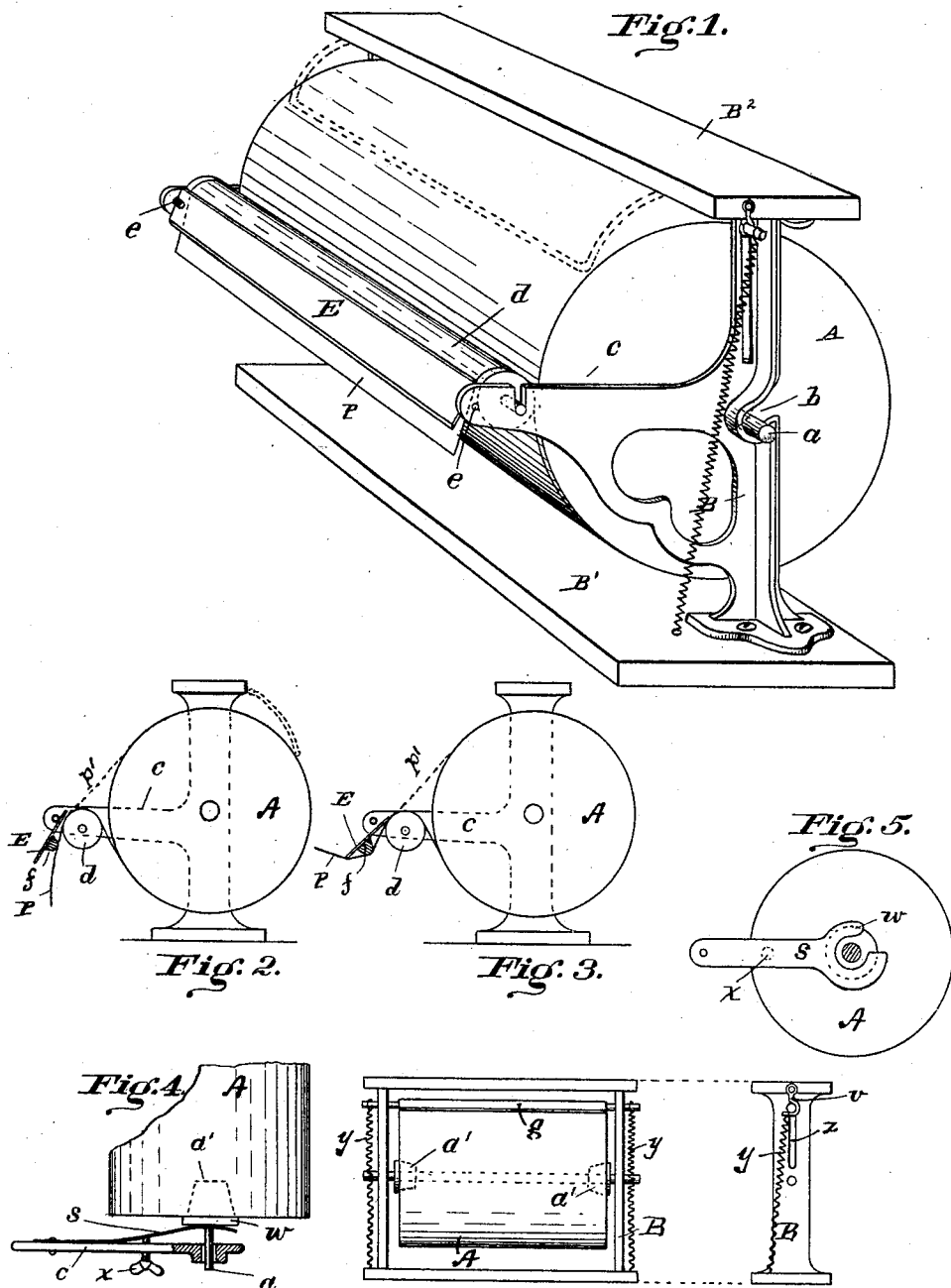


(No Model.)

A. Q. ROSS.
ROLL PAPER HOLDER AND CUTTER.

No. 452,719.

Patented May 19, 1891.



Attest.
C. W. Bogart
David Davis

Fig. 6. Inventor
Abbott Q. Ross.
By Robert H. H. Atty.

UNITED STATES PATENT OFFICE.

ABBOTT Q. ROSS, OF CINCINNATI, OHIO; AIDA H. ROSS, GUARDIAN, ASSIGNOR
TO THE AMERICAN ROLL PAPER COMPANY, OF ST. LOUIS, MISSOURI.

ROLL-PAPER HOLDER AND CUTTER.

SPECIFICATION forming part of Letters Patent No. 452,719, dated May 19, 1891.

Application filed June 5, 1888. Serial No. 276,114. (No model.)

To all whom it may concern:

Be it known that I, ABBOTT Q. ROSS, a citizen of the United States, residing at Cincinnati, Ohio, have invented new and useful Improvements in Roll-Paper Holders and Cutters, of which the following is a specification.

My invention relates to roll-paper holders and cutters, its object being to provide an efficient and simple device for holding paper in rolls, with suitable appliances to facilitate the tearing off of such portions as may be needed from time to time.

My improvements embody, generally, a supporting-stand in which rolls may be pivotally inserted, a guide bar or roller over which the free end of the paper strip passes in a fixed relation to the supporting-frame regardless of the diminishing size of the roll, a brake upon the paper-roll or its pivot to prevent over-running of the paper strip, and a tearing-knife pivotally mounted and acting as a brake or lock upon the guide bar or roller to hold the strip while being torn. To these may be added a holding bar or projection in rear of the knife to carry the severed end away from the knife-edge when torn to facilitate the grasp of the fingers when about to tear off a new strip.

My invention consists in the construction of certain of these features in detail and in their combination in certain relations and for certain purposes, as hereinafter more fully set forth.

Mechanism embodying my invention is shown in the accompanying drawings, in which—

Figure 1 is a perspective elevation of my improved paper-roll holder in its preferred form complete; Figs. 2 and 3, partial detail side elevations showing the relative positions of the knife, respectively, in the normal position of rest and in the position assumed when the paper is being torn, the latter figure showing the knife operating as a brake upon the guide bar or roller. Figs. 4 and 5 are plan and side views, respectively, of the side spring-brake; and Fig. 6 shows in front and side elevation my preferred form of brake.

Referring now to the drawings, A designates the paper-roll, which is furnished with a pivotal rod a , usually held in the roll by

wooden conical blocks or bushings $a' a'$, (shown in the dotted lines in Figs. 4 and 6,) inserted in the axial opening of the roll, the projecting ends of the rod a forming the pivots upon which the roll rotates when in use.

B B are the side standards, provided with open sockets b , in which the axial pivots of the roll are inserted and by which the roll has its pivotal bearings and is supported upon and between the side standards. The latter are secured upon a base B' , and may be secured across the top by a brace B^2 , which in turn may serve as a base for a similar standard to support other rolls above. The side standards are formed with arms c , projecting horizontally forward, between which and across the front of the paper-roll is secured a guide bar or roller d . Across the front of the guide bar or roller d in pivotal bearings in the arms c is journaled a "straight-edge" or "tearing-knife" E, overhanging so as to fall by gravity into the normal position shown in Fig. 2 as limited by a stop or stops e upon the arm c . The knife E is so proportioned and hung that when its lower or tearing edge is moved forward its rear or "butt" edge is brought against the guide bar or roller d , as shown in Fig. 3, thus acting as a brake to the latter if a roller and a clamp for the paper strip p , which passes from the main roll A between the guide bar or roller d and the knife E.

It may be here mentioned that the paper-roll A may be so placed as to unwind and feed from the top, as indicated by the dotted lines p' in Figs. 2 and 3, or from the bottom, as indicated by the full lines in said figures. In the latter case the guide-bar d is preferably formed as a roller having its pivotal bearings in the side arms c ; but in the former case a simple rod may be substituted. Either may be used, however, in each case. The paper being drawn downward or outward at any angle short of that in which the knife is tilted against the guide d it feeds freely out from the roll; but when sufficient is unrolled the end of the paper is slightly raised, so that its pressure outward and upward against the front edge of the knife tilts the knife backward against the guide d . Such pressure makes the knife a lever, in which the slight pull or pressure against the long arm consti-

tuting its front portion causes its short arm or rear portion to impinge with relatively considerable force against the guide d and clamp the paper thereto. Thus the paper is absolutely held against slipping during the tearing operation by the force used in the same operation.

The knife is preferably set at a forward inclination to the vertical and its range of movement is relatively slight, so that the severed edge may fall downward and project below and behind the knife-edge. To facilitate the new grasp I place behind the knife, either upon its back in the form of a rear projection or between the arms c , a cross-bar f , which as the knife falls down after the tearing operation carries the severed edge of the paper away from the front edge of the knife. The relation and effect of these features are clearly indicated in Figs. 2 and 3.

It is desirable, though not absolutely necessary, to place a brake of some kind upon the paper roll in order to prevent overrunning of the paper by the rotative momentum of the roll. This may be done in various ways—for example, the following construction, (shown in Figs. 4 and 5,) in which I attach to the inner side of one or both of the arms c a leaf-spring S , riveted at its front end and bearing at its rear end laterally against the block a or a washer w , placed on the pivot a in front of said block. The rear or bearing end of the spring is cut out, as shown in Fig. 5, to pass around the pivot a , so as not to interfere with the removal or replacing of paper rolls, and an adjusting thumb-screw x may be threaded through the arm c to bear against the spring to adjust its tension. The friction thus produced causes sufficient resistance to brake the paper roll properly. I prefer, however, to use a simple friction-bar g , of wood or metal, resting upon the upper periphery of the paper-roll A and carried through vertical guide-slots z in the standards. The bar g may act as a brake by gravity simply, or may be held to contact by springs y , attached to the outer terminals of the bar and to points below upon the side standards or the base, all as shown in Fig. 6, such bar

being confined by its guide-slots z to a vertical movement, following down the periphery of the diminishing roll until the paper is exhausted, and the frictional resistance thereby gradually decreases with the diminishing force of the springs, as is desirable. In connection with the bar g I employ sustaining-hooks v to uphold the bar when placing a new roll in position. This form of brake is both cheap and efficient. I have also indicated in dotted lines in Figs. 1 and 2 a wire bail, used commonly as a brake in roll-holders of this character, and which may be used here, if desired. Being well known, I have not thought a detailed description necessary.

I claim as my invention and desire to secure by Letters Patent of the United States—

1. In a roll-paper holder and cutter, the combination, with the paper-roll, of two side supports in which the roll is pivotally carried, arms projecting forward horizontally from said side supports, a guide bar or roller secured between the terminals of said arms across the front of the roll, and a tearing-knife carried pivotally in and between said arms in front of the guide bar or roller and adapted when pivotally actuated by the pull of the paper in tearing across the front edge to impinge rearwardly against said guide bar or roller, substantially as and for the purpose specified.

2. In a roll-paper holder and cutter, the combination of the vertically-slotted side supports, a paper-roll journaled in said supports, and a movable brake-bar resting upon the upper periphery of the roll and moving downward in said slots as the roll diminishes in size, with a guide-roller and a pivoted knife supported in front of and working in conjunction with said guide-roller to clamp the paper when being severed from the roll, substantially as herein set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ABBOTT Q. ROSS.

Witnesses:

L. M. HOSEA,
L. E. HOSEA.