

No. 609,228.

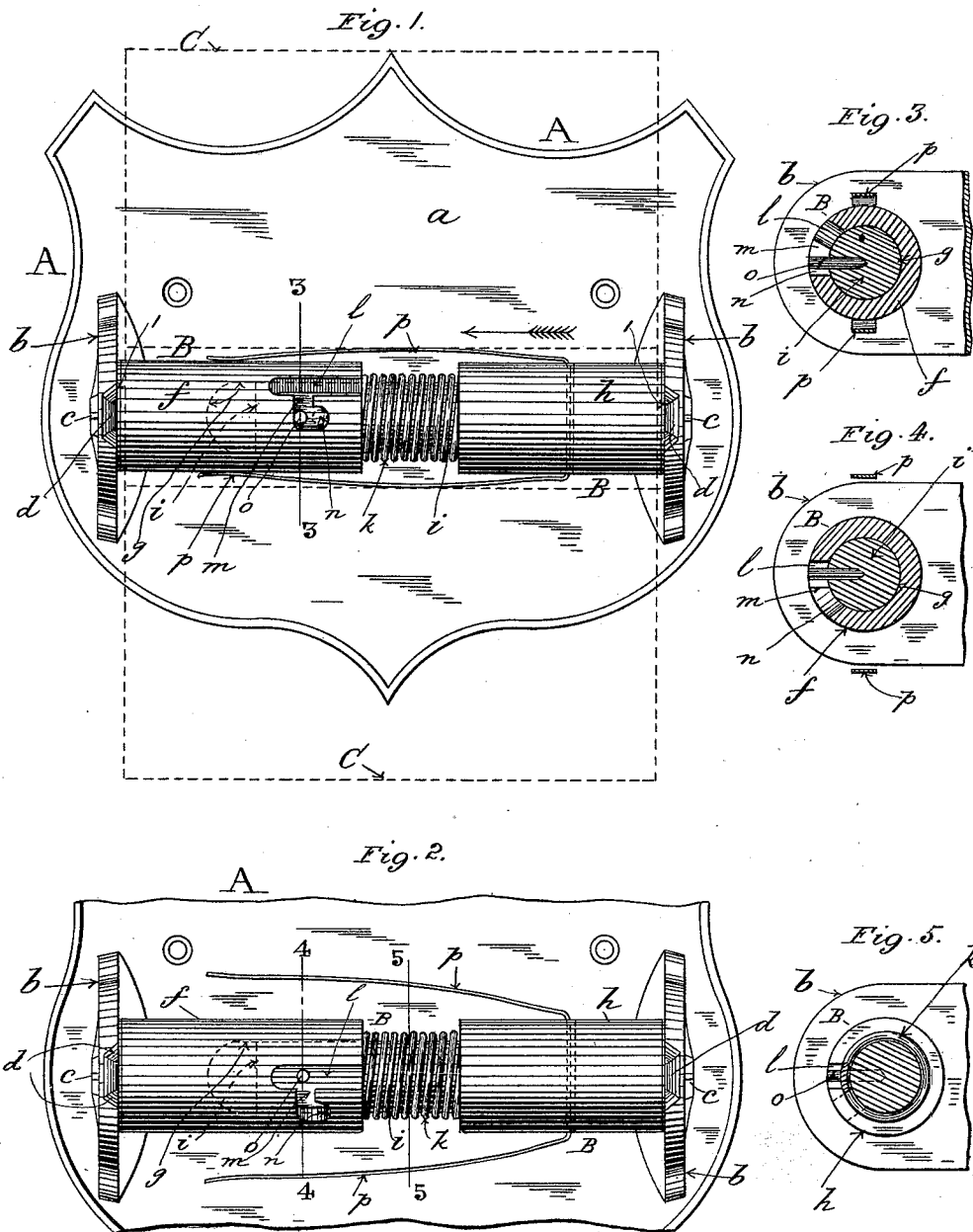
Patented Aug. 16, 1898.

W. H. CLARKE.
PAPER ROLL HOLDER.

(Application filed Apr. 24, 1897.)

(No Model.)

2 Sheets—Sheet I.



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2 Sheets—Sheet 2.

Fig. 6.

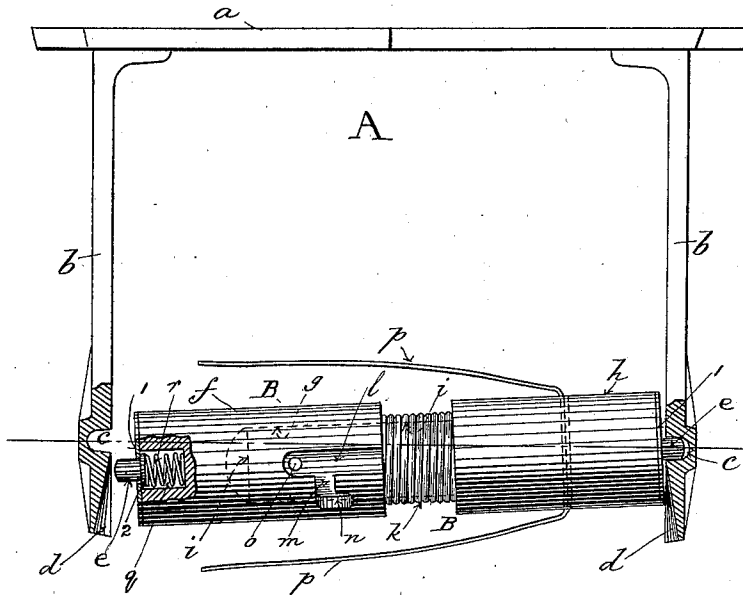


Fig. 7.

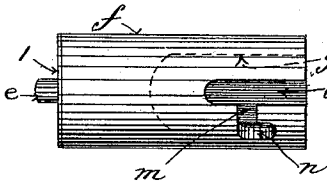


Fig. 8.

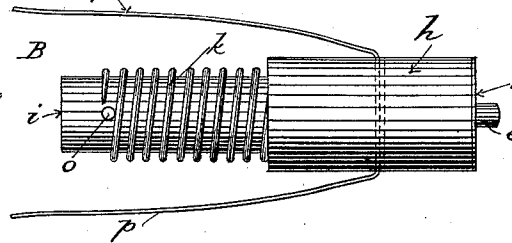


Fig. 9.

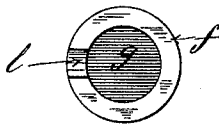
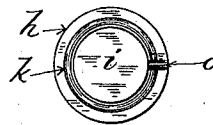


Fig. 10.



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UNITED STATES PATENT OFFICE.

WALTER H. CLARKE, OF ST. LOUIS, MISSOURI.

PAPER-ROLL HOLDER.

SPECIFICATION forming part of Letters Patent No. 609,228, dated August 16, 1898.

Application filed April 24, 1897. Serial No. 633,661. (No model.)

To all whom it may concern:

Be it known that I, WALTER H. CLARKE, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented a new and useful Improvement in Paper-Roll Holders, of which the following is a specification.

My invention relates to an improvement in paper-roll holders, and has for its objects to produce tensional resistance on the paper while being unwound from the roll and to prevent the removal of the paper-roll when in use from the holder.

The invention consists in features of novelty, as hereinafter described and claimed, reference being had to the accompanying drawings, forming part of this specification, whereon—

Figure 1 is a front elevation of my improved paper-roll holder, showing the various parts of the paper-roll spindle in position when supporting the paper-roll; Fig. 2, a similar view to Fig. 1 of the holder broken away, showing the parts of the spindle in position after unwinding the paper-roll therefrom preparatory to removing the spindle from its bearings. Fig. 3 is a cross-section through the spindle on line 3 3 in Fig. 1; Figs. 4 and 5, cross-sections through the spindle on lines 4 4 and 5 5, respectively, in Fig. 2; Fig. 6, a plan of the holder, showing the parts of the spindle in position while being removed from its bearings. Figs. 7 and 8 are detail views of the end parts of the spindle seen in Figs. 2 and 6 detached; and Figs. 9 and 10, inner end views of the said parts, respectively, like letters and numerals of reference denoting like parts in all the figures.

A represents a paper-roll holder having its frame, which consists of the wall-plate *a* and the arms *b*, projecting therefrom, of any desired pattern or configuration. Each arm *b* has on its inside face a hole or bearing *c*, (see particularly Fig. 6,) from which a rearwardly and laterally flaring groove *d* extends to and emerges at the outer edge of the arm *b*.

The bearings *c* are opposite to each other for receiving the end journals or pivots *e* of a preferably circular spindle B, which is diametrically larger than the journals *e* and on which the paper-roll C (indicated by dotted

lines in Fig. 1) is fixed, as hereinafter more particularly referred to. The spindle B is composed of two main parts *f* and *h*, detachable or movable longitudinally with respect to each other, the part *f* having a central longitudinal socket *g* of suitable length and the part *h* having a longitudinal extension *i*, which corresponds diametrically with and is adapted to enter the socket *g*. Around the extension *i*, between the shoulder formed by the part *h* with the extension *i* and the shoulder surrounding the mouth of the socket *g* of the part *f*, is placed a spiral spring *k*.

Through the surrounding wall of the socket *g* is a slot *l*, which is open at the mouth of the socket *g* and extends therefrom for a suitable distance along the part *f*. From the slot *l*, preferably at right angles thereto, a slot *m* extends through the wall of the socket *g*, partly around the part *f*, and opens, preferably, into the end of a slot *n*, which is formed through the wall of the socket *g* for a suitable distance parallel to the slot *l* toward the mouth of the socket *g*. From the circumference of the extension *i* of the part *h* projects a pin *o*, the outer end of which is preferably flush with the circumferential surfaces of the parts *f* and *h*.

To the part *h* at opposite points of its circumference are fixed one end of two preferably flat springs *p*, which normally spring outward from the spindle B at their free ends, as shown in Figs. 2, 6, and 8.

In the outer end of each part *f* *h* is a pocket *q*, having an outer cover-plate 1, through which projects the journal or pivot *e* of the spindle B. On the inner end of the journal *e* is a collar 2, which is normally held against the inside of the cover-plate 1 by a spiral spring *r*, placed within the pocket *q*, between its rear end and the collar 2, whereby the journal *e* can be forced back, so that its outer end is flush with the cover-plate 1.

In operation, assuming the parts *f* and *h* of the spindle B to be detached, as seen in Figs. 7 and 8, the extension *i* of the part *h* is inserted within the socket *g* of the part *f*, so as to compress the spring *k*, the pin *o* on the extension *i* traveling along the slot *l* of the part *f* until the pin *o* arrives opposite to the slot *m*, Fig. 2, when by partially rotating the part *h* and its extension *i* the pin *o* is alined to the

slot *n*, Fig. 1, and the parts *f h* being then released the spiral spring *k* forces them apart until stopped by the pin *o* bearing against the end of the slot *n* nearest to the spring *k*, as indicated by dotted lines in Fig. 1. The paper-roll C is then passed onto the spindle B in the direction of the arrow shown in Fig. 1, and in so doing closes the flat springs *p* toward the spindle B, whereby the paper-roll C will be firmly held by the tension of the springs *p*, so that when unwinding the paper the spindle B is caused to rotate with the paper-roll C at all times.

For placing the spindle B, with the paper-roll C thereon, into the bearings *c* of the holder A the parts *f h* are closed toward each other against the pressure of the spring *k* and the end journals or pivots *e* pushed inward sufficiently for inserting their outer ends into the outer openings of the flaring grooves *d*, when by releasing the parts and pushing on the roll C the journals *e* are forced along the grooves *d* and in so doing are pushed inward against the springs *r* until opposite to the bearings *c*, when the springs *r* return the journals *e* to their normal position and into the bearings *c*. Simultaneously the parts *f h* of the spindle B are pressed outward by the spring *k*, so that their outer ends or shoulders of the journals *e* bear hard against the inside faces of the holder-arms *b*, thereby producing a frictional resistance to the rotation of the paper-roll C and a consequent tensional resistance to the unwinding of the paper as required. In this position of the parts *f h* the pin *o* on the extension *i* bears against or is in proximity to the end of the slot *n* farthest from the spring *k*, the length of the slot *n* limiting the play of the pin *o*, so that it will operate as a lock or stop to the parts *f* and *h*, whereby they cannot be closed or pried toward each other by an instrument inserted between either end of the spindle B and the frame of the holder A for surreptitiously or otherwise removing the paper-roll C.

For removing the spindle B from the bearings *c* after the paper-roll C has been unwound therefrom the part *h* is partially rotated for returning the pin *o* to the slot *l*. The part *f* is then moved toward the part *h* against the spring *k* until the journal *e* at the end of the part *f* is clear of its bearing *c*, when the spindle B is removed, as shown in Fig. 6, the slot *l* being sufficiently long to permit of the travel of the pin *o* beyond the slot *m* for the purpose.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a paper-roll holder, the combination with supporting-arms having sockets or bear-

ings, of a roller composed of two sections or parts movable longitudinally with respect to each other, and means between the ends of the roller for locking the sections from movement toward each other when the roller is placed in said sockets or bearings, substantially as and for the purpose described.

2. In a paper-roll holder, the combination with supporting-arms having sockets or bearings, of a roller composed of two sections or parts movable longitudinally with respect to each other, means between the ends of the roller for locking the sections from movement toward each other when the roller is placed in said bearings, and a spring between the sections for pressing the same against the arms, substantially as described.

3. In a paper-roll holder, the combination with supporting-arms having sockets or bearings, of a roller composed of two sections or parts movable longitudinally with respect to each other, one of said sections having a pin *o* and the other having a longitudinal slot *l* to receive the pin so as to permit the placing of the roller in the sockets or bearings and a lateral slot *m* to be engaged by the pin to prevent movement of the sections toward each other when the roller is placed in the bearings, substantially as described.

4. In a paper-roll holder, the combination with supporting-arms having sockets or bearings, of a roller composed of two sections or parts movable longitudinally with respect to each other, one of said sections having a pin *o* and the other having a longitudinal slot *l* to receive the pin so as to permit the placing of the roller in the bearings or sockets and a lateral slot *m* to be engaged by the pin to prevent movement of the sections toward each other when the roller is placed in the bearings, and a spring *k* between the sections for pressing the same against the arms, substantially as described.

5. In a paper-roll holder, the combination with supporting-arms having sockets or bearings and inclined grooves *d* leading to the bearings, of a roller composed of two sections or parts movable longitudinally with respect to each other, means between the ends of the roller for locking the sections from movement toward each other when the roller is placed in the bearings, a spring for pressing the sections against the arms, and spring-journals *e* in the ends of the roller, substantially as described.

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