

No. 612,812.

Patented Oct. 25, 1898.

G. BENSON.  
WINDOW BLIND MOUNTING.

(Application filed Dec. 30, 1897.)

(No Model.)

Fig. 1.

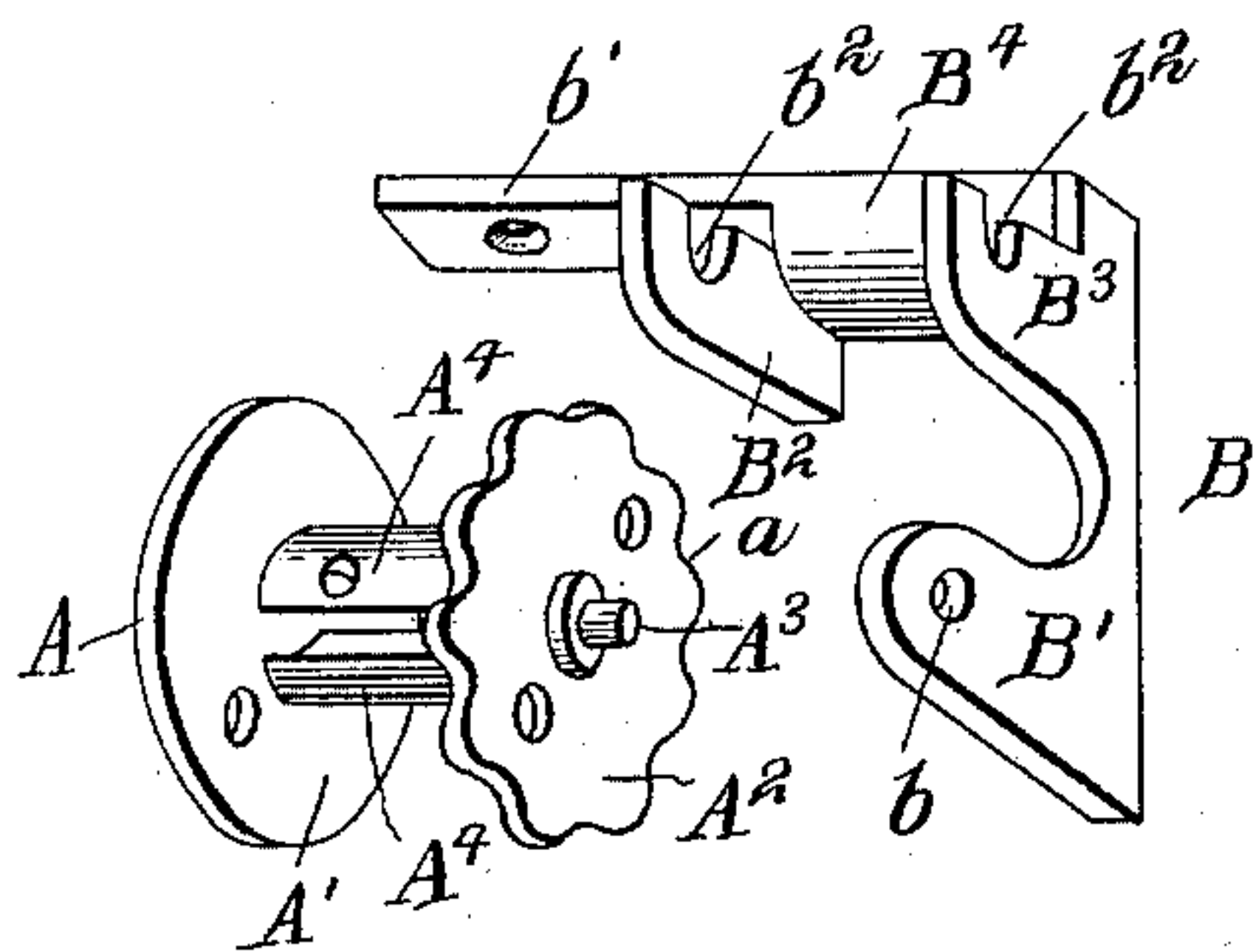


Fig. 2.

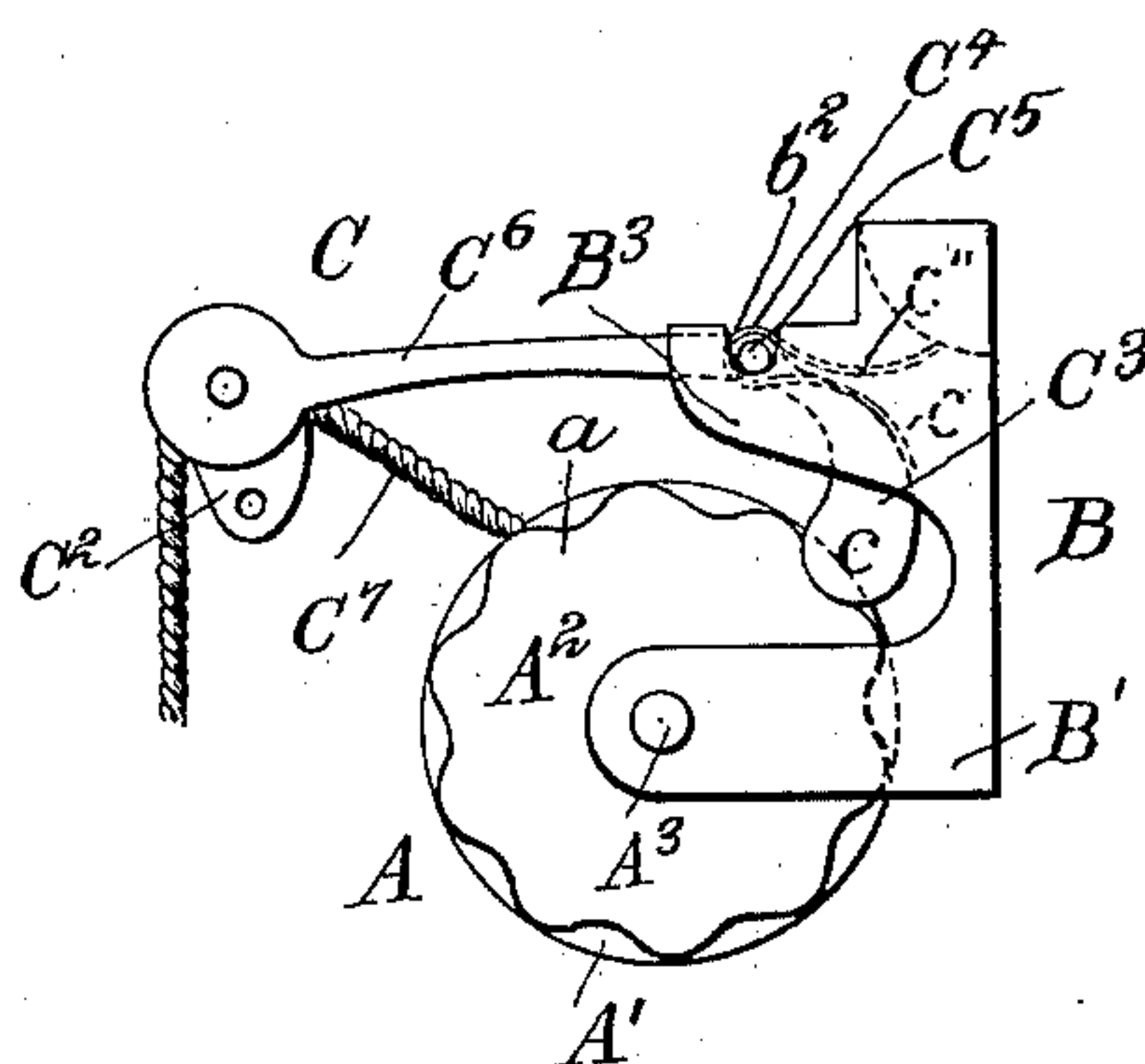


Fig. 3.

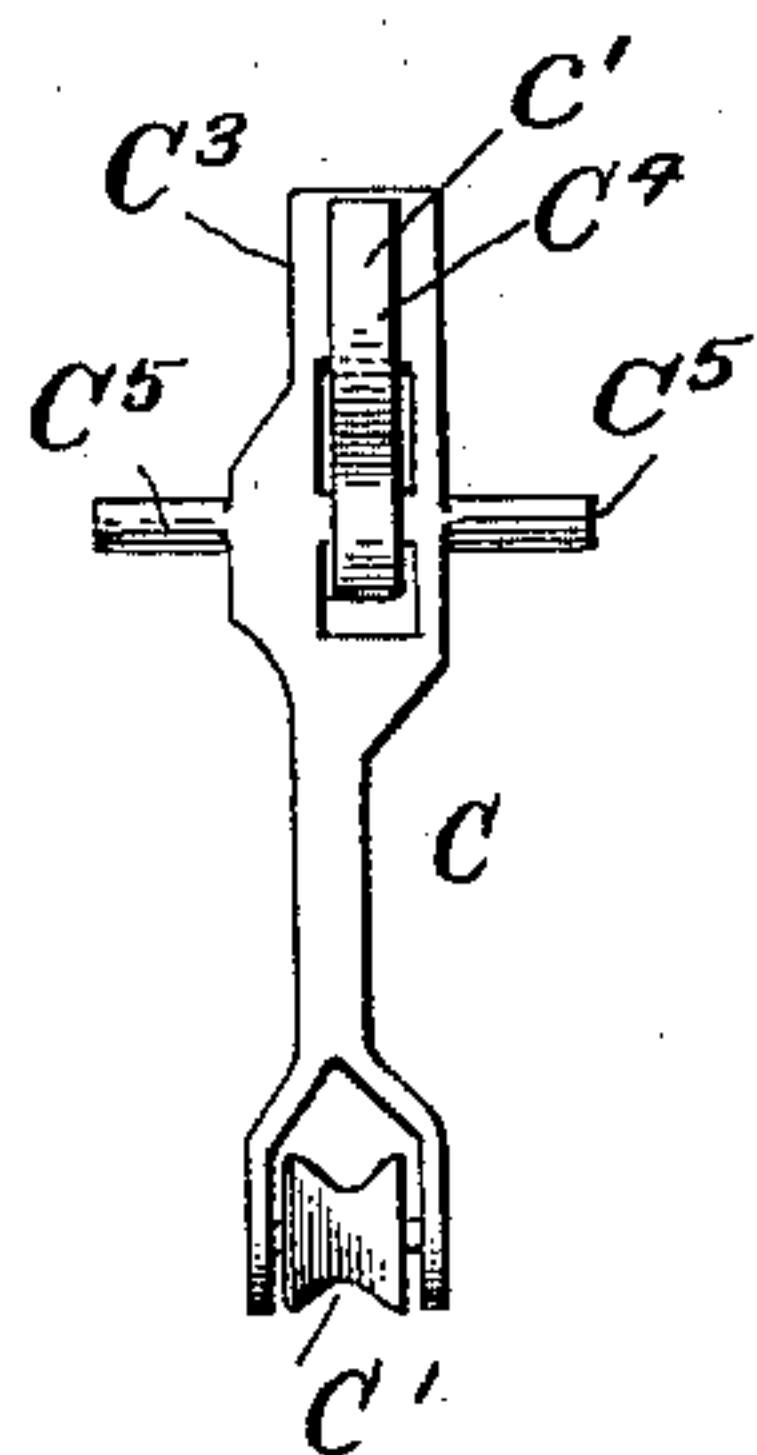


Fig. 4.

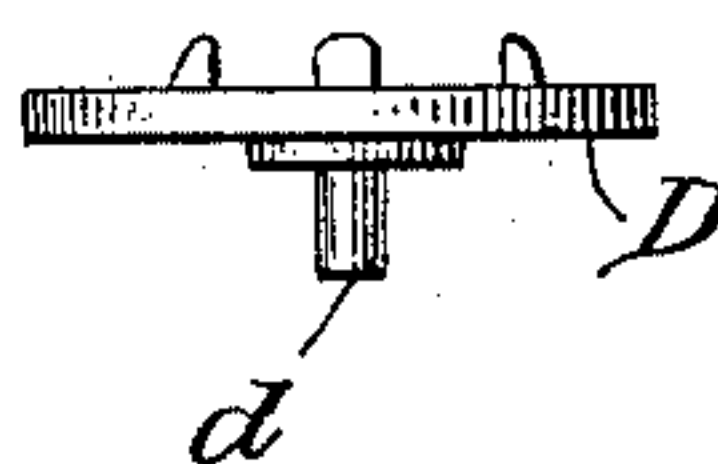
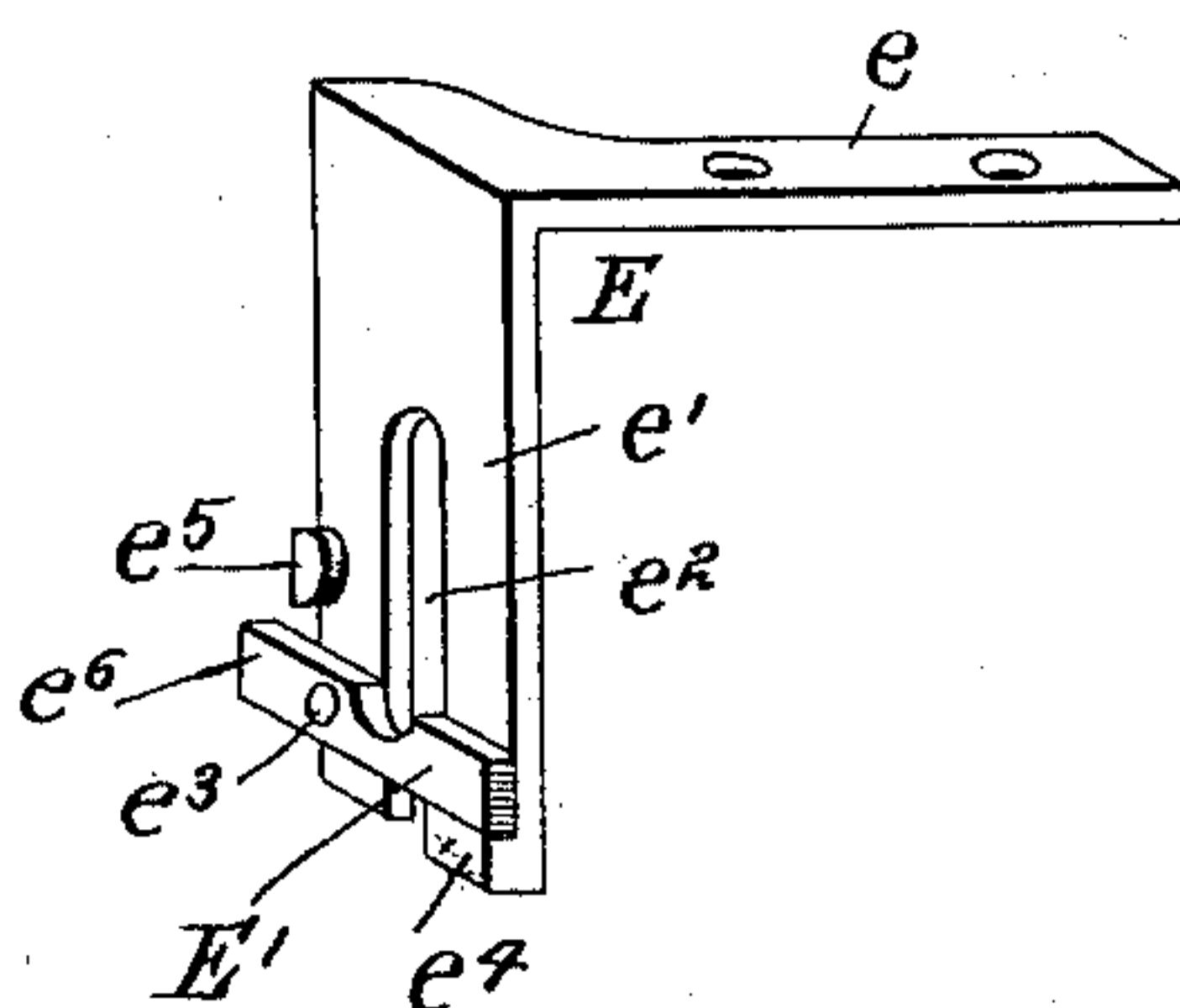


Fig. 5.



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# UNITED STATES PATENT OFFICE.

GEORGE BENSON, OF BELFAST, IRELAND.

## WINDOW-BLIND MOUNTING.

SPECIFICATION forming part of Letters Patent No. 612,812, dated October 25, 1898.

Application filed December 30, 1897. Serial No. 664,506. (No model.) Patented in England August 23, 1895, No. 15,840.

*To all whom it may concern:*

Be it known that I, GEORGE BENSON, a citizen of the United Kingdom of Great Britain, residing at 48 and 50 Fountain street, Belfast, in the county of Antrim, Ireland, have invented certain new and useful Improvements in Window-Blind Mountings, (for which I have secured a patent in Great Britain, No. 15,840, dated August 23, 1895,) of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to devices for mounting window-blinds; and it has for its object to provide simple and improved means for conveniently and effectively mounting the blinds and governing the operation of the same.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by the same letters of reference in each of the views, and in which—

Figure 1 is a perspective view showing the mounting devices for one end of the roller of the blind. Fig. 2 is an end view showing the device for mounting and operating the blind in assembled position. Fig. 3 is a top or plan view of the lever. Fig. 4 is an edge view of the mounting-disk for the opposite end of the blind-roller, and Fig. 5 is a perspective view of the mounting bracket or device for the opposite end of the blind-roller.

In carrying out my invention I attach to one end of the blind-roller (preferably the left-hand end) an ordinary disk, which may be constructed with a flange or otherwise and carries a projecting bearing-pin adapted to be seated in a slot in a carrying-bracket, so that the roller can be easily lifted into or out of position. This end disk may be fastened to the end of the roller by screws.

The roller used in connection with my improved blind-mounting devices may be of any suitable or adapted construction, and any desired form of blind may also be employed.

At the opposite end of the roller (preferably the right-hand end) I provide a barrel upon which the operating-cord is wound, this barrel being carried between two disks, the

inner one of which corresponds to the end disk at the left-hand end of the roller, while the outer one of said disks has a corrugated or waved periphery.

To provide for the revolution of the barrel in connection with the roller, a projecting bearing-pin is arranged upon the outer disk and is adapted to be received by a bearing eye or opening in the arm of a carrying-bracket. The bracket is provided above said bearing-arm with two smaller arms provided with recesses or seats, in which are mounted the oppositely-projecting fulcrum-pins of a two-arm lever. The lower inner arm of the lever is provided with a pawl or cam adapted to engage the corrugations or waves in the periphery of the outer disk of the carrying-bracket, while the upper or front arm of the lever projects forwardly and carries a roller over which the blind-cord passes. An approximately V-shaped spring is mounted upon the lever at its fulcrum, one arm of which spring bears upon the lower arm of the lever, while the other arm of the spring bears against a projecting roof or top portion provided upon the bracket at a point between the two top arms which provide the fulcrum-bearings for the lever.

I will now proceed to more specifically describe the construction and various detail parts comprised in my invention and improvements with reference to the accompanying drawings.

In the drawings forming part of this specification, A designates the barrel upon which the cord is wound, said barrel being mounted between the inner disk A', which is secured to the right-hand end of the roller of the blind, and the outer disk A<sup>2</sup> having the corrugations or waves *a* in its periphery. The barrel A is preferably formed of two segmental sections, as at A<sup>4</sup> A<sup>4</sup>, for the purpose of lightness and also to provide an intervening space or recess between said sections in which the knot at the end of the operating-cord may be concealed.

A<sup>3</sup> designates the bearing-pin, which projects at the outer face of the outer disk A<sup>2</sup>.

B designates the carrying-bracket for the barrel device A. This bracket comprises a depending arm B', provided with the bearing eye or opening *b* for the pin A<sup>3</sup>. This



bracket may embody a top plate  $b'$ , by which it may be secured in position, and it has at its top two forwardly-projecting arms  $B^2$  and  $B^3$ , respectively, in the top edge of the front portion of which are provided recesses  $b^2$   $b^3$ , in which may be seated the oppositely-projecting fulcrum arms or pintles  $C^5$   $C^6$  of a two-arm lever  $C$ . At the top of the bracket  $B$ , between the top arms  $B^2$  and  $B^3$ , is provided a roof or top surface  $B^4$ , preferably curved, as shown, which forms a bearing-surface for the spring  $C^4$ .

The lever  $C$  has a lower rear arm  $C^3$ , having a pawl or cam-shaped end  $c$ , corresponding to and adapted to engage the peripheral corrugations or waves  $a$  in the disk  $A^2$ . The top or outer arm  $C^6$  of the lever projects forwardly over the barrel device  $A$  and carries at its outer end a roller  $C'$ , over which the blind-cord  $C^7$  is adapted to pass. A projection  $C^2$  may be provided at the outer end of the front arm of the lever for the purpose of connecting a supplementary cord, if desired.

The spring  $C^4$  is approximately V-shaped and is mounted upon the lever  $C$  at the fulcrum of the latter, so that its lower arm  $c$  bears upon the lower rear arm of the lever, and its upper arm  $c'$  bears with relation to the surface  $B^4$  of the bracket.

In Fig. 4 I have illustrated the disk  $D$ , which is secured to the opposite or left-hand end of the roller, this disk being provided with a projecting pin  $d$ , forming the bearing-pintle for that end of the roller.

The carrying-bracket  $E$  for the left-hand end of the roller comprises a top plate  $e$ , by which the bracket may be secured in position, and a downwardly-extending arm or plate  $e'$ , which is vertically slotted at its lower end portion, as at  $e^2$ . A bar  $E'$  is pivotally mounted, as at  $e^3$ , upon the slotted arm  $e'$  and is adapted to project across the slot  $e^2$ . The arm  $e'$  may be provided with a foot or shoulder  $e^4$  to limit the downward movement of the pivoted bar  $E'$  and provide a seat for the latter, and I may also provide a limiting stop or projection  $e^5$  upon the arm  $e'$  at a point above the pivot of the bar  $E'$  to limit the upward swing of said bar. The bar  $E'$  preferably projects beyond the arm  $e'$  and beyond its pivot  $e^3$ , as at  $e^6$ , to provide a projecting end which can be conveniently engaged by the finger in the operation of said bar.

In mounting the bearing-pin  $d$  at the end of the roller in this end-carrying bracket  $E$  it is only necessary to push the pin  $d$  upwardly in the slot  $e^2$  until it passes the upwardly-swinging bar  $E'$ , when the bar will automatically fall by gravity and provide a bearing for the pin. To disconnect the pin  $d$  from its bearing, the roller may be lifted to carry the pin upwardly in the slot  $e^2$ , when the bar  $E'$  may be swung upwardly into a vertical position, which will enable the pin  $d$  to be slipped downwardly out of the slot.

The operation and advantages of my in-

vention will be readily understood. In the assembling of the blind-mountings into operative position the lever  $C$  is first set in its bearings in the arms  $B^2$  and  $B^3$ , with the spring  $C^4$  in adjusted position. The bearing-pin  $A^3$  of the barrel device  $A$  at the right-hand end of the roller is then seated in the bearing eye or opening  $b$  of the bracket  $B$ , and the bearing-pin  $d$  at the left-hand end of the roller is slipped into engagement with the carrying-bracket  $E$ . The blind-cord  $C^7$  is then passed over the roller  $C'$  upon the lever. When this cord is pulled downwardly, the cam or pawl end  $c$  of the lever is drawn up from engagement with the corrugations or waves in the periphery of the disk  $A^2$ , which releases the roller and permits of its free revolution, and then when the pull upon the cord  $C^7$  is released the lever is immediately carried into engagement with the corrugated or waved periphery of the disk  $A^2$  by operation of the spring  $C^4$  and acts as a brake. By the connection of a supplementary cord to the projection  $C^2$  at the outer end of the lever the brake action of the latter can be released without pulling upon the main blind cord  $C^7$ , so that the blind will fall of its own weight or gravity.

If desired, in the case of very heavy blinds both of the disks  $A^2$  and  $A'$  of the barrel device  $A$  may be provided with the peripheral corrugations or waves  $a$ , and the pawl or cam of the lever may be extended laterally, so that it will engage both of said disks, and thus operate in its brake action at two points.

Having fully described my invention, I claim as new and desire to secure by Letters Patent—

1. The herein-described device for supporting one end of a shade-roller, comprising a cylindrical or barrel-shaped central portion having disk-shaped heads or ends, one of said heads or ends being adapted to be connected with the end of the roller, and the other being provided with a corrugated or waved periphery, a spring-operated pawl-lever pivotally supported above said device, one end of which is adapted to operate in connection with the corrugated or waved periphery of one of said end disks, and the other end of which projects thereover, and is provided with a pulley, and a cord connected with the central cylindrical or barrel-shaped portion of said device and passed over said pulley, and means for supporting the opposite end of the shade-roller, consisting of a bracket having a downwardly-extending arm provided with a vertical slot in its end portion, a bar pivotally mounted upon said arm and adapted to project across said slot and forming a bearing-seat, and a supporting foot or device for supporting said pivoted bar in operative position, substantially as shown and described.

2. In a window-blind mounting, a carrying-bracket, having a downwardly-extending arm provided with a vertical slot in its end por-



tion, a bar pivotally mounted upon said arm  
and adapted to project across said slot and  
form a bearing-seat, and a supporting foot or  
device for sustaining said pivoted bar in op-  
5 erative position, substantially as and for the  
purpose set forth.

In testimony that I claim the foregoing as

my invention I have signed my name, in pres-  
ence of the subscribing witnesses, this 8th  
day of December, 1897.

GEO. BENSON.

Witnesses:

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