No. 701,175. Patented May 27, 1902.

H. F. DUNBAR.

PAPER STOP.

(Application filed Sept. 26, 1901.)

(No Model.)

Fig. 1.

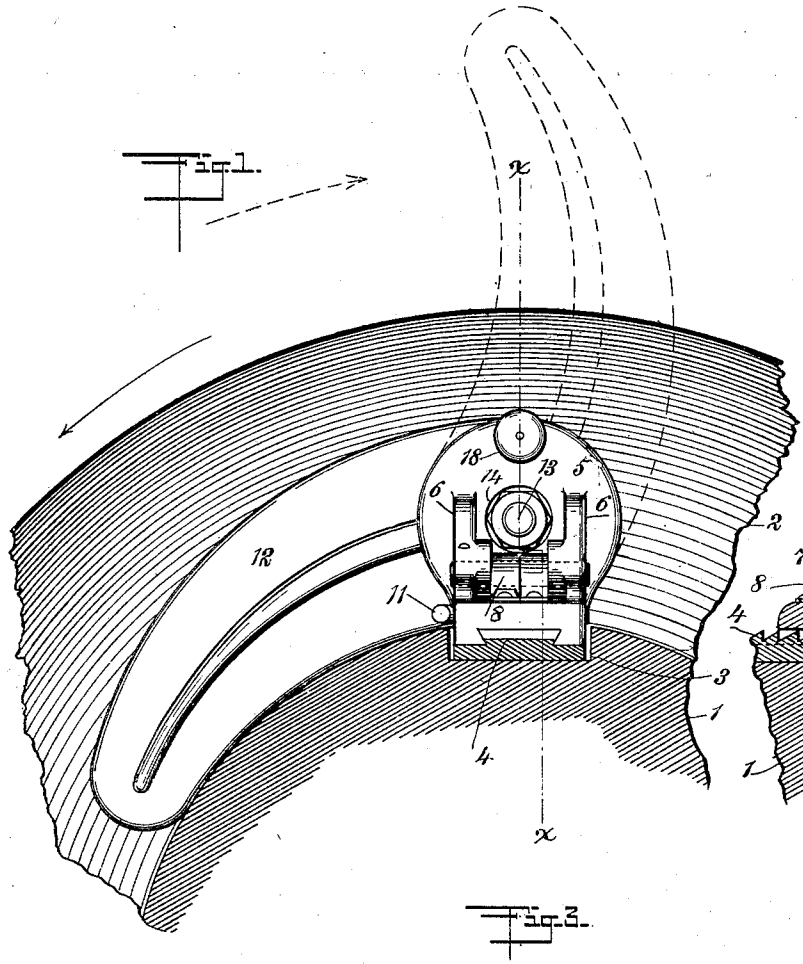


Fig. 2.

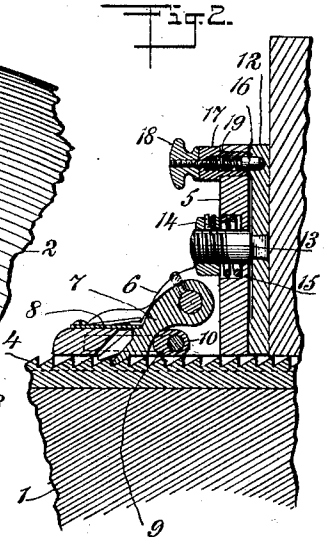
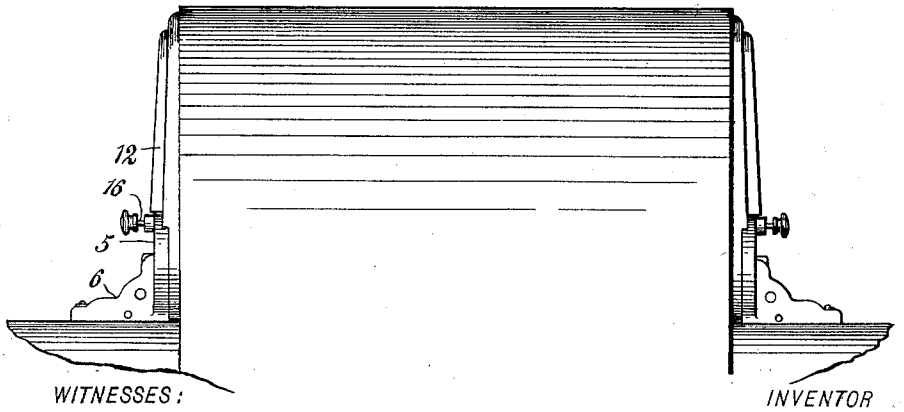


Fig. 3.



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PAPER-STOP.

SPECIFICATION forming part of Letters Patent No. 701,175, dated May 27, 1902.

Application filed September 26, 1901. Serial No. 76,654. (No model.)

To all whom it may concern:

Be it known that I, HAROLD F. DUNBAR, a citizen of the United States, and a resident of Turners Falls, in the county of Franklin and State of Massachusetts, have invented new and useful Improvements in Paper-Stops, of which the following is a full, clear, and exact description.

This invention relates to improvements in stops for paper or other material while winding on a drum, the object being to produce a simple stop to prevent the paper from sliding endwise of the drum or from sliding one layer upon another, and, further, to so arrange the stop that it may be readily adjusted to the increasing size of the paper-roll while the winding-drum is revolving.

I will describe a paper-stop embodying my invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side view of a paper-stop embodying my invention. Fig. 2 is a section on the line *x x* of Fig. 1. Fig. 3 is a front view showing a stop at each end of the paper-roll.

Referring to the drawings, 1 designates a winding-drum upon which the paper 2 or other material is wound. Seated in a channel 3, formed in the drum, is a rack 4, having ratchet-shaped teeth, and movable on the rack is a carriage consisting of an upright plate 5 and side plates 6. The sides of the rack are undercut, and the bottom of the carriage has an inwardly-extending portion to engage said undercuts, as clearly shown in Fig. 1.

A dog 7 is mounted on a bar having bearings in the side plates 6 and is held in yielding engagement with the rack 4 by means of a spring 8. A shaft 9 has bearing in the side plates 6, and on this shaft is a cam 10, adapted to engage with the under side of the dog for the purpose of raising the same out of contact with the rack. One end of the shaft 9 has a handle 11 for convenience in turning the same.

Mounted to swing on the plate 5 is a stop-arm 12. This stop-arm is longitudinally curved, so that when folded downward, as indicated in full lines in Fig. 1, its edge will bear closely upon the winding-drum. A pivot-pin 13, attached to the stop-arm 12, passes through an opening in the plate 5, and on the projected end of this pivot-pin, which is screw-threaded, is a nut 14, between which and the plate 5 is arranged a spring 15, which will hold the arm 12 friction-tight against the plate. When the plate is moved downward, as indicated in Fig. 1, and especially as the size of the roll is lessened by unwinding, it is desirable to lock said arm to prevent its being thrown outward by centrifugal action, and therefore prevent it from striking or coming in contact with an attendant that may be near the winding-drum. This locking device consists of a pin 16, passing through a sleeve 17, arranged through the plate 5, and on the outer end of the pin is a finger-piece 18. A spring 19 surrounds the pin within the sleeve, one end of this spring bearing against an enlarged portion of the pin and the other end bearing against the outer end wall of the sleeve, all as clearly shown in Fig. 2.

It will be understood that my stop device, as described, will be arranged at each end of the paper-roll, and while I have shown two stops in Fig. 3 arranged directly opposite each other in practice they will be arranged on opposite sides of the winding-drum, the purpose being to equally balance the drum.

In operation the stops are to be moved along the drum and engage against the ends of the paper or other material being wound thereon. As the size of the roll increases on the drum the stop-arms are to be swung outward relatively to the drum, which may be done while the drum is in rotation. The dotted lines in Fig. 1 show the stop-arm in its extended position. In unwinding, the stop-arms will be gradually moved downward until they finally engage against the drum, where they will become locked by the means above described. When it is desired to increase the distance between the two stops, they may be readily drawn outward on the racks after lifting the dogs from engagement from the racks.

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

1. In connection with a winding-drum, a stop mounted on the drum and adapted to

swing transversely of the drum while winding the material thereon.

2. In connection with a winding-drum, a stop-arm adjustable longitudinally and axially of the drum.

3. A paper-stop in connection with a winding-drum, consisting of a carriage adjustable longitudinally on the drum, and an arm mounted to swing on said carriage axially of the drum.

4. A paper-stop for a winding-drum, comprising a rack on the drum, a carriage movable on the rack, a spring-pressed dog on the carriage and engaging with the rack, and a stop-arm mounted to swing on the carriage.

5. A paper-holding device on a winding-drum, comprising a rack attached to the drum, a carriage movable on said rack, a spring-pressed dog mounted on the carriage and engaging with the rack, a lifting device for the dog, and a stop-arm mounted to swing on the carriage.

6. In connection with a winding-drum, a carriage movable longitudinally of the drum, an arm mounted to swing on said carriage, and means for locking the arm on the carriage.

7. In connection with a winding-drum, a carriage adjustable longitudinally of the drum, a stop-arm having spring-yielding pivotal connection with the carriage, and a locking connection between the carriage and arm.

8. In connection with a winding-drum, a carriage adjustable longitudinally of the drum, and a curved stop-arm mounted to swing on said carriage.

9. In connection with a winding-drum, a rack secured in a channel in the drum, a carriage comprising an upright plate and side plates, a spring-pressed dog mounted in the carriage and engaging with the rack, a shaft having bearings in the side plates, a cam on said shaft for engaging with the dog, a stop-arm, a pivot-pin on said stop-arm and extending through the upright plate of the carriage, a spring yielding connection between said pin and the carriage, and a spring-pressed pin mounted in the carriage and adapted to engage in an opening in the said arm.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HAROLD F. DUNBAR.

Witnesses:
CHAS. N. SUMNER,
JAS. D. COY.