Aug. 10, 1926. 1,595,913

W. H. NEEDHAM

PAPER HOLDER

Filed July 31, 1924

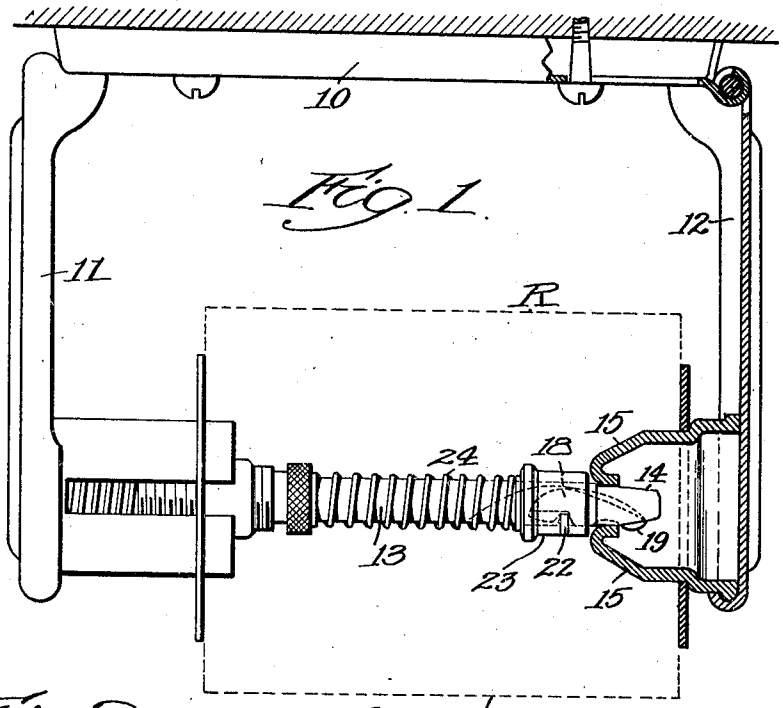


Fig. 1.

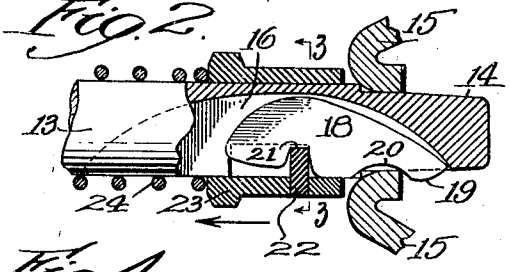


Fig. 2.

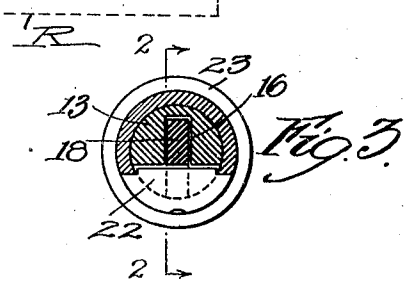


Fig. 3.

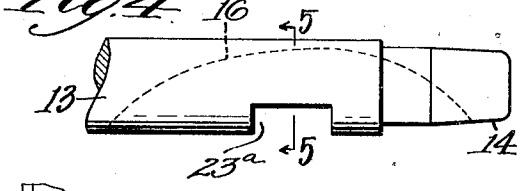


Fig. 4.

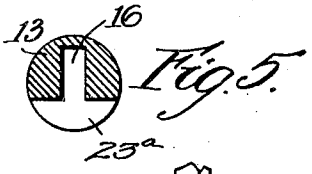


Fig. 5.

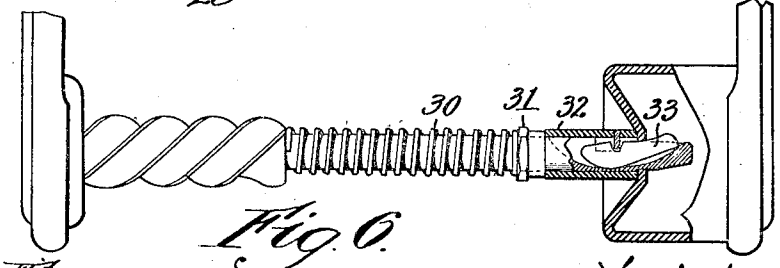


Fig. 6.

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UNITED STATES PATENT OFFICE.

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PAPER HOLDER.

Application filed July 31, 1924. Serial No. 729,233.

This invention relates to a paper holder of the general type shown in the prior patents to Johnson, No. 1,097,327 and No. 1,495,956. The paper holders shown in these prior patents each comprise a base or stand having swinging arms pivoted at both ends of the base and having a spindle fixed to one of said arms.

It is the object of my invention to provide an improved locking device for said spindle, by which the free end of said spindle may be securely locked in the second swinging arm and may also be easily released therefrom.

My invention further relates to arrangements and combinations of parts which will be hereinafter described and more particularly pointed out in the appended claims.

A preferred form of my invention and a slight modification thereof are shown in the drawings in which—

Fig. 1 is a plan view, partly in section, of a paper holder embodying my invention;

Fig. 2 is an enlarged sectional plan view of the locking device taken along the line 2—2 in Fig. 3;

Fig. 3 is a transverse sectional view, taken along the line 3—3 of Fig. 2;

Fig. 4 is a detail plan view of a portion of the spindle;

Fig. 5 is a transverse sectional view, taken along the line 5—5 in Fig. 4; and

Fig. 6 is a partial plan view, partly in section, showing a slight modification.

Referring to Figs. 1 to 5, I have shown my improved locking device embodied in a paper holder of the type shown in the prior patent to Johnson, No. 1,495,956. In this construction, a base or stand 10 is permanently secured to a wall or other support and is provided with swinging arms 11 and 12 pivotally secured to the two ends of the base. A roll supporting spindle 13 is fixed to the arm 11 and the slightly tapered outer end 14 thereof extends into the recessed end 15 of the arm 12.

My present invention relates particularly to a locking device for firmly securing the end of the spindle 13 in the recessed projection 15, thus preventing the swinging arms 11 and 12 from separating laterally and releasing the paper roll R supported thereon.

In constructing my improved locking device, I provide a slot or groove 16 in the end portion 14 of the spindle 13. The bottom of the slot 16 has substantially the concave curved outline indicated in Figs. 2 and 4. This bottom surface of the slot 16 acts as a cam surface, as will be hereinafter explained.

A locking plate 18 is slidable in the slot 16 and is provided with a lug 19, a depression 20 and a notch 21. A cross bar 22 fixed in a sliding collar 23 projects into the notch 21 of the plate 18. The spindle 13 is notched at 23^a to receive the cross bar 22 and limit axial movement of the collar 23. A spring 24 is mounted on the spindle 13 and yieldingly moves the sleeve 23 to the right, as viewed in the drawings.

The plate 18 is thus pushed through the recessed arm end 15 to the position indicated in Fig. 2. When in this position, the lug 19 is held outward from the axis of the spindle by the cam-shaped bottom of the slot 16 and locks the spindle in the arm end 15.

In order to release the arm 12, it is necessary to slide the collar 23 to the left, which can only be done after the paper roll R has been exhausted and removed. As soon as the sleeve and locking cam plate have been moved to the left, the spindle may be drawn out of the recessed arm end 15 and the paper roll may be readily replaced.

A substantially similar construction is shown in Fig. 6, applied to a roll holder of the type shown in the Johnson Patent No. 1,097,327. The only substantial difference in the locking device is that the spring 30 acts on an intermediate collar 31 instead of directly on the sleeve 32 which moves the lock plate 33. The construction and operation of the other parts of the Johnson roll holders form no part of my invention and for a full description thereof reference is made to the Johnson patents above cited.

Having thus described my invention and the advantages thereof, I do not wish to be limited to the details herein disclosed otherwise than as set forth in the claims, but what I claim is:—

1. In a paper holder, a spindle, a swinging arm having a recess to receive the end of said spindle, and means to lock said spindle in said recess, said spindle having a cam slot extending lengthwise thereof,

and said means comprising a locking cam plate slidable in said slot and means to slide said cam plate longitudinally in said slot.

2. In a paper holder, a spindle, a swinging arm having a recess to receive the end of said spindle, and means to lock said spindle in said recess, said spindle having a cam slot extending lengthwise thereof, and said means comprising a cam plate having a projection and means to force said cam plate longitudinally of said slot to bring said projection into locking position within said arm.

3. In a paper holder, a spindle, a swinging arm having a recess to receive the end of said spindle, and means to lock said spindle in said recess, said spindle having a cam slot extending lengthwise thereof, and said means comprising a cam plate having a locking projection and a notch, a collar on said spindle having a portion engaging said notch, and a spring on said spindle effective to slide said collar and cam plate longitudinally on said spindle to locking engagement with said recessed arm.

In testimony whereof I have hereunto affixed my signature.

WILLIAM H. NEEDHAM.