

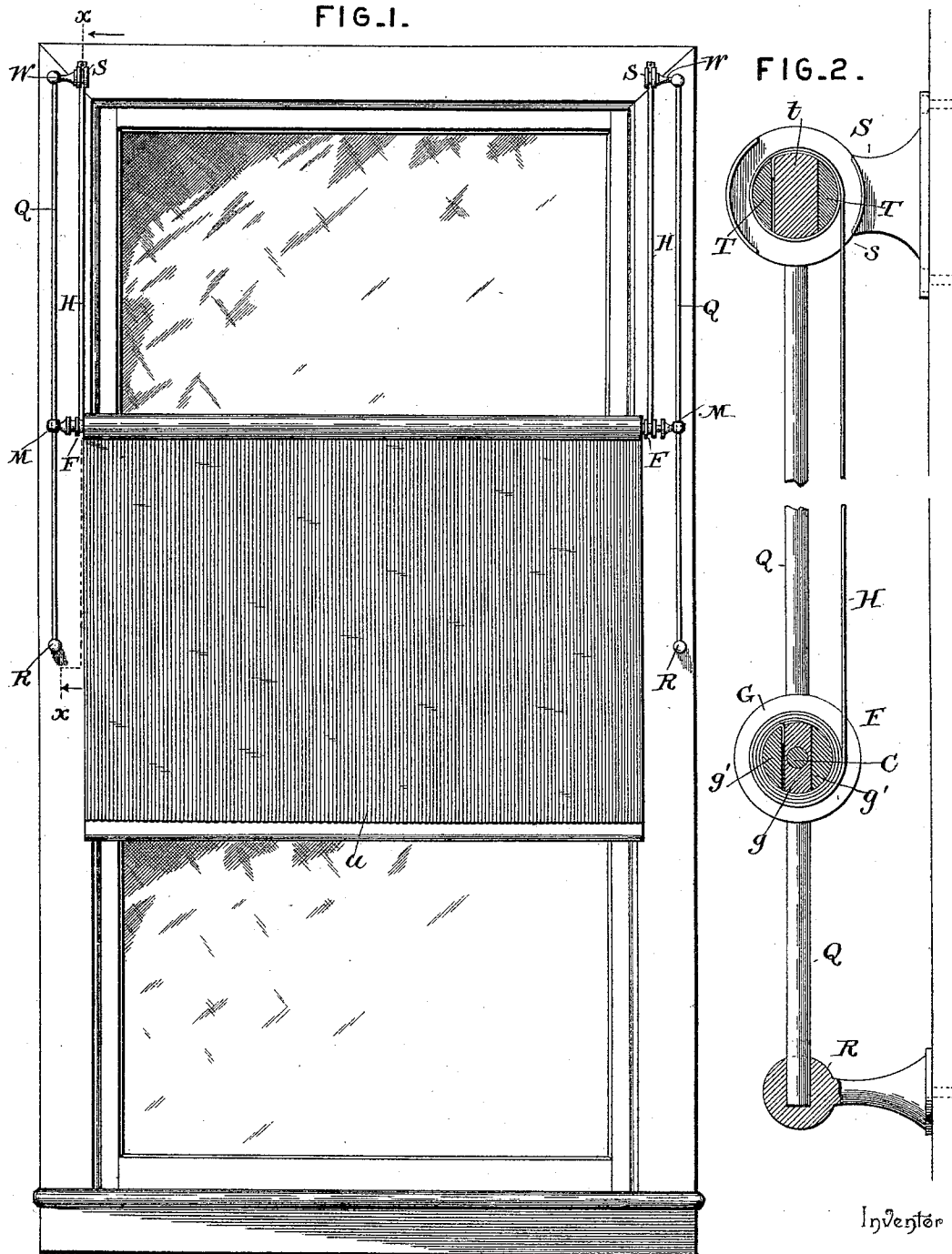
(No Model.)

2 Sheets—Sheet 1.

C. E. GOODRICH.
CURTAIN FIXTURE.

No. 517,453.

Patented Apr. 3, 1894.



Inventor

Witnesses

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FIG. 3-

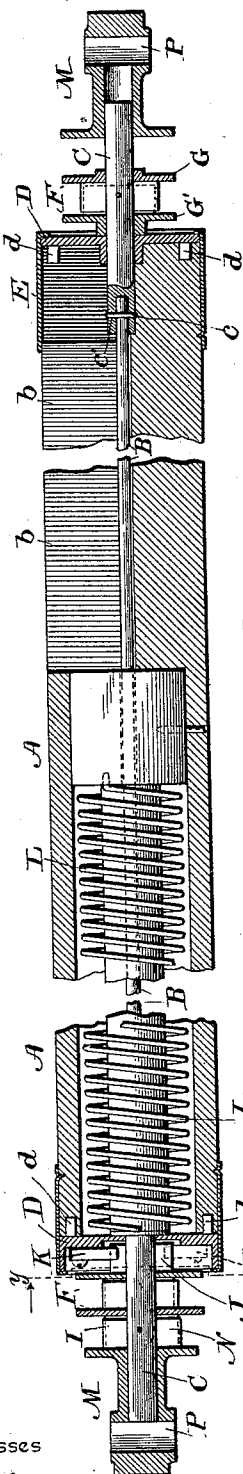


FIG. 5.

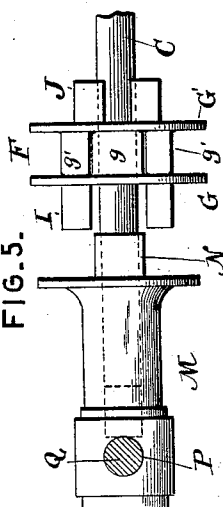


FIG. 4.

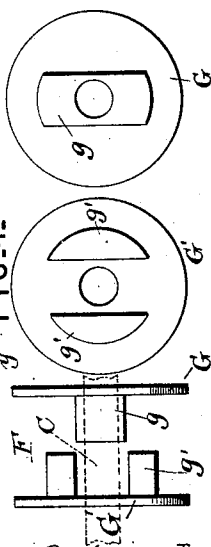


FIG. 8.

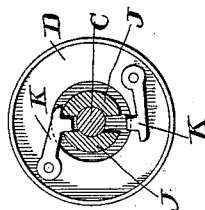


FIG. 7-

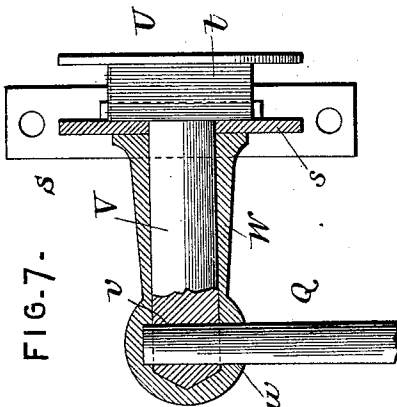
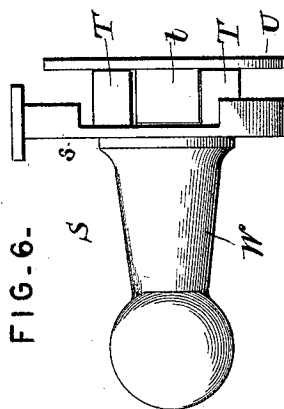


FIG. 6-



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UNITED STATES PATENT OFFICE.

CHARLES EBENEZER GOODRICH, OF PIOCHE, NEVADA, ASSIGNOR OF ONE-HALF TO THOMAS J. OSBORNE, OF SAME PLACE.

CURTAIN-FIXTURE.

SPECIFICATION forming part of Letters Patent No. 517,453, dated April 3, 1894.

Application filed December 9, 1893. Serial No. 493,219. (No model.)

To all whom it may concern:

Be it known that I, CHARLES EBENEZER GOODRICH, a citizen of the United States, residing at Pioche, in the county of Lincoln and State of Nevada, have invented a new and useful Curtain-Fixture, of which the following is a specification.

This invention relates to improvements in curtain fixtures.

The invention contemplates improvements in vertically adjustable curtain fixtures in which not only the curtain shade can be wound and unwound on the roller, but the vertical adjustment of the roller itself is provided for, whereby the upper and lower portions of the window can be covered or uncovered at the convenience of the operator.

To this end the main and primary object of the present invention is to effect improvements in fixtures of this class wherein the effective operation thereof shall be insured, while at the same time constructing the fixture so that the same can be easily and cheaply manufactured.

With these and other objects in view which will readily appear as the nature of the invention is better understood—the same consists in the novel construction, combination and arrangement of parts, hereinafter more fully described, illustrated and claimed.

In the drawings:—Figure 1 is a front elevation of the improved curtain fixture applied in operative position to a window frame. Fig. 2 is an enlarged sectional view on the line $x-x$ of Fig. 1, showing clearly the connection of the supporting tapes or ribbons with the winding wheels and also the supporting brackets. Fig. 3 is a central longitudinal sectional view of the shade roller and its attached parts. Fig. 4 is an enlarged detail side and face elevation of the separable winding wheels, the parts of which are separated from each other. Fig. 5 is a detail elevation of the winding wheel having the pawl and clutch hubs, showing the non-rotative bearing clutch collar in a position out of engagement with the clutch hub. Fig. 6 is an enlarged detail elevation of the combined tape and rod bracket. Fig. 7 is an enlarged detail sectional view of

the same. Fig. 8 is a detail sectional view on the line $y-y$ of Fig. 3.

Referring to the accompanying drawings, A represents a hollow wooden shade roller accommodating therein the longitudinally arranged roller shaft B, mounted in suitable bearings inside of the roller so as to be held steady in its movement, and said roller shaft B, is made in a suitable size to be accommodated to the size of the curtain fixture, and after being placed inside of the roller, with some of the fixture parts attached to one end, a portion of such shaft may be readily lifted out of the roller through the longitudinally disposed roller slot b , so that the other parts of the fixture can be easily and securely fastened on the other end of the shaft, after which the latter is dropped back again into the roller, thus providing a construction which greatly facilitates putting the several parts of the curtain fixture together.

Securely attached to each extremity of the longitudinal roller shaft B, are the extended wheel spindles C, projected beyond the opposite ends of the shade roller, and preferably fitted rigidly on the shaft so as to turn therewith, by means of securing pins c , passed through aligned openings c' , in the shaft ends and such spindles. The said wheel spindles C, attached to the opposite extremities of the roller shaft are journaled in the opposite bearing plates D, arranged at the opposite ends of the roller and provided with prongs d , engaging the same so as to be held from turning, and such bearing plates D, are held firmly in position at the opposite ends of the roller by means of the flanged ferrules E, fitted over the same and the ends of the roller. The attached wheel spindles C, carry at a point intermediate of their ends outside of the roller end the sectional winding wheels F. The winding wheels F, which are arranged on the extended wheel spindles C, each comprise a fixed disk member G, and a separable member G' , the fixed member G, consisting of a disk with a single base lug g , projected from the inner face thereof and adapted to fit between or interlock with the separated base lugs g' , projected from the inner face of the

disk member G', and after the parts have been adjusted with the separable wheel disks G', in locking engagement with the fixed wheel disks, grooved winding wheels are completed which accommodate therein the metal supporting tapes or ribbons H, which are held fast at their upper ends at the top of a window frame in the manner to be presently described, so as to wind and unwind on said sectional winding wheels to provide for the raising and lowering of the shade roller as will be presently set forth. It will be obvious that by reason of providing the wheel members with interlocking base lugs, slits or notches are left between the lugs which accommodate the lower extremities of the supporting tapes or ribbons held in such slits or notches by the wrap of the tapes or ribbons on the winding wheel, thereby providing a secure attachment of the tapes or ribbons to such wheels. One of the sectional winding wheels F, is provided at its outer side with a notched clutch hub I, and at its corresponding inner side with the notched pawl hub J, the latter of which is adapted to be automatically engaged by the ordinary roller pawls K, pivoted to one of the bearing plates D, in order to arrest the motion of the roller and the recoil of the actuating spring L, in the ordinary manner, when simply the curtain shade α , is being wound and unwound on the roller. The spiral actuating spring L, has one end thereof fastened to the shaft B, and its other end to the roller A, at an intermediate point, so that when the shaft with its attached wheels are held stationary by the clutch device to be presently described, the curtain shade α , can be separately raised and lowered and held in any adjusted position by manipulating the same in the usual manner, it being simply necessary to grasp the shade α , relieve the roller pawls K, from the notched pawl hub J, and then quickly pull the shade down to unwind from the roller, or to allow it to quickly wind on the roller under the tension of the spring L, therein, which operation is that involved in the adjustment of the curtain shade on the ordinary spring shade rollers. The wheel spindles C, beyond the winding wheels thereon are adapted to loosely receive the non-rotative bearing collars M, which collars are somewhat elongated and supported in a position whereby the shade roller with its attached part may have a slight lateral play or horizontal movement. One of said non-rotative bearing collars M, is provided at its inner end with the diametrically opposite clutch lugs N, which are engaged and disengaged with the notched clutch hub I, of one of the winding wheels by simply shifting the shade roller laterally or horizontally, while grasping the curtain. When the non-rotative bearing and clutch collar is in gear with the pawl hub of one of the attached winding wheels, the longitudinal shaft B, and such winding

wheels are necessarily prevented from rotating, so that the curtain shade, α , may be operated in the ordinary manner in winding on or unwinding from the roller, and said clutch collar, therefore, serves to hold the shade roller in any fixed adjusted position. When the clutch of the roller is thrown out of gear with the non-rotative clutch collar, then the roller with its attached wheels is free to ascend or descend at the will of the operator, and will then respond to the rotary movement imparted to it by manipulating the curtain. It will be obvious that the supporting tapes or ribbons H, will wind on the winding wheels or unwind therefrom according to whether the curtain shade is being wound or unwound.

Both of the bearing collars M, are provided in their outer ends with the guide openings P, which loosely embrace the vertically arranged guide rods Q. The vertically arranged guide rods Q, are located at opposite sides of a window frame and are adapted to have their lower ends removably rest in the socketed lower brackets R, suitably secured to the window frame, while the upper ends of such guide rods are fitted into the combined tape and rod brackets S, fastened to opposite upper ends of the window frame. The brackets S, are provided with the off-standing flanged bracket disks, having at one side of the perforation therethrough the spaced base lugs T, which are adapted to receive therebetween the single base lug t , arranged at one side of the disk U, at one end of the bracket spindle V. When the disk U, at one end of the bracket spindle, is placed against the lugs T, so as to dispose the single base lug t , there-between, a grooved support is formed for the upper extremities of the supporting tapes or ribbons H, which are adapted to have their extreme upper ends slipped into the slits between the registering lugs T and t , and held therein by a wrap of the tapes or ribbons in the grooves formed between the disks s and U. The bracket spindles V, extend through the central openings of the disks s , and are provided in their outer ends with the lock openings v , and accommodate thereon the lock sleeves W. The lock sleeves W, are provided in one side near their outer ends with the rod openings w , which receive the upper extremities of the guide rods Q, which project into the openings v , of the bracket spindles and serve to lock the several parts of the combination brackets together.

It will be obvious that the construction of the combination brackets just described provides for supporting or holding the guide rods at proper distances apart, while at the same time allowing sufficient room for the lateral or horizontal play of the shade roller to provide for throwing the check clutch in and out of gear.

The operation of adjusting the curtain shade is well understood, and it is thought that from the foregoing description the oper-

ation and utility of the check clutch will also be understood, such clutch being intended to hold the roller stationary in any adjusted position, while at the same time allowing the same to ascend or descend in response to the rotary motion imparted thereto by manipulating the shade, and it is to be of course understood that the clutch in being thrown out of gear, is to be relieved of the weight of the roller by pulling gently on the shade before shifting the roller laterally or horizontally to secure the necessary disengagement from the clutch collar before permitting it to raise or lower.

15 Changes in the form, proportion and the minor details of construction, may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

20 Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. In a curtain fixture, the combination of the hollow shade roller having a longitudinally disposed roller slot leading out to one end, a shaft arranged longitudinally in the roller and having winding wheels at one end, one end of said shaft being adapted to be free for movement out of said roller slot in adjusting the fixture, the spring and check devices, and the supporting tapes or ribbons winding and unwinding on said wheels, substantially as set forth.

2. In a curtain fixture, the combination with a spring actuated shade roller; of a shaft arranged longitudinally in said roller, sectional winding wheels attached to the extremities of said shaft, supporting tapes winding and unwinding on said winding wheels, and a check clutch for holding the roller in a fixed position, substantially as set forth.

3. In a curtain fixture, the combination with a spring actuated and pawl-arrested shade roller; of a shaft arranged longitudinally in the roller, sectional winding wheels attached to the extremities of said shaft and one of which is provided with a clutch member, the supporting tapes or ribbons, and a non-rotative clutch member supported for vertical movement at one end of the roller and adapted to be engaged by and disengaged from the wheel clutch member by a lateral shift of the shade roller, substantially as set forth.

4. In a curtain fixture, the combination with a spring actuated and pawl-arrested shade roller supported for a slight horizontal or lateral play; of a shaft arranged within the roller and having winding wheels and a clutch member, a non-rotative clutch member supported for a vertical movement at one end of the roller, and supporting tapes, substantially as set forth.

5. In a curtain fixture, the combination of an ordinary spring actuated shade roller, winding wheels attached to the extremities of the shaft of said roller and one of which is provided

with a clutch hub, supporting tapes winding and unwinding on the winding wheels, opposite parallel guide rods, and bearing collars mounted to slide on the guide rods and one of which is provided with a clutch end adapted to be engaged by and disengaged from said clutch hub, substantially as set forth.

6. In a curtain fixture, the combination with a spring actuated and pawl arrested shade roller; of a shaft arranged longitudinally in the roller, sectional winding wheels attached to the extremities of the shaft and comprising separate disk members having registering base lugs, supporting tapes suspended from their upper ends and having their lower extremities fitted between the registering base lugs of the sectional wheels, and a check clutch for holding the roller in a fixed position, substantially as set forth.

7. In a curtain fixture, the combination with a spring actuated shade roller; of the longitudinal roller shaft, extended wheel spindles fitted to the extremities of said shaft and having winding wheels comprising fixed and separable disk members having registering base lugs, one of said winding wheels having an inner notched pawl hub and an outer notched clutch hub, the roller pawls engaging said pawl hubs, suitably arranged guide rods, non-rotative bearing collars sliding on said guide rods and loosely receiving the outer ends of the wheel spindles to provide for a horizontal play of the shade roller, one of said collars having clutch lugs adapted to be engaged by said clutch hub and disengaged therefrom by the horizontal movement of the shade roller, and the supporting tapes winding and unwinding on said winding wheels, substantially as set forth.

8. In a curtain fixture, the combination of the automatic roller devices having opposite projecting wheel spindles, the sectional winding wheels fitted on said spindles and having registering base lugs, the stationary supporting brackets having separable parts provided with registering base lugs corresponding with those of the winding wheels, and the supporting tapes wound on the winding wheels and said brackets and adapted to have their extremities fitted in the spaces between said registering base lugs, substantially as set forth.

9. In a curtain fixture, the combination of the automatic roller devices having opposite projecting spindles and winding wheels, suitably arranged socket brackets, the vertical guide rods fitted at their lower ends in said brackets, the bearings for the roller devices mounted on said rod, the combined tape and rod brackets located at the upper end of a window frame and having off-standing flanged bracket disks provided at one side with spaced base lugs, the bracket spindle extended through central openings in said bracket disks and having an end disk, and a single

base lug registering with the spaced base lug,
and lock openings in their outer extremities,
the lock sleeves fitted over said spindles and
having rod openings aligning with said lock
5 openings and adapted to receive the upper
ends of said guide rod, and the supporting
tapes, substantially as set forth.

In testimony that I claim the foregoing as
my own I have hereto affixed my signature in
the presence of two witnesses.

CHARLES EBENEZER GOODRICH.

Witnesses:

JAS. B. WHEELER,
E. JARRATT.