A. E. HOLMES.

PAPER HOLDER.

APPLICATION FILED OCT. 25, 1915.

1,178,159. Patented Apr. 4, 1916.

Fig. 1.

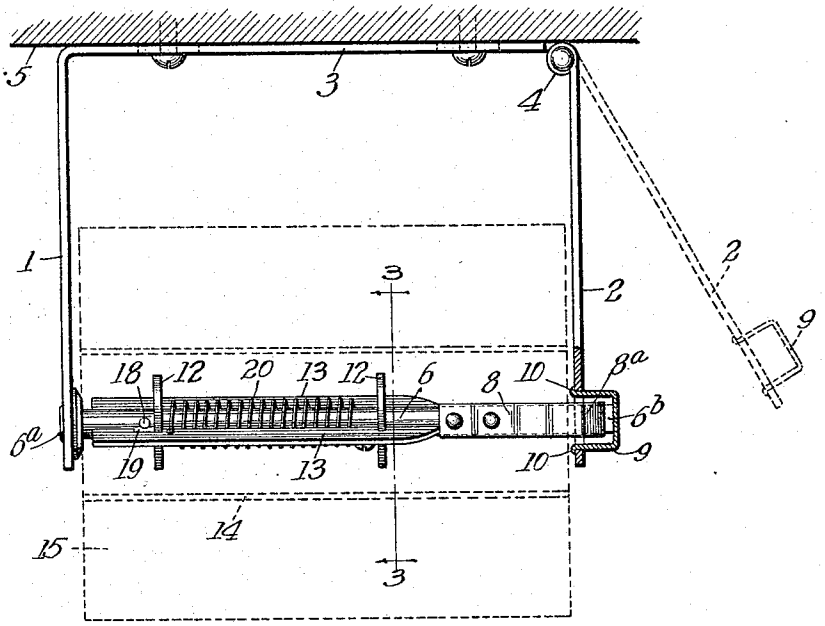


Fig. 2.

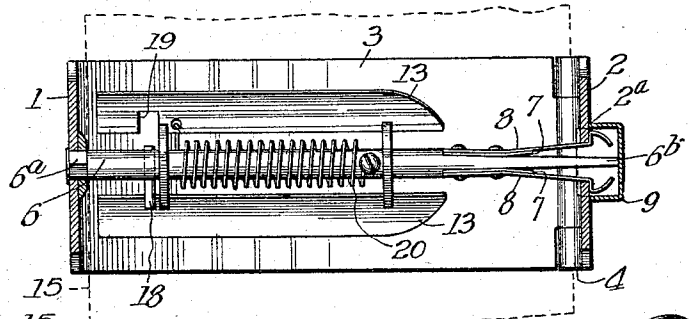


Fig. 3.

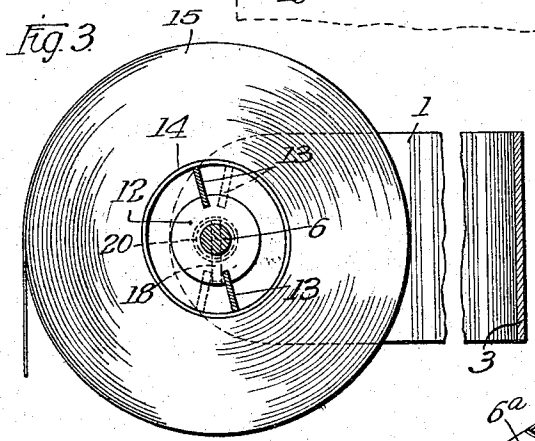


Fig. 4.

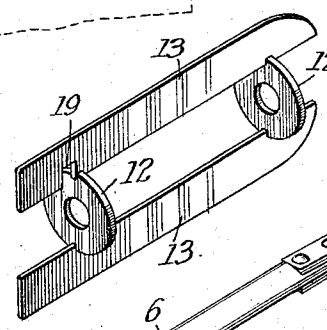


Fig. 5.

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PAPER-HOLDER.

1,178,159. Specification of Letters Patent. Patented Apr. 4, 1916.

Application filed October 25, 1915. Serial No. 57,643.

To all whom it may concern:

Be it known that I, ALFRED E. HOLMES, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Paper-Holders, of which the following is a specification.

My invention relates to paper holders and the general object of the invention is to provide a simple and inexpensive holder which will prevent the paper roll from being removed after it has once been introduced into the holder.

With respect to specific features of the invention it is my object to provide spring locking means and means associated therewith for protecting said springs against excessive pressure by one of the side arms.

Another object is to increase the rigidity of the structure when in acting condition by so proportioning the parts that the axle will have a bearing in the swinging arm.

Another object is to provide means for supplementing the action of the springs.

Another object is to provide a construction by which the rotary part of the holder may be permitted to rotate substantially 360 degrees and then automatically return to original position.

More specific objects will appear as the description proceeds.

I obtain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the complete device. Fig. 2 is an elevation thereof partly in section. Fig. 3 is a sectional elevation on the line 3—3, Fig. 1. Fig. 4 is a perspective view of the rotary paper carrier, and Fig. 5 is a perspective view of the axle upon which said carrier is mounted.

Similar numerals refer to similar parts throughout the several views.

The bracket or support consists of two arms 1 and 2 connected by a cross arm 3. In the construction shown the parts 1 and 3 are integral, while the arm 2 is connected to the cross arm 3 by a hinge 4. When the device is in use the cross arm will be screwed or otherwise fastened to a wall 5 or other suitable stationary support. The axle 6, shown separately in Fig. 5 is rigidly fastened to the fixed arm 1. According to the design shown, the end 6^a of said axle is squared and fits into a correspondingly shaped aperture in the fixed arm and the outer edge is riveted over or swaged over on to the outside surface of the fixed arm. At the other end the axle is cut down so as to form two flat surfaces for receiving the springs 7 and 8. These springs are riveted or otherwise fastened in place on opposite sides of the axle, the inner springs 7 supplementing the action of the outer springs 8. The outer springs are longer than the inner ones and have shoulders 8^a formed at the outer ends for snapping into and engaging the sides of the aperture 2^a formed in the swinging arm 2. These extended springs, which form a snap lock, are of comparatively thin metal and are protected against damage by the extension 6^b of the axle which projects beyond the ends of said springs and forms a stop which is engaged by the housing 9 which completely incloses the ends of the springs and the extension 6^b as the latter projects through the swinging arm 2. Another advantage in thus causing the axle to extend through the swinging arm is that it prevents the axle from being forced out of alinement. Said housing is rigidly secured to said arm in any suitable manner, for example, the walls may be swaged over as indicated at the points 10 in Fig. 1.

The paper carrier consists, in the design shown, of two parallel rings 12, 12, provided with vanes 13, 13. The rings are rotatable upon the axle and the vanes are fastened to said rings, diametrically opposite to each other, and arranged in the same plane. The distance between the outer edges of said vanes is somewhat greater than the inner diameter of the core 14 of the paper roll 15 and the result is, under normal conditions, that the roll will rotate only as permitted to do so by the parts 12 and 13.

Extending radially from the axle is a pin 18 which constitutes a stop for limiting the rotation of the carrier. Ordinarily, it is desirable to permit the vanes to make a full revolution. This is accomplished, in my construction, by forming a notch 19 at the inner edge of one of the vanes which permits this vane to clear the pin. A helical spring 20 encircles the axle between the rings 12 and is fastened at one end to one of the vanes and at the other end to the axle. This permits the vanes to rotate in one direction but causes them to return to normal position as soon as the roll is released.

In operation, when it is desired to fill the holder, a paper roll is slipped over the carrier to the position indicated by dotted lines, Fig. 1. The swinging arm 2 is then rotated from the position shown in dotted lines, Fig. 1, to the position shown in full lines, the springs 8 automatically engaging the swinging arm. The extension 6^b limits the swinging movement of the arm and prevents the housing 9 from reaching the ends of said spring and damaging them. After the parts have thus become locked, the springs are inaccessible so long as the paper remains in place. After the paper has been used up, the core 14 is torn off, whereupon the springs 8 are accessible and may, by pinching them between the thumb and finger, be made to release the swinging arm.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A paper holder having a fixed arm, an axle supported at one end thereby, a swinging arm at the opposite end of the axle, having an aperture therein which comes in line with the axle when the swinging arm is in closed position, springs on the axle adapted to pass through said aperture and engage the swinging arm as the latter swings to closed position, a housing over said aperture, and an extension on said axle projecting beyond the ends of the springs and engaging said housing to prevent the latter from reaching the ends of the springs.

2. In a paper holder, the combination of a fixed arm having an axle supported thereby at one end, a pair of springs fastened to said axle on opposite sides thereof and having engaging shoulders formed at their outer ends, a swinging arm having an aperture positioned to receive the ends of said springs and snap into engagement with the shoulders thereof as said arm moves to closed position, a housing fastened to the swinging arm outside of said aperture to inclose the ends of the springs, and an extension on said axle located between said springs and projecting beyond the ends thereof for engaging the inside of the housing and arresting it before it can reach the ends of the springs.

3. In a paper holder, the combination of a pair of parallel supporting arms, a non-rotatable axle supported by said arms, and a rotatable paper carrier on said axle, said carrier having two vanes extending in opposite directions from the axle, and a pin located between said arms and extending radially from said axle, one of said vanes approaching closely enough to said axle to engage said pin and the other vane clearing said pin as said vanes are rotated.

In witness whereof, I have hereunto subscribed my name.

ALFRED E. HOLMES.

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