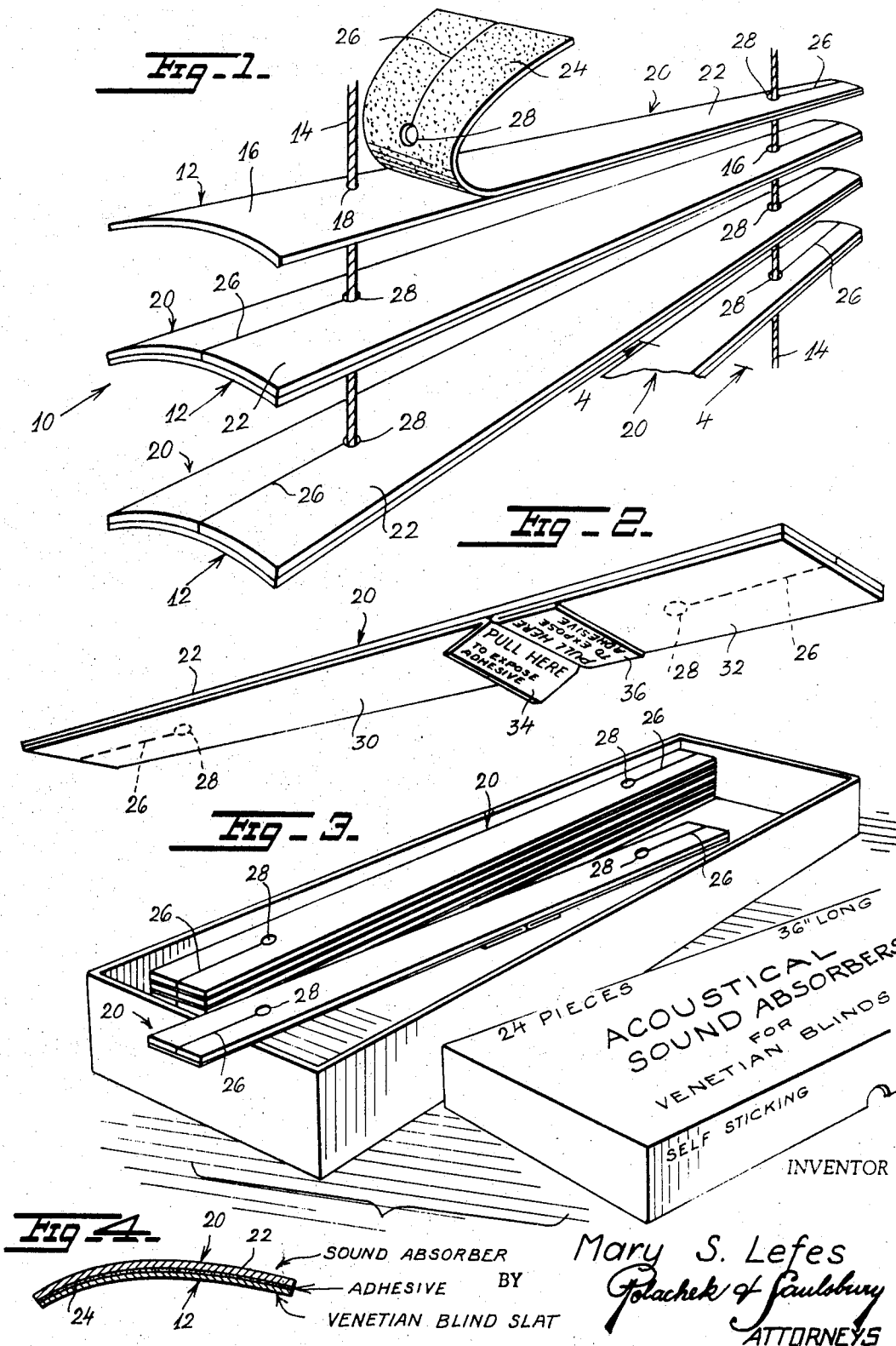
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SOUNDPROOF AND HEATPROOF SLAT FOR VENETIAN BLINDS

Filed April 30, 1968

2 Sheets-Sheet 1



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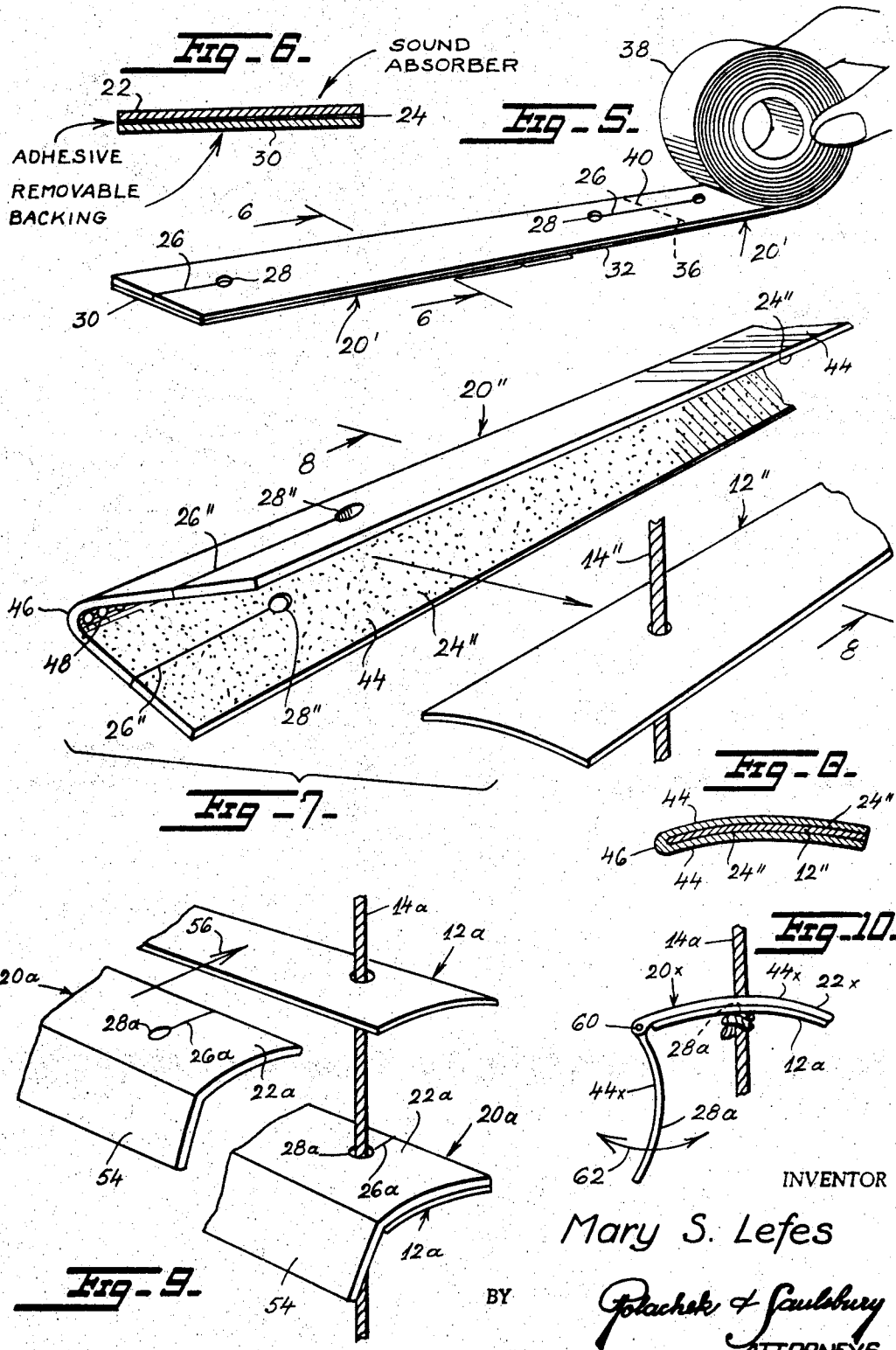
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SOUNDPROOF AND HEATPROOF SLAT FOR VENETIAN BLINDS

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2 Claims

ABSTRACT OF THE DISCLOSURE

A slat for venetian blinds having an elongated flexible rectangular-shaped body of plastic material slightly curved longitudinally. On one surface of the body of the slat there is a flexible tape of a shape similar to the shape of the body of the slat composed of sound deadening, dampening or noise absorbing material capable of insulating the slat from heat and cold and preventing the ambient rays from penetrating the slat. The tape is slitted at its ends, terminating at the inner ends of the slits in intersecting holes for receiving the ropes for actuating the slats of a venetian blind. The tape carries its own attaching means in the form of a coating of adhesive.

It is among the objects of the present invention to provide venetian blinds with a coating tape or other means that will render the venetian blind fully closed so as to keep out light, sound, heat or cold as well as flashes from any bomb bursts, whereby to render the complete venetian blind self-contained and a full block for these purposes.

BRIEF DESCRIPTION OF THE VIEWS OF THE DRAWINGS

FIGURE 1 is a front perspective view of a fragment of a venetian blind with slats embodying one form of the invention, the protective tape on one of the slats being shown turned back.

FIG. 2 is a perspective view of a protective tape shown in FIG. 1 before it is applied to a slat.

FIG. 3 is a top perspective view of a box with a supply of tapes of FIG. 2 stacked therein, the cover of the box being shown removed.

FIG. 4 is a cross-sectional view taken on the plane of the line 4—4 of FIG. 1 on an enlarged scale.

FIG. 5 is a perspective view of a supply of tapes shown in FIG. 2, in roll form.

FIG. 6 is an enlarged cross sectional view taken on the plane of the line 6—6 of FIG. 5.

FIG. 7 is a top disassembled perspective view of a fragment of a modified form of tape, the tape being shown preparatory to being applied to a slat.

FIG. 8 is a cross-sectional view taken on the plane of the line 8—8 of FIG. 7 after the tape has been applied to the slat.

FIG. 9 is a top perspective view of a fragment of a venetian blind showing another modified form of tape preparatory to applying to a slat and showing a similar tape applied to a slat.

FIG. 10 is an end edge view of a slat with still another modified form of tape applied thereto, the tape being shown in open position.

DETAILED DESCRIPTION OF THE DRAWINGS

Referring now in detail to the various views of the drawings, in FIG. 1 there is shown a fragment of a venetian blind 10 composed of a series of slats 12 slidably and pivotally supported on guide ropes 14. The slats 12 are formed in accordance with the present invention.

Each slat 12 has an elongated rectangular shaped longitudinally curved body 16 formed of suitable flexible opaque plastic material. Holes 18, 18 are formed adjacent the ends of the body of the slat to permit the ropes 14 to pass therethrough.

In accordance with the present invention, one surface of the body of the slat 12 is covered with a tape or sheet 20 having a flexible body 22 composed of suitable sound deadening and heat insulating material. The body of the tape is of the same length and width as the body of the slat and is provided with a coating of adhesive 24 on its bottom surface as viewed in FIG. 1, whereby the tape adheres to the surface of the body of the slat. The body of the tape is formed with elongated slits 26 extending centrally and inwardly from each end edge of the body, each slit terminating at its inner end in a round hole 28, intersected by the slit. The slits permit the tape to be superimposed on the slat during assembly and the holes accommodate the ropes 30 of the venetian blind when assembled. The tape is applied facewise directly to the surface of the skin of the slat. When the tape 20 is so attached to the slat, the tape serves to absorb and dissipate the flexural vibrations of the body of the slat. The tape is thermally an insulator of heat and cold and is acoustically effective. When the slat flexes under vibratory forces with the tape attached thereto, such flexures effect temporary distortion of the tape material causing such material to do considerable work. This working dissipates the flexural and other vibratory energy of the slat and thereby minimizes sound transmission through the slat.

The tapes 20 are preferably produced and marketed in the form of individual rectangular shaped planar sheets of predetermined lengths and widths as shown in FIG. 2 for individual facewise application to the slat to be protectively or dampingly faced off. A pair of paper backing sheets 30 and 32 is shown placed end to end over the adhesive coating 24 to protect the adhesive until used. The adjacent ends of the backing sheets 30 and 32 are turned back and folded forming integral flaps 34 and 36, respectively, to be grasped by the fingers of the hand of the operator for tearing the backing sheets off when the tape is to be used.

The invention also contemplates supplying the tapes in the form of a roll 38 as shown in FIG. 5 with the individual tapes 20' marked off by transverse dash lines indicated at 40 to be cut by a tool for separating the tape 20' from the roll.

In assembling the slat 12, the backing sheets 30 and 32 are removed from the adhesive coating 24 of the body of the tape 20 and 20', the tape superimposed over the top surface of the slat 12 and pressed down thereagainst, with the slits in the ends of the body of the tape swung against the ropes 14 of the venetian blind 10 thereby forcing the material of the tape apart and positioning the ropes in the holes 28 in the ends of the tape.

The exact reason for the sound damping or deadening action or the thermal insulating action of the tape of the present invention has not been fully ascertained. It appears however that the sound deadening and thermal insulating tapes exert their sound deadening and thermal insulating effects by reason of collision of intermittent contact with vibrating portions of the slats.

In FIGS. 7 and 8, the tape 20'' embodying a modified form of the invention is shown for use in sound dampening and heat insulating a slat 12''. The tape 20'' comprises an elongated rectangular sheet of sound dampening and heat insulating material folded lengthwise upon itself forming two sections or portions 44, 44 joined by a curved portion 46. The curved portion is formed with a series of closely spaced holes 48 to facilitate bending of the material to form the tape. Each section of portion 44 is

formed with a slit 26'' centrally of each end, the slit terminating in a hole 28''. The inner surface of each section or portion 44 is coated with adhesive 24''.

In assembling the slat 12'', the tape 20'' is slid laterally in the direction of the arrow 50 in FIG. 7, with its open face leading to a position over and under the slat 12'' as shown in FIG. 8, the slitted ends separating and allowing the ropes 14'' to be inserted into the holes 28''. The sections or portions are then pressed against the surfaces of the slat 12'' into intimate contact therewith as seen in FIG. 8. The holes in the curved joint 46 permit this operation.

FIG. 9 illustrates a tape 20a embodying another modified form of the invention for use with a slat 12a. The tape 20a differs from the tape 20 of FIG. 1 in that the body portion 22a thereof is formed with a flange 54 formed integrally with one long side of the body, extending at an angle to the plane of the body 22a. The flange 54 is uncoated. The body 22a, instead of being slitted at the ends with the slits intersecting the end edges thereof, is formed with transverse slits 26a intersecting the other long edge of the body and extending inwardly toward the center of the body where it terminates in a hole 28a at the center, the slit intersecting the hole.

In assembling, the body 22a of the tape is moved, with its free long edge leading, laterally, in the direction of the arrow 56 over the slat 12a, with the hole 28a receiving the rope 14a, the slit 26a permitting this operation. The body 22a is pressed downwardly on the top surface of the slat 12a attaching the tape to the slat, the flange 54 hanging loosely downwardly.

The modified form of tape 20x shown in FIG. 10 differs from the tape 20'' of FIG. 7 merely in that the sections or portions 44x, 44x instead of being joined by an integral portion, such as the joint 46 of FIG. 7, are joined along one long edge by a hinge structure 60. One section 44x is adapted to swing toward or away from the other section or portion as indicated by the arrow 62.

In all other respects the tape 20x is similar to the tape 20'' and similar reference numerals are used to indicate similar parts.

I claim:

1. A slat for venetian blinds comprising an elongated flexible body rectangular in shape having holes adjacent the ends thereof, and a flexible tape covering one surface of the body, said tape being formed of sound deadening and heat insulating material, said tape having holes adjacent the ends thereof aligned with the holes in the body of the slat, said aligned holes adapted to receive ropes of a venetian blind, the tape having longitudinal slits intersecting the end edges thereof and intersecting the holes in the tape to facilitate assembling the tape on the slat, the tape being coated with adhesive on one surface thereof for attachment to the surface of the slat.

2. A slat for venetian blinds comprising an elongated flexible body, rectangular in shape, having holes adjacent the ends thereof, and a flexible tape folded to cover both surfaces of the slat body, said tape being formed of sound deadening and heat insulating material, said tape having holes adjacent the ends thereof aligned with the holes in the body of the slat, the opposed surfaces of the folds of the tape being coated with adhesive, each fold having slits intersecting the end edges thereof, said slits extending inwardly and intersecting with the end holes in the tape aligned with the holes in the slat.

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U.S. Cl. X.R.

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