March 31, 1953 R. A. CURTIS, JR 2,633,191

BLIND CONSTRUCTION

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Fig. 1.

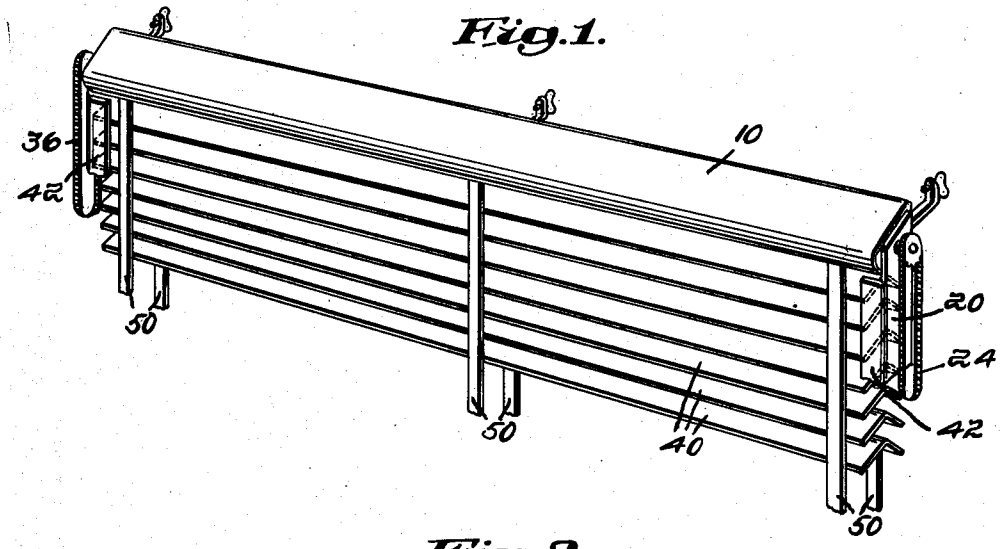
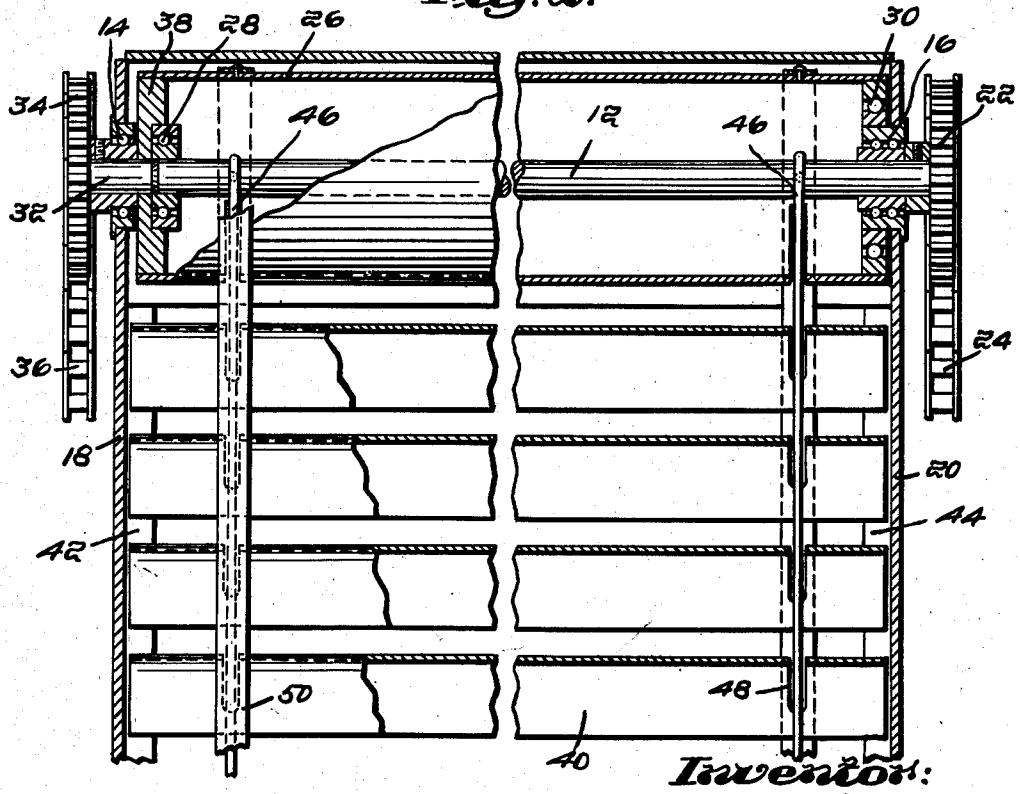



Fig. 2.




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Fig. 3.

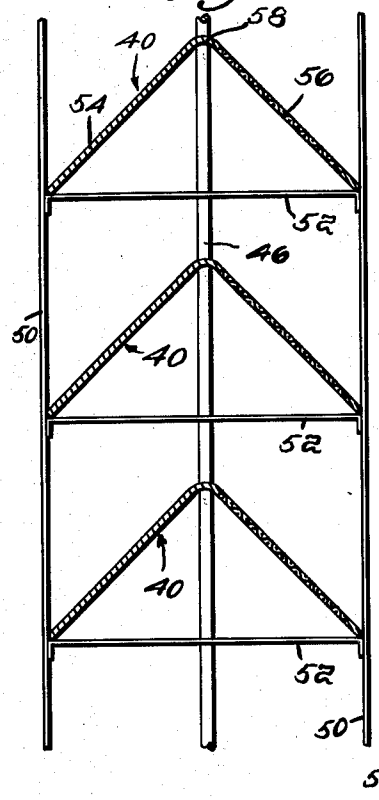



Fig. 4.

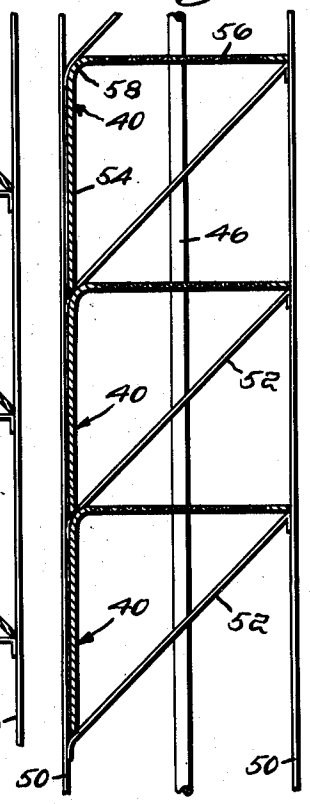



Fig. 5.

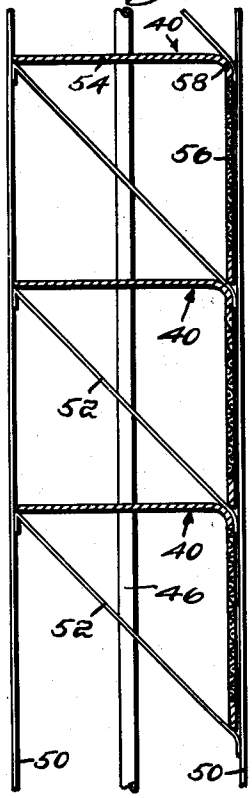



Fig. 6.

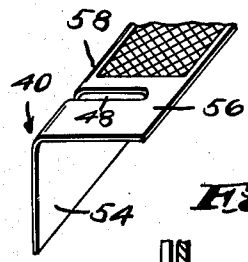



Fig. 7.

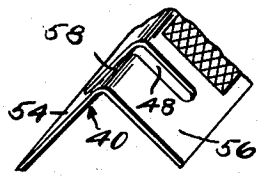



Fig. 8.

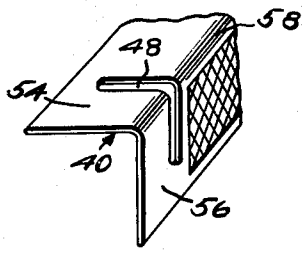
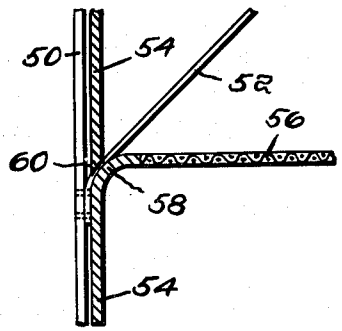



Fig. 9.




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Fig. 10.

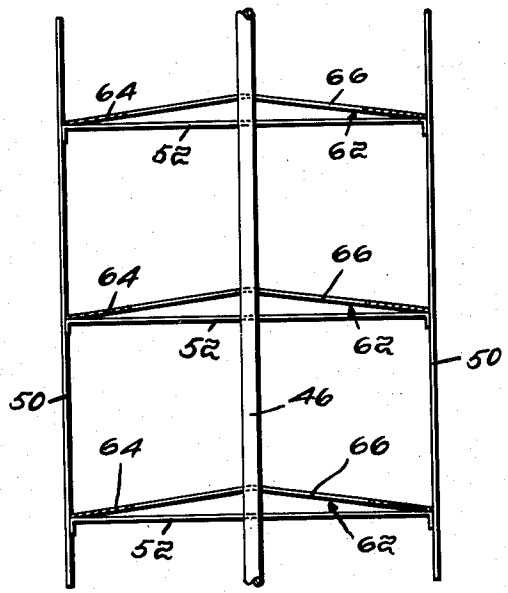



Fig. 11.

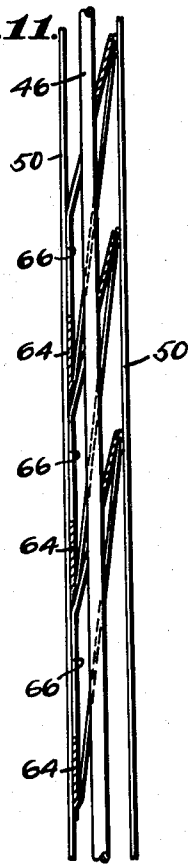
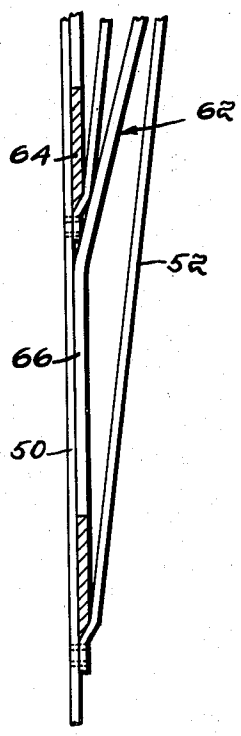



Fig. 12.




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Patented Mar. 31, 1953 2,633,191

# UNITED STATES PATENT OFFICE

2,633,191

## BLIND CONSTRUCTION

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Application June 21, 1950, Serial No. 169,500

2 Claims. (Cl. 160—176)

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This invention relates to improvements in Venetian blind construction which may be embodied in a screen for a fireplace or a screen for a window.

The slats for Venetian blinds produced as screens for windows or other purposes are usually made flat or may be curved in cross section. When such a blind is closed, the slats overlap and do not present a smooth even surface.

In the patent to Renton, 2,318,525, V-shaped slats or louver bars are employed, but when closed the Renton screen has overlapping slats and does not present a smooth even surface.

It is an object of my invention to provide a construction for Venetian blinds or screens which may be used for window openings, fireplace openings or other purposes in which the slats or louver bars are made V-shaped in cross section and are so arranged that the blind may be closed to present a smooth even surface which may, if desired, be decorated to present an attractive appearance from the inside of the room.

Further objects and advantages of my improvements will be more readily apparent from the following description of a preferred embodiment thereof as disclosed in the attached drawings, in which:

Fig. 1 is a fragmentary perspective view showing part of a Venetian blind construction;

Fig. 2 is a fragmentary vertical section of the blind construction shown in Fig. 1, and which is shown on an enlarged scale;

Fig. 3 is a vertical cross section of one embodiment of the slats or louver bars of the blind construction;

Fig. 4 is a sectional view similar to Fig. 3 but showing the bars tilted to present a smooth surface on one side;

Fig. 5 is a sectional view similar to Figs. 3 and 4 but showing the bars tilted in the opposite direction so that the screen portion of the bars are arranged in a vertical plane;

Fig. 6 is a fragmentary vertical section of one of the bars in the position of Fig. 4;

Fig. 7 is a similar effective view showing the bar in the position of Fig. 3;

Fig. 8 is another perspective view showing the bar in the position of Fig. 5;

Fig. 9 is an enlarged detailed vertical cross section showing the manner in which the bars adjoin to present a smooth surface on one side;

Fig. 10 is a vertical cross section of a blind construction in which the bars or slats are made V-shaped but with a substantially wide angle between the two sides of the bars;

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Fig. 11 is a vertical section similar to Fig. 10 but showing the manner in which the bars may be tilted to present a smooth surface on one side; and

Fig. 12 is an enlarged vertical section showing the adjoining portions of adjacent bars.

The blind construction disclosed in Figs. 1 and 2 is principally designed for use as a screen or a blind in front of a fireplace opening but a similar construction is adaptable for use as a window blind. The head board 10 conceals the operating mechanism. The horizontal shaft 12 is rotatably mounted for raising or lowering the slats of the blind. Ball bearings 14 and 16 are carried in the side frames 18 and 20. The shaft 12 is supported at one end in the ball bearing 16 and may be turned by the gear 22, as shown in Fig. 2, which is operated by the pull-chain 24. A rocker member 26 is mounted concentric with the shaft 12 and supports at one end a ball bearing 28 through which one end of the shaft 12 is rotatably supported. The other end of the rocker is carried by the ball bearing 30 which is mounted on a ball bearing 16. The short shaft 32 is mounted in the ball bearing 14 and is fixed to the rocker 26. The shaft 32 may be turned by the gear 34 through the pull-chain 36. The short shaft 32 is fixed to the end wall 38 of the rocker 26.

The Venetian blind slats or louver bars 40 may be retained at their ends against side sway by the side frames 18 and 20 which have the front and back walls 42 and 44. The side frames 18 and 20 are thereby U-shaped in cross section and adapted to guide the vertical movement of the slats or bars 40. The cords 46, which are attached to the shaft 12, extend through the slots 48 in the bars 40 and are attached to the lowermost bar or bottom of the blind so that by turning the shaft 12 the bars may be raised to stack the bars. The tapes 50 are attached to the rocker 26 and to a series of straps 52 which form supports for the individual bars in the customary manner. Turning of the rocker 26 will thereby cause tilting of the bars. If the blind is used for a window, conventional operating mechanism could be employed.

I have shown that the bars 40, in Figs. 1 and 2, are made V-shaped in cross section. The angle between the two sides of the bar is preferably between 90° and 180°. A 90° angle, as shown in Figs. 3, 4 and 5, may be used, or a substantially wide angle may be used as shown in Figs. 10, 11 and 12.

When the bars are made V-shaped, as disclosed, they may be arranged in three different positions,

as well as intermediate positions. The middle position is shown in Fig. 3 and the end positions on either side of the middle are shown in Figs. 4 and 5. The bars should be suitably spaced so that, when arranged in the positions shown in Figs. 4 and 5, the lower edge of one bar is substantially close to the middle line of the adjacent lower bar so that a substantially smooth flat surface is presented.

In Figs. 3, 4 and 5, the V-shaped slats, as disclosed, are designed for use as slats or bars for a fire screen but it will be understood that similar forms of slats or bars may be employed if the blind is to be used for other purposes.

In Figs. 3 to 9, each bar **40** is made V-shaped with the two side portions **54** and **56**. These side portions may meet in a sharp angle or preferably in a rounded angle, as shown at **58**. The edge of the side **54** of each bar **40** is preferably shaped as shown at **60** in Fig. 9 so as to come closely adjacent to the rounded surface of the adjacent bar. In this position, the side **54** of the bars are in a vertical plane and only a very small clearance is permitted between each pair of bars.

When used as a fire screen, the Venetian bars in Figs. 3 to 9 may be made of metal with the sides **56** of each bar formed in part of wire screening or of reticulated metal.

There are many advantages in using a Venetian blind construction for a fire screen. When the screen is closed in the position of Fig. 4, the flat surface may face towards the room and the fireplace will be entirely concealed. The screen may be set into a fireplace opening in such manner that the screen will close the opening in the position of Fig. 4 and prevent drafts from the chimney. When the fireplace is in use, the screen may be turned to the position of Fig. 5 in which the screen surfaces are in a common plane and the blind will serve as a screen against sparks from the fire. In an intermediate position, the screen may be adjusted to control the draft of the fire.

If the blind construction is used for a window opening, or in place of a window, one side of each slat may be made of transparent material and the other of opaque material. The bars or slats could, for example, be made of plastic with one side opaque and the other side translucent or transparent. When closed to the position of Fig. 4, the smooth opaque side could face the room and could be decorated to present an effective appearance. When turned to the position of Fig. 5, the blind will admit light but not air, and in intermediate position, the blind may be adjusted to admit air from the outside but cut off or subdue the light.

Figures 10 to 12 show a construction in which the bars **62** are made with the two sides **64** and **66** at a substantially wide angle. The bars **62** may be controlled by the cords **46** and the tapes **50** as in Figs. 1 and 2.

Figs. 11 and 12 show the manner in which the slats or bars **62** may be closed to present a substantially smooth surface on one side.

I claim:

1. In a blind construction of the Venetian type for an opening, a plurality of bars, each bar being V-shaped in cross section and mounted in the inverted position, the angle between the sides of each V-shaped bar being not less than 90°, each bar having a rounded surface at the center line between the sides thereof, means for determining the vertical spacing of the bars, means for tilting the bars between limiting positions in which the sides of the bars are brought into a common vertical plane, each bar having at least one free edge formed to an angular shape conforming to the rounded surface at the center line of the adjacent bar whereby when the bars are tilted to bring the sides into a common plane the angular free edge of each bar is brought closely adjacent the rounded angle between the sides of the adjacent lower bar.

2. A screen for a fireplace of the Venetian type having a plurality of bars or slats, each of said bars being made of metal and formed V-shaped in cross section and mounted in the inverted position, the angle between the sides of the V-shaped bars being more than 90°, each bar having a rounded surface at the center line between the sides thereof and also having its free edges formed to an angular shape conforming to the rounded surface at the center line of the adjacent bar, means for tilting said bars to bring either side thereof into a common vertical plane, one side of each bar being imperforate and the other side perforate, whereby when the bars are tilted to one position the screen forms a closure for the fireplace opening and when tilted to the other side to bring the other side of the bars into a common plane, the screen serves as a fire screen against sparks from the fireplace.

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