

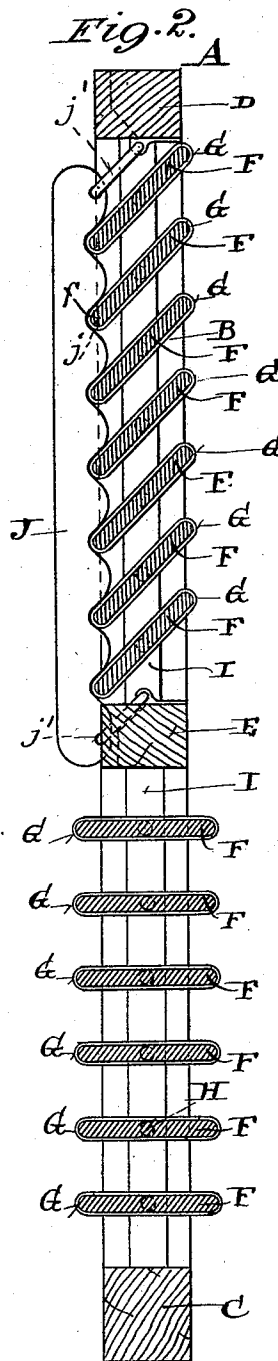
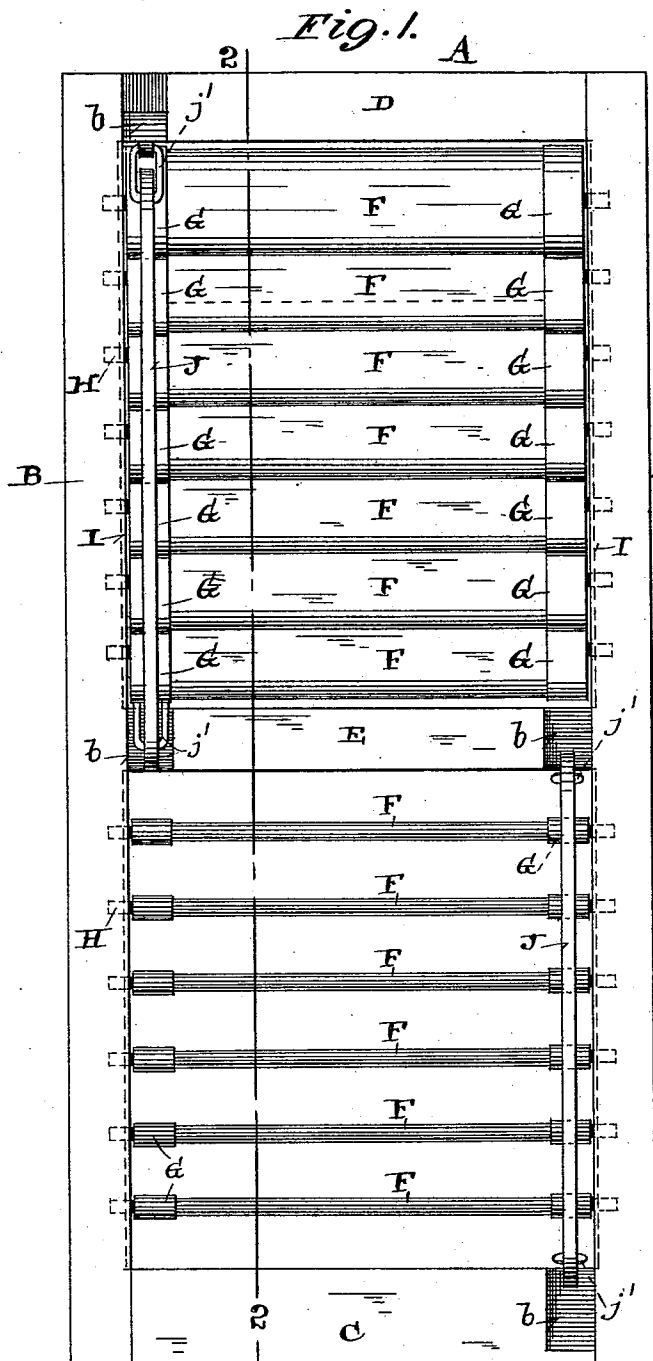
(No Model.)

2 Sheets—Sheet 1.

E. STOEPPELWERTH & C. H. KNEFELKAMP.
WINDOW BLIND.

No. 465,395.

Patented Dec. 15, 1891.



WITNESSES
Edward L. Funnell.
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INVENTORS
Edward Stoepfelwerth
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by C. J. Mody City

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Fig. 3.

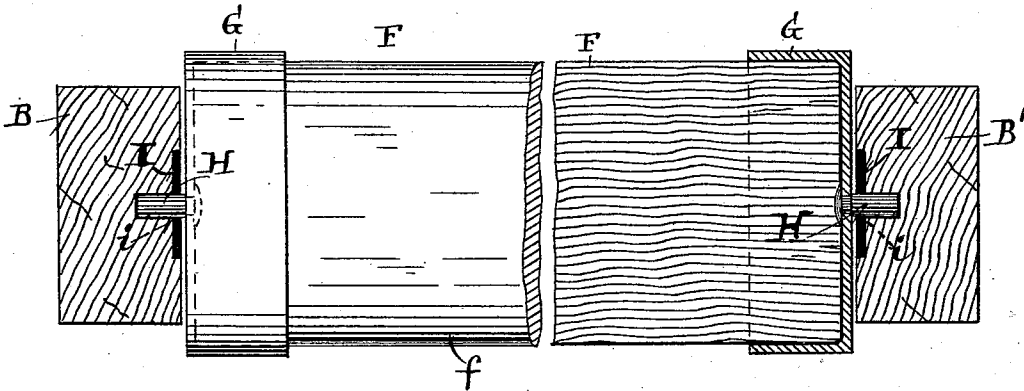


Fig. 5.

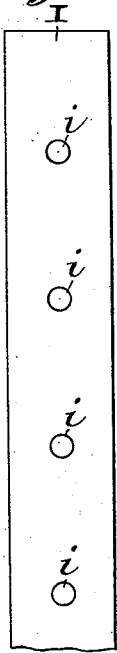
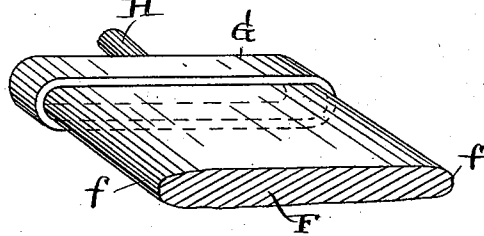


Fig. 4.



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UNITED STATES PATENT OFFICE.

EDWARD STOEPPELWERTH AND CHARLES H. KNEFELKAMP, OF ST. LOUIS, MISSOURI, ASSIGNORS OF ONE-THIRD TO OLIVER J. FUNSCH, OF SAME PLACE.

WINDOW-BLIND.

SPECIFICATION forming part of Letters Patent No. 465,395, dated December 15, 1891.

Application filed March 21, 1890. Renewed October 30, 1891. Serial No. 410,388. (No model.)

To all whom it may concern:

Be it known that we, EDWARD STOEPPELWERTH and CHARLES H. KNEFELKAMP, of St. Louis, Missouri, have jointly made a new and useful Improvement in Window-Blinds, of which the following is a full, clear, and exact description.

The improvement relates partly to the journaling of the blind-slats and partly to the means for adjusting the blind-slats, substantially as is hereinafter set forth and claimed, aided by the annexed drawings, making part of this specification, in which—

Figure 1 is a side elevation of the improved blind; Fig. 2, a vertical section on the line 2 of Fig. 1; Fig. 3, a horizontal section of the blind, the slat being partly in plan and partly in horizontal section; Fig. 4, a view in perspective showing an end of one of the slats; and Fig. 5 an elevation of one of the metal strips which are let into the stiles of the blind. The last three views are upon an enlarged scale.

The same letters of reference denote the same parts.

The blind A is of the usual construction, saving as it is modified or supplemented by the improvement under consideration.

B B' represent the blind-stiles; C, the bottom rail; D, the top rail; E, the middle rail, and F F the slats. The slats at each end thereof are held in and covered by a socket G, and the socket in turn is provided with a journal H, which projects into a suitable recess in the stile B. The journal passes first through a metal strip I, which is let into the stile, substantially as shown more distinctly in Fig. 3. The journal may be made in one piece with the socket, or a separate piece secured to the socket. The slat, socket, and journal turn as one part in the strip I and stile. By this means the slats are strengthened and protected at their ends, and the slat-journals are metal parts journaled in metal bearings. The slats can be snugly fitted to the stiles, and the weather is less liable to interfere with the proper working of the slats than when the blind-slats and stiles are all wood, as heretofore constructed.

The other feature of the improved blind

consists, mainly, in the notched rod J, which is employed to adjust the slats, and by which means the slats can be turned in their bearings without being required to be jointed to the rod, as blind-slats heretofore have been. The rod and slats are relatively adjusted to cause the slat edges *f* and the rod-notches *j* to interact, so that by moving the rod J upward and downward the slats can be rotated in their respective bearings in the stiles and be turned upward and downward and opened and closed, as desired.

A desirable means for holding the rod in engagement with the slats and enabling the rod to be used to operate the slats, as described, are the links *j' j'*, which at one end are jointed to the rod and at the other end to the blind-rails, respectively, and substantially as shown. We do not, however, desire to be restricted to this means, as the rod can be otherwise held in place. The rod J is preferably of metal, and it preferably is arranged near the stile, and it preferably is arranged to bear upon those parts of the slats which are covered by the sockets G. There may be more than one rod J, as when it is desired to operate the slats in the lower part of the blind independently of the slats in the upper part of the blind, and in such case the rods may be arranged, respectively, toward the stiles B B', as shown. The blind-rails may be grooved, as at *b*, to provide for the movement of the rods when shaped and arranged as shown. The strips I may be held in their places in the stiles by any suitable means—as, for instance, by the slats, which prevent the strips from becoming detached from the stiles.

The perforations in the strips I to receive the slat-journals are shown at *i*, Fig. 5.

The strips I serve the purpose of re-enforcing the bearing-recesses in the stiles, and the journals H, while shown secured to the sockets, would be more easily made integral therewith, and the socket would be thereby rendered stronger.

The rod J has concave notches and convex projections between the notches, and the rounded edges of the sockets G rest in said notches and are lifted by said projections, so

that as there are no corners or angles there will be no noise or jar when the slats are opened and closed.

We claim—

- 5 1. In a blind, the combination, with the recessed stiles, the slats, and the sockets G, secured upon the ends of the slats and provided with the central journals H, of the rod J, provided with notches to receive the edges of
10 the corresponding sockets and lifting projections between said notches, and means, substantially as described, whereby the upper and lower ends of said rod are connected to the frame of the blind, substantially as specified.
15 2. In a blind, the combination, with the slats and the metal sockets secured over the ends

thereof provided with journals having bearings in the stiles and having rounded edges, of the rod J, having concave notches to receive said rounded edges and rounded lifting 20 projections between said notches, and the links $j' j'$, connecting the ends of said rod to the corresponding transverse rails of the frame of the blind, substantially as specified.

Witness our hands this 17th day of March, 25 1890.

EDWARD STOEPPPELWERTH.
CHARLES H. KNEFELKAMP.

Witnesses:

C. D. MOODY,
B. F. REX.