

E. H. McCLOUD.
 MEANS FOR SUPPORTING AND OPERATING CURTAIN ROLLERS.
 APPLICATION FILED FEB. 28, 1907.

1,015,331.

Patented Jan. 23, 1912.

2 SHEETS—SHEET 1.

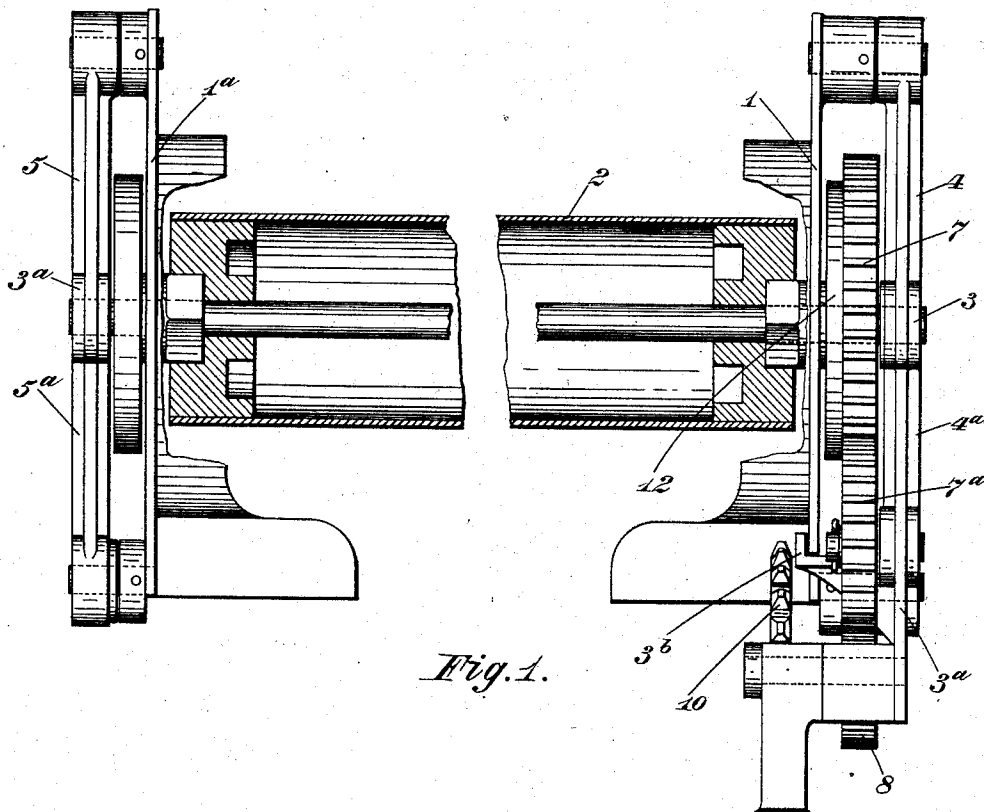


Fig. 1.

Witnesses
Benj. E. Eichel
James Thacher

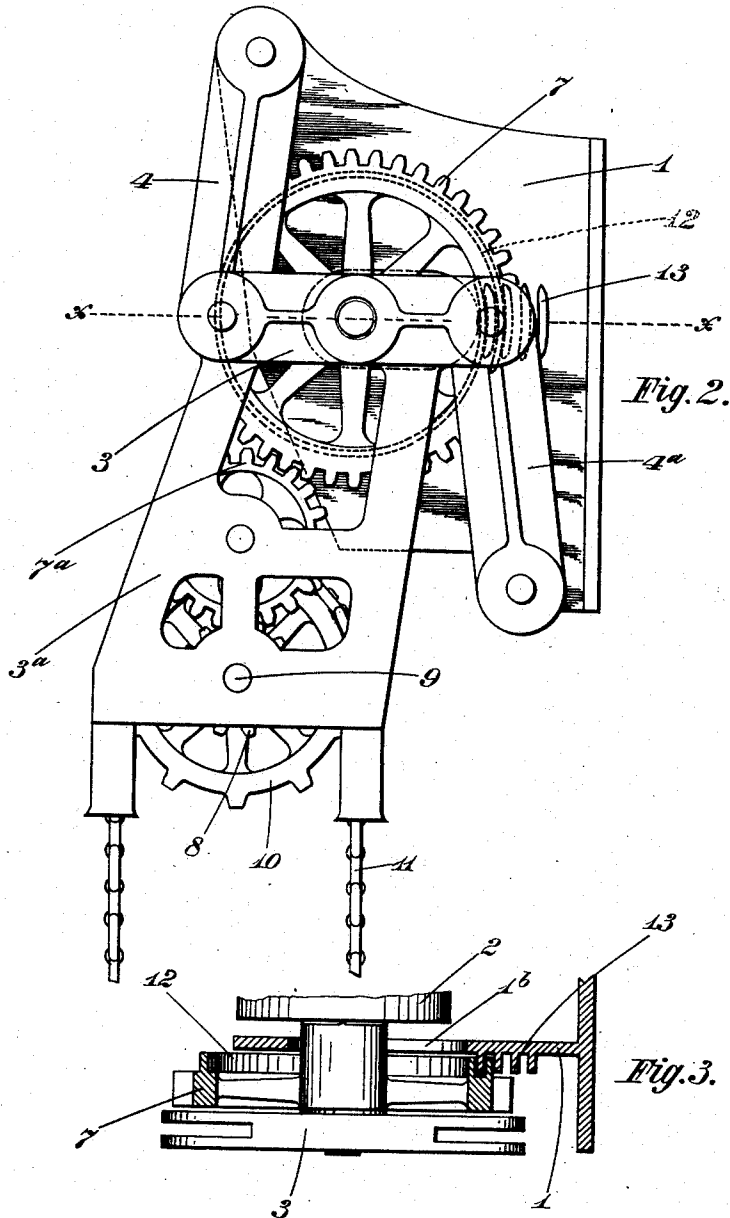
Inventor
Edward H. McCLOUD
 by *Finckel Finckel*
 his Attorneys

E. H. McCLOUD.
 MEANS FOR SUPPORTING AND OPERATING CURTAIN ROLLERS.
 APPLICATION FILED FEB. 28, 1907.

1,015,331.

Patented Jan. 23, 1912.

2 SHEETS—SHEET 2.



Witnesses
Benj. Finckel
James Shadler

Inventor
Edward H. McCLOUD
 by *Finckel Shadler*
 his Attorneys

UNITED STATES PATENT OFFICE.

EDWARD H. McCLOUD, OF COLUMBUS, OHIO.

MEANS FOR SUPPORTING AND OPERATING CURTAIN-ROLLERS.

1,015,331.

Specification of Letters Patent.

Patented Jan. 23, 1912.

Application filed February 23, 1907. Serial No. 359,723.

To all whom it may concern:

Be it known that I, EDWARD H. McCLOUD, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Means for Supporting and Operating Curtain-Rollers, of which the following is a specification.

This invention relates more particularly to that class of roller for a shutter or curtain that is moved laterally as the curtain is wound or unwound to cause that portion of the curtain which is off the roll and in the guiding channels to stand tangent to that portion which is rolled.

The object of the present invention is a combination of devices for facilitating the lateral movement of the roller, and the invention consists as hereinafter described and claimed, reference being had to the accompanying drawings illustrating one embodiment thereof.

In said drawings—Figure 1 is a front elevation with parts in section and broken out in the middle; Fig. 2 is a side elevation of the right-hand side of what is shown in Fig. 1; Fig. 3 is a detail with parts in horizontal section on the line $x-x$ Fig. 2.

In the views 1 and 1^a designate end brackets upon which can be secured a suitable hood if desired. These brackets are each provided with slots, like that indicated at 1^b, parallel to each other.

2 designates the curtain roller, which may have the flexible curtain attached thereto as usual, said roller having suitable studs or bearings at its opposite ends. These studs or bearings project through the said slots of the end brackets and enter carrier bars 3 and 3^a beyond the brackets 1 and 1^a. The carriers 3 and 3^a are supported by means of limbs or links 4 and 4^a and 5 and 5^a, all of substantially equal length, the links 4 and 5 being pivotally attached to the upper portions of the outer sides of the brackets and to the inner ends of the carrier bars 3 and 3^a, and the links 4^a and 5^a being pivotally attached to or supported on rests at the lower portions of the outer sides of the brackets

beyond the carriers and to the outer ends of the carrier bars 3 and 3^a, so that when said links are swung the intermediate points of the carrier bars, where the studs or bearings are supported, will move in a substantially straight line and with great ease and little friction.

The above mechanism is described and claimed in my patent of the United States No. 896,929, dated August 25, 1908.

The means for operating the roller and curtain comprises a large spur gear 7 secured on the outer end of the right hand stud journal of the roller, as seen in Figs. 1 and 2, an intermediate gear 7^a, a pinion 8 journaled on a pin 9 projecting from a frame plate 3^a on the carrier bar 3, a sprocket wheel 10 also on the pin 9 and turning with the pinion 8, and a sprocket chain 11 running over the sprocket wheel 10. The frame plate 3^a at its inner side is provided with an angular projection 3^b to engage the lower edge of the end bracket 1 to guide and hold said plate in proper position as it moves inward and outward with the roller.

The inner side of the spur gear 7 is provided on its inner face near its rim with a spiral projection 12 having a pitch equal to the thickness of the shutter, and on the outer face of the bracket 1 is a series of teeth 13. As the roller is turned, either to wind or unwind the shutter, the spiral projection 12 successively engages the teeth 13 and urges the roller inward or outward as the case may be. But because of the ease with which the roller is impelled there is little friction between the spiral projection and the teeth.

What I claim and desire to secure by Letters Patent is:

In combination with a curtain roller having journals and fixed brackets between which the roller is hung, a support for the roller comprising horizontally movable carriers having bearings to receive the journals of the roller, a pair of links to support each carrier said links being pivotally attached to the carrier at opposite sides of the bear-

ings therein and extending in opposite directions and pivotally supported at fixed points on the brackets whereby the carriers can swing in substantially horizontal plane,
5 a gear fixed on the roller, a spiral projection on the roller and projections on the bracket engaged by the spiral projection on

the roller, and means for driving the said gear, substantially as described.

EDWARD H. McCLOUD.

Witnesses:

CHAS. BRASHEAR,
BENJAMIN FINCKEL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
