

July 21, 1953

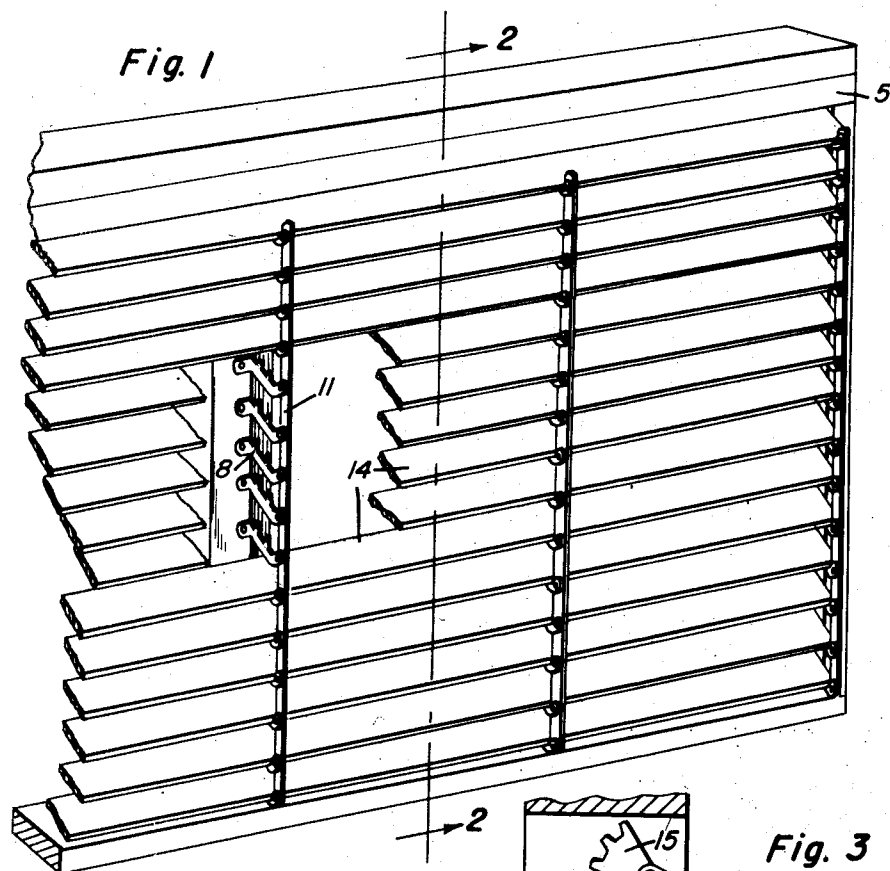
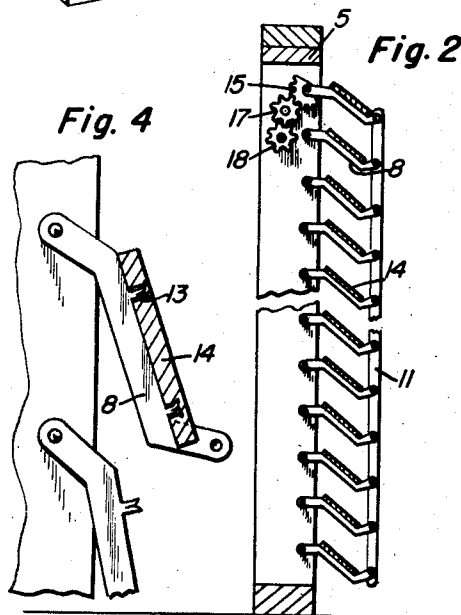
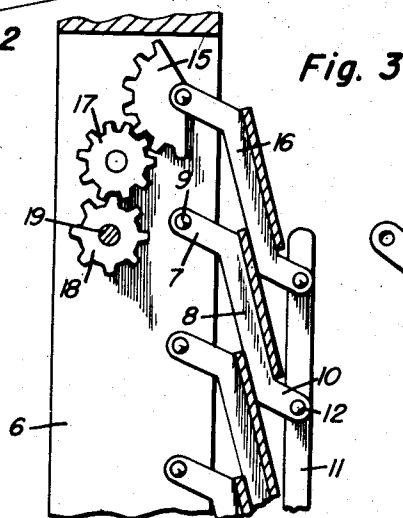
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2,645,828

SHUTTER CONSTRUCTION AND OPERATOR

Filed Sept. 19, 1950

2 Sheets-Sheet 1



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Fig. 6

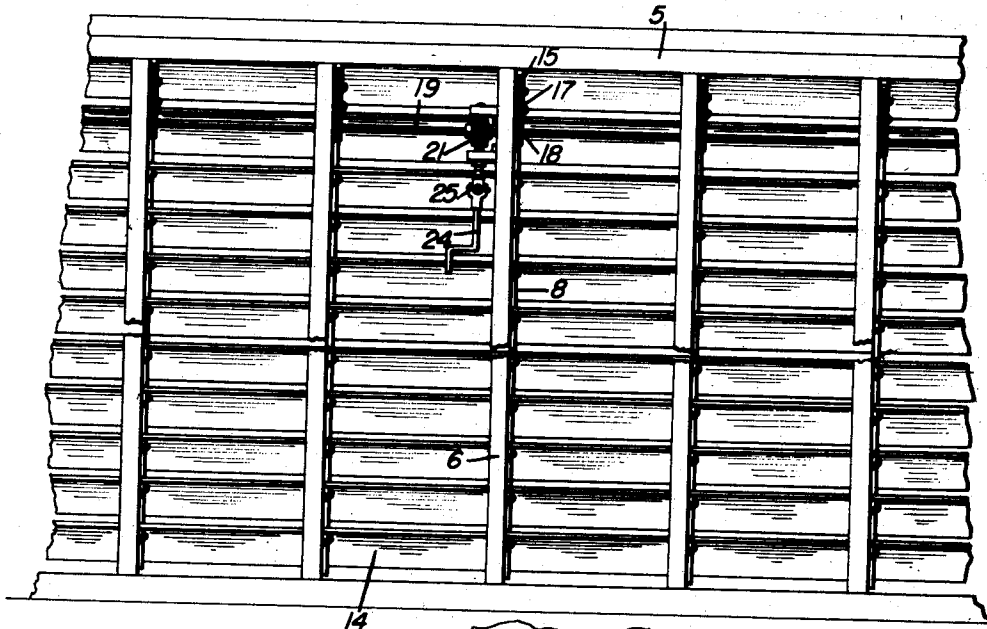
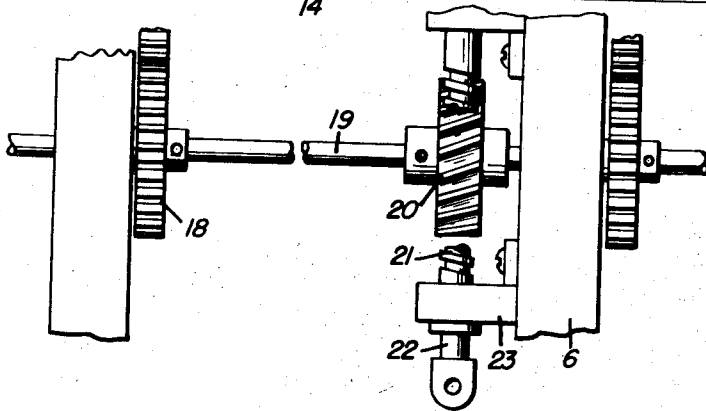


Fig. 7

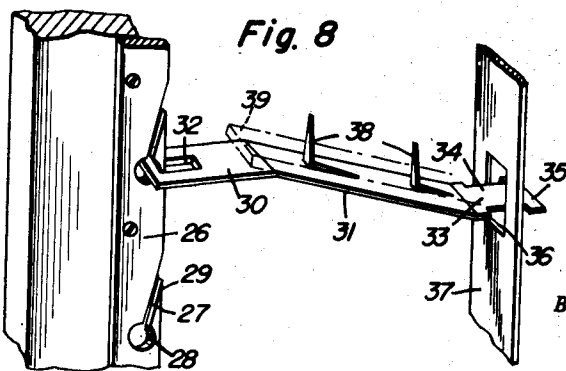


Fig. 8

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UNITED STATES PATENT OFFICE

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SHUTTER CONSTRUCTION AND OPERATOR

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Application September 19, 1950, Serial No. 185,639

1 Claim. (Cl. 20—62)

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The present invention relates to new and useful improvements in shutters and louver operating means therefor.

An important object of the invention is to provide a novel louver supporting arm construction to support a group of louvers in front of a supporting frame and connecting the outer ends of the arms to an operating bar to uniformly raise and lower the louvers from a closed overlapping position to an upwardly inclined open position.

Another object is to provide novel means for attaching the louvers or slats to the supporting arms.

A further object is to provide a simplified louver arm attaching construction for easily and quickly pivotally attaching the inner and outer ends of the arms to the supporting frame and to the operating bar.

A still further object is to provide a device of this character of simple and practical construction, which is strong and durable, efficient and reliable in operation, relatively inexpensive to manufacture, and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a fragmentary perspective view with parts shown in section;

Figure 2 is a vertical sectional view taken on a line 2—2 of Figure 1;

Figure 3 is an enlarged fragmentary vertical sectional view;

Figure 4 is an enlarged fragmentary vertical sectional view showing the fastening prongs for the slats or louvers carried by the arms;

Figure 5 is an enlarged fragmentary sectional view of a modified louver fastening construction;

Figure 6 is a rear elevational view;

Figure 7 is an enlarged rear elevational view of the louver operating mechanism; and

Figure 8 is an enlarged perspective view of a modified arm construction.

Referring now to the drawings in detail, wherein for the purpose of illustration I have disclosed a preferred embodiment of my invention, the numeral 5 designates a frame provided with studding 6 at regularly spaced apart intervals, and to the studding, as well as to the ends of the frame, are pivotally secured the inner ends 7 of arms 8 by pins or the like 9.

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The arms are constructed of strap metal and the inner ends 7 and outer ends 10 of arms 8 are inclined oppositely, the inner ends being inclined rearwardly and the outer ends inclined forwardly and the outer ends are pivoted to a vertical operating bar 11 by pins or the like 12.

The outer edge of arms 8 are formed with at least two bendable double prongs 13a for penetrating a louver or slat 14 and may be clinched against the outer surface of the louver to hold the same horizontally on the arms as shown in Figure 5, or the prongs may be slightly shorter than the thickness of the slat and placed in shallow holes 13 in the slat to spread the prongs by tapping the slat with a hammer, as shown in Figure 4. The arms and louvers are properly spaced in the frame to overlap the adjacent edges of the louvers when the same are closed inwardly against the frame, as shown in Figure 3.

Gear segments 15 are fixed to the inner ends of the uppermost arms 16 connected by idler gears 17 to pinions 18 secured to a horizontal shaft 19 journaled in the studding. A worm gear 20 is also secured to shaft 19 driven by a worm 21 on a vertical shaft 22 journaled in a bracket 23 secured to one of the studding. A crank handle 24 is secured to the lower end of shaft 22 and provided with a universal joint 25.

In the modified construction shown in Figure 8 a vertical metal strip 26 is secured to the studding with one edge of the strip projecting forwardly of the studding and formed with downwardly inclined slots 27 leading to circular openings 28 in the strip to form upstanding pins 29 at the front edge of the strip 26. The inner end 30 of strap metal arms 31 are formed with slots 32 for sliding the arms downwardly in slots 27 to enter the openings 28 for pivoting the arms on the strips.

The outer ends 33 of arms 31 are notched at its opposite side edges to form a narrow neck 34 with a cross bar 35 at its outer end to lock the arms in slots 36 of operating bars 37.

Prongs 38 are bent upwardly from arms 31 to attach the louvers or slats 39 thereto.

The invention is designed primarily for use in the construction of so-called "lath" houses used to protect plants from frost and may be erected in sections to form the sides as well as the top of the house and the louvers opened to admit sunlight or closed when the plants need protection.

The device may also be used on porches and other purposes where protection from the weather is desired.

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In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claim.

Having described the invention, what is claimed as new is:

In a louver construction, a fixed vertical supporting strip having outwardly inclined entrance slots at one edge and openings at the lower ends of the slots to form upstanding pins at the edge of the strip, a plurality of louver supporting arms having openings adjacent their inner ends to receive said pins for vertical swinging movement of the arms, louver fastening prongs projecting up-

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wardly from the arms, a neck at the outer end of each arm, and an operating bar having openings in which the necks of the arms are lockably and pivotally engaged.

ROY A. DAVIS.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
10 191,951	Fawcett	June 12, 1877
208,692	Pohl	Oct. 8, 1878
1,818,286	Vail	Aug. 11, 1931
2,133,113	Pratt	Oct. 11, 1938
15 2,207,605	Wolfe	July 9, 1940
2,234,712	Swanfeldt	Mar. 11, 1941
2,324,454	Huff	July 13, 1943

FOREIGN PATENTS

Number	Country	Date
20 101,544	Australia	June 28, 1936
107,620	Australia	June 2, 1939