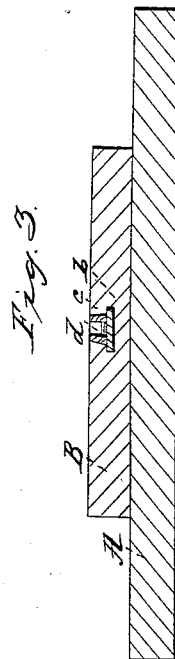
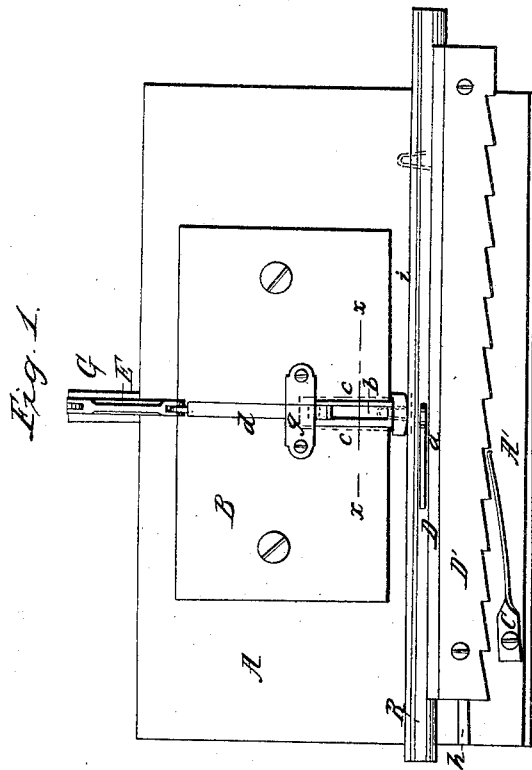
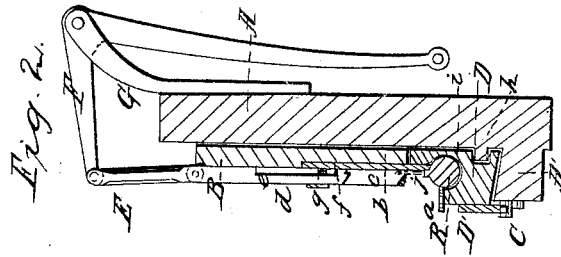


*D. Kelly,*  
*Wiring Blind Rods.*  
*N<sup>o</sup> 49,888.      Patented Sep. 12, 1865.*



*Witnesses:*  
*Theo. Tusch*  
*Wm. Treurn*

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*D. Kelly*  
*per muni*  
*Attorney.*

# UNITED STATES PATENT OFFICE.

DANIEL KELLY, OF GRAND RAPIDS, MICHIGAN.

## IMPROVEMENT IN MACHINES FOR WIRING WINDOW-BLIND RODS.

Specification forming part of Letters Patent No. 49,888, dated September 12, 1865.

### *To all whom it may concern:*

Be it known that I, DANIEL KELLY, of Grand Rapids, in the county of Kent and State of Michigan, have invented a new and useful Improvement in Machines for Wiring Blind-Rods; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view of a machine made according to my invention. Fig. 2 is a cross-section thereof through the axis of the follower *d*. Fig. 3 is a section on the line *x* of Fig. 1.

Similar letters of reference indicate corresponding parts.

This invention consists in a novel arrangement of devices for forcing wire staples into the rods of window-blinds, whereby the work is greatly facilitated, and at the same time performed in a workmanlike manner.

A designates a platform which sustains the operating mechanism. Its front edge has an elevation, *A'*, along whose inner face the carriage *D* is moved as hereinafter explained. The lower face of the carriage is grooved to fit over a tongue, *h*, which rises from the platform and serves as a guide for the carriage.

The letter *i* designates a semi-cylindrical socket, made the whole length of the carriage, for the purpose of receiving the blind-rod to be wired. *R* designates such a rod placed in the said socket. (See Figs. 1 and 2.) The socket is on that side of the carriage which is adjacent to the apparatus that drives the wire staples. The rod is held in place in the socket by means of a cam-lever, *a*, pivoted to the carriage in such a position as to press down on the rod vertically and clamp it when the operation of wiring is being performed.

The upper face of the carriage has a ratchet-plate, *D'*, whose teeth are engaged by a spring-detent, *C*, so as to prevent the carriage from being moved backward by accident. The friction of the spring which presses against the longer sides of the divisions of the ratchet will also hold the carriage so as to prevent it from advancing prematurely.

The platform *A* sustains a bed, *B*, which is grooved transversely to receive the driver *d*.

In the front part of the groove is fixed a plate, *b*, whose front end is rabbeted so as to form a tongue, which projects over the lower edge of the carriage *D* and comes beneath the tongue *j* of the rod, so as to support and form a guide for it in the advance of the rod past the groove of the driver. The bed-plate *b* supports a sliding box, *c*, of rectangular form, open at top and bottom, which fits with an enlargement of the same groove that the driver *d* slides in. The inner end of the box is cut down, as seen at *f*, Fig. 2, to the height of the space cut away at *e* on the under side of the driver *d*. The effect of this construction is to enable the driver in its reciprocations in its groove to move without giving motion to the box until those parts of the driver which form the ends of the space strike the end of the box, which they embrace, when the box will be moved toward or away from the blind-rod. The front end of the box is cut away beneath, as seen in Figs. 2 and 3, to allow the wire staple to pass out of the box when the driver pushes it forward.

To the outer end of the driver I connect a toggle, *E*, jointed at one end to the driver and at the other to the short end of an elbow-lever, *F*, which has its fulcrum on the end of a bracket, *G*. The driver *d* fits and moves within the sides of the box *c*, and its lower face rests and slides upon the bed-plate *b*. Its front edge is cut away the thickness of one of the wire staples, so that the latter may be held under the front edge of the driver, and thereby kept flat in the box while it is being moved forward to the rod.

The manner of operating the apparatus is as follows: A blind-rod having been placed in the socket *i* and clamped by the cam-lever *a*, the carriage *D* is moved toward the right, step by step, by any convenient means, the distance apart of the teeth of the ratchet-plate *D'* being equal to the distance at which the wire staples are to be set apart in the rod. A wire staple is placed within the box *c* on the bed-plate, with its points toward the carriage, and the driver is forced forward, its front edge overlapping the bight of the staple and keeping the staple flat on the bed-plate. As the driver advances it drives the points of the staple against the face of the rib *j* of the rod,

the box *c* being at the same time made to advance by means of the contact of the under side of the driver with the end *f* of the box, so that its forward end, which moves over the staple, will advance with it as the staple is pushed into the rib *j*, and thereby compel it to remain flat and prevent it from yielding or bending before the driver. The front end of the box will come up to the rib *j* of the rod, and the thickness of that end will be the measure or gage which determines how much of the staple is to be left outside of the rib, the driver continuing to act upon the staple until the end of the driver comes against the end of the box. When the driver is withdrawn the box *c* will be pulled backward far enough to permit the staple last driven to pass it, when the carriage is moved onward to a new position. This backward movement of the box is effected by the shoulder formed at the front end of the space

*e* of the driver. The driver is kept within its groove by the plate *g*.

I claim as new and desire to secure by Letters Patent—

1. In machines for wiring blind-rods, the sliding box *c*, constructed and operated substantially as above described.

2. The driver *d*, fitting over the back end, *f*, of the sliding box, as above set forth, and with a rabbet on its lower front edge to overlap the staple, substantially as described.

3. The combination of the sliding box *c* with the driver *D*, substantially as above described.

DANIEL KELLY.

Witnesses:

B. A. HARLAN,  
T. S. DANIELS.