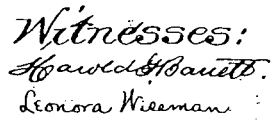


Patented May 1, 1900.

PAPER CARRYING AND FEEDING ATTACHMENT FOR ADDING MACHINES.

2 Sheets—Sheet 1.



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No. 648,708.

Patented May 1, 1900.

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PAPER CARRYING AND FEEDING ATTACHMENT FOR ADDING MACHINES.

(No Model.)

(Application filed Sept. 26, 1899.)

2 Sheets—Sheet 2.

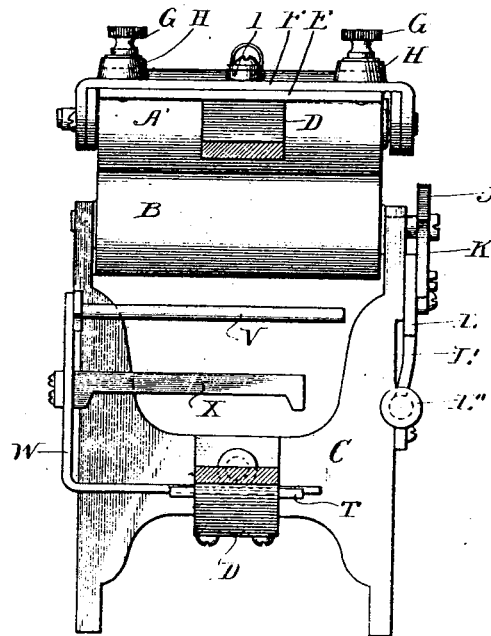


Fig. 3.

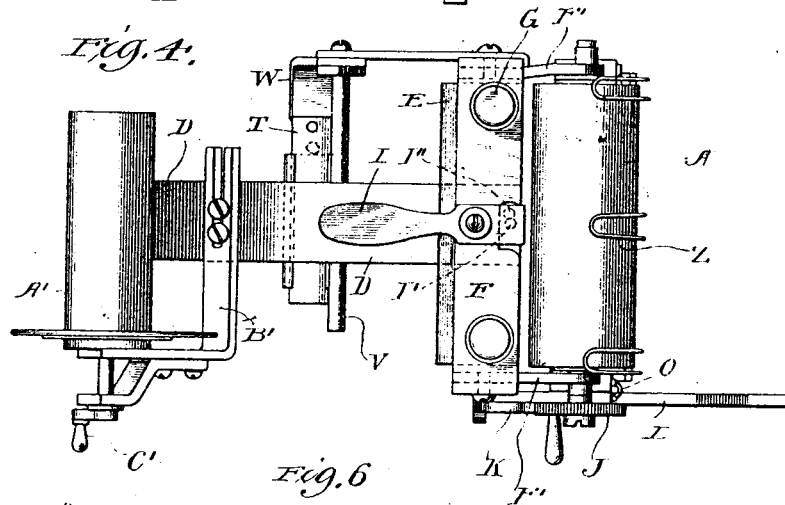
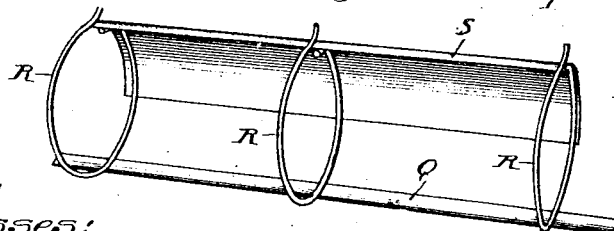


Fig. 4.

Fig. 6



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UNITED STATES PATENT OFFICE.

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PAPER CARRYING AND FEEDING ATTACHMENT FOR ADDING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 648,708, dated May 1, 1900.

Application filed September 26, 1899. Serial No. 731,728. (No model.)

To all whom it may concern:

Be it known that I, CORWIN H. PLATT, a citizen of the United States of America, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Paper Carrying and Feeding Attachments for Adding-Machines, of which the following is a description, reference being had to the accompanying drawings, forming part of this specification.

My invention has been designed more particularly with reference to use as an attachment to a well-known adding-machine now upon the market and in general use, commonly called the "Burrongs Registering Accountant," which machine will be found illustrated and described in Letters Patent of the United States of America, No. 504,963, granted September 12, 1893, upon the application of William S. Burrongs. As will be understood from the explanation of my invention hereinafter given, however, its utility is not restricted to its use as an attachment to this Burrongs machine; but, on the contrary, it may be employed in connection with other suitable machines of a different construction.

The principal object of my invention is to provide an improved paper carrying and feeding attachment for machines of this character which will accommodate rolls or sheets of paper of any desired width and permit them to be adjusted laterally to different positions for the printing of vertical columns of numbers thereon at any desired point in the width of the roll or sheet.

A further object of the invention is to provide means for readily separating at will the feed-rolls by which the paper is advanced to permit the ready insertion and adjustment of the paper, particularly where several sheets are employed with interposed carbon-paper for manifolding purposes.

Referring now to the accompanying drawings, Figure 1 represents a side elevation of the attachment embodying my invention; Fig. 2, a middle vertical section; Fig. 3, a rear elevation with part of the bow-frame broken away; Fig. 4, a top plan view; Fig.

5, a transverse sectional detail view; and Fig. 6, a perspective view of the paper-holder.

The same letters of reference are used to indicate identical parts in the several views.

In the Burrongs adding-machine, heretofore referred to, the paper strip or sheet upon which the printing is effected is passed forward between a pair of feed-rollers located at the rear end of the machine, and thence upward over the upper one of said rollers, the latter serving also as a platen-roller, upon which the types effect the printing as the paper passes over the face of such roller. When my invention is employed as an attachment to the Burrongs machine, the two rollers A B take the place of the two rollers above referred to, and the upper roller A constitutes the printing or platen roller whose forward face receives the impact of the type, the attachment being secured to the rear end of the machine. In the Burrongs and other similar machines the two rollers A B are journaled at their opposite ends in a supporting-frame in such a manner that the sheet or strip of paper can be inserted between them only from their front or rear sides, and consequently they cannot accommodate paper of greater width than the length of the rollers themselves.

The first feature of my invention consists in supporting the two rollers A B one above the other in such a way that a strip or sheet of paper of any width can be inserted laterally between the rollers and adjusted lengthwise thereof to any desired position. To this end the lower roller B is journaled in the upper end of an upright frame C, adapted to be secured in fixed position upon the rear end of the adding-machine, the lower end of the frame being provided with transverse holes, adapted to fit upon a fixed rod present in the Burrongs machine and shown in the Burrongs patent before mentioned. The frame C is further secured to the rear end of the adding-machine by suitable means. (Not shown.) The upper roller A is supported above the roller B by means of a bow-frame D, whose lower forward end is secured to the frame C and whose upper forward end has secured to it a fixed cross-piece E, upon which

rests a yoke-frame F, in whose forwardly-projecting arms F' is journaled the roller A. The frame F is connected to the cross-piece E by means of thumb-screws G, whose threaded lower ends pass freely through holes in the horizontal plate of the frame F and screw into threaded holes in the cross-piece E, Fig. 5. The heads of the thumb-screws G do not bear directly upon the plate F, but upon thick rubber washers H, interposed between them and said plate, so that when the screws are tightened up the plate F is securely but yieldingly held to the cross-piece E. The adjustment of the parts is such that at such time the roller A will be pressed into firm contact with the roller B, cooperating with it for the purpose of advancing the paper strip when the rollers are turned. The yielding connection of the roller-frame F with the cross-piece E, however, permits the roller A to be forced upward slightly away from the roller B for the ready insertion and adjustment of the paper. As a means for thus separating the rollers whenever desired there is provided a lever I, fulcrumed upon the upper side of the plate F, midway of its length, Fig. 4, and provided upon the under side of its front end with a stud I', adapted when the rear end of the lever is forced to the left to ride over an inclined surface I'' upon the upper face of the cross-piece E, Figs. 2, 4, and 5, and thereby force the frame F and roller A slightly upward against the resistance of the rubber springs H, interposed between the heads of the screws G and the frame F. By pressing the rear end of the lever I to the one side, therefore, the rollers A B may be separated at any time to permit the ready insertion and adjustment of the paper, and upon throwing the end of the lever back to normal position the frame F will be released and the springs G will force the roller A toward the roller B again and grip the sheet of paper between them.

For the purpose of advancing the paper at each operation of the machine the spindle of the lower roller B has secured to it a ratchet J, with which cooperates a pawl K, pivoted upon the rear end of a lever L, fulcrumed at M upon the side of the frame C. Depending from the lever L in rear of its fulcrum is an arm L', through which is passed a stop-screw L'', Figs. 1 and 3, whose forward end contacts with the rear edge of a plate N, secured to the side of the frame C, and limits the downward movement of the rear end of the lever L and pawl K. A spring O, secured to the forward edge of the frame C, bears against a vertical edge of the lever L, Fig. 1, and presses the rear end of the lever downward and normally maintains the stop-screw L'' in contact with the plate N. The front end of the lever L is provided with an incline surface P, with which cooperates a roller 538 upon the upper end of the lever 513. (Shown and described in the Burroughs patent, No. 504,963, heretofore referred to.) The upper end of this

lever 513 is thrown rearward a definite distance at each operation of the machine, and the roller 538 rides over the incline surface P on the end of the lever L and rocks the latter, pressing its front end downward and throwing its rear end upward and causing the pawl K to turn the roller B and advance the paper passed between said roller and the roller A. The engagement of the roller 538 with the lever L will throw the rear end of said lever and pawl K upward to a certain position at each operation of the machine, and by adjusting the stop-screw L'' to cause the lever and pawl normally to occupy a lower or a higher position the lever may be given a greater or less degree of movement at each operation of the machine to advance a greater or less length of paper, as may be desired.

As so far described my attachment would be complete for use with loose sheets of paper of any desired width, the unused portion of the paper (if of considerable length) being curled up in a roll within the bow-frame D, behind the frame C and rollers A B, or, when desired, the unused portion of the paper may be held in the holder shown in Fig. 6, said holder consisting of a bar Q, having secured to its upper side a series of curved wires R, and the latter in the present instance having secured to their forward sides a curved guard-plate S. The bar Q of this holder is adapted to fit and slide lengthwise in a dovetailed guideway T, which may be secured directly to the bow-frame D, but in the present instance is carried by the rear end of a bracket-plate U, secured at its forward end to the frame C and extending rearward therefrom immediately over the lower horizontal portion of the bow-frame D.

Where the printing is to be effected upon a long strip of paper carried in a supply-roll, the latter will be mounted upon the spindle V, carried by the vertically-bent end of a bar W, whose lower horizontal portion is shaped to engage and slide longitudinally in the guideway T. From the roll upon the spindle V the paper strip passes forward beneath a guide-bar X, secured at the rear end of its rearwardly-projecting arm to the upper end of the vertical portion of the bar W, and thence upward over the rear side of the roller B, and on forward between the said roller and the upper roller A, and upward over the forward side of the latter. To guide the paper over the forward side of the roller A, there is provided a frame Y, to whose cross-bar are secured several pairs of curved wires Z, extending upward and rearward over the forward face of the roller A.

For the storage of the printed portion of the paper strip there is provided a reel A', mounted in a bracket-frame B', detachably secured to the upper rear side of the bow-frame D, Fig. 4, and provided with a handle C', by which it may be turned to wind up the printed portion of the strip delivered from the rollers A B. A wire E', secured at its lower forward

end to the side of the bracket-frame B', is suitably bent inward and rearward and shaped to press against the roll of paper wound upon the roll A' and produce the necessary friction upon said roll to prevent the paper from becoming unwound.

Having thus fully described my invention, I claim—

1. The herein-described paper carrying and feeding attachment for adding-machines, comprising the rollers A B mounted vertically one above the other in independent supporting-frames permitting the free insertion of the paper laterally between the rollers at each end thereof and its adjustment longitudinally of the rollers, means for moving the support or bearings of one of said rollers vertically toward and from the other roller and means for actuating the rollers to advance the paper step by step, substantially as set forth.

2. The herein-described paper carrying and feeding attachment for adding-machines, comprising the frame C adapted to be secured to the rear end of the adding-machine, the feed-roller B journaled therein, the combined feed and platen roller A mounted in an independent frame vertically over the roller B, to permit the free insertion of the paper between the rollers A B at each end thereof and its adjustment longitudinally of the rollers, means for moving the support or bearings for the roller A vertically toward and from the roller B and the pawl-lever L and pawl K cooperating with the ratchet J upon the roller B, substantially as set forth.

3. The herein-described paper carrying and feeding attachment for adding-machines, comprising the frame C adapted to be secured to the rear end of the adding-machine, the feed-roller B journaled therein, the combined feed and platen roller A mounted in an independent frame vertically over the roller B, to permit the free insertion of the paper between the rollers A B at each end thereof and its adjustment longitudinally of the rollers, the pawl-lever L and pawl K cooperating with the ratchet J on the roller B, and the regulating-screw L' passed through the arm L' of the pawl-lever L and cooperating with a fixed stop, substantially as set forth.

4. The herein-described paper carrying and feeding attachment for adding-machines, comprising the frame C adapted to be secured to the rear end of the machine, the bow-frame D, the roller B mounted in the upper end of the frame C and the roller A independently mounted upon the upper forward end of the bow-frame D, and the pawl-lever L and pawl K cooperating with the ratchet J on the roller B, substantially as set forth.

5. The herein-described paper carrying and feeding attachment for adding-machines, comprising the frame C adapted to be secured to the rear end of the adding-machine, the roller B mounted in the upper end thereof, the bow-frame D, the roller A independently

mounted upon the upper forward end of said bow-frame D, so as to permit the free insertion of the paper laterally between the rollers at either end thereof and its adjustment longitudinally of the rollers, means for normally pressing the roller A against the roller B and for separating them at will, and means for turning the rollers step by step to advance the paper passed between them, substantially as set forth.

6. The herein-described paper carrying and feeding attachment for adding-machines, comprising the frame C adapted to be secured to the rear end of the adding-machine, the roller B mounted in the upper end thereof, the bow-frame D, the roller A independently mounted upon the upper forward end of said bow-frame D, so as to permit the free insertion of the paper laterally between the rollers at either end thereof and its adjustment longitudinally of the rollers, springs normally pressing the roller A against the roller B, means for forcing the roller A upward away from the roller B, and means for turning the rollers to advance the paper, substantially as set forth.

7. The herein-described paper carrying and feeding attachment for adding-machines, comprising the frame C adapted to be secured to the rear end of the adding-machine, the bow-frame D, the roller B mounted in the upper end of the frame C, the yoke-frame F yieldingly supported upon the upper forward end of the bow-frame D, the roller A mounted in the frame F, springs acting upon the frame F to press the roller A against the roller B, the lever I and cooperating devices for lifting the frame F and separating the roller A from the roller B, and means for turning the rollers to advance the paper, substantially as set forth.

8. The herein-described paper carrying and feeding attachment for adding-machines, comprising the frame C adapted to be secured to the rear end of the adding-machine, the bow-frame D provided at its upper forward end with the cross-piece E, the roller B mounted in the upper end of the frame C, the yoke-frame F F' resting on the cross-piece E of the frame D, the screws G passed through the frame F and engaging the cross-piece E, the springs H confined by said screws upon the frame F, the lever I fulcrumed on the frame F and cooperating with the cross-piece E on the frame D to force the frame F upward when the rear end of the lever is drawn to one side, the roller A mounted in the forwardly-projecting arms F' of the frame F, and means for turning the rollers to advance the paper, substantially as set forth.

9. The herein-described paper carrying and feeding attachment for adding-machines, comprising the frame C adapted to be secured to the rear end of the adding-machine, the bow-frame D provided at its upper forward end with the cross-piece E, the roller B mounted

in the upper end of the frame G, the yoke-frame F F' resting on the cross-piece E of the frame D, the screws G passed through the frame F and engaging the cross-piece E, the springs H confined by said screws upon the frame F, the lever I fulcrumed on the frame F and provided with the projection I' coöperating with the projection I' on the cross-piece E to force the frame F upward when the rear end of the lever is swung to one side, the roller A mounted in the forwardly-projecting arms F' of the frame, and means for turning the rollers to advance the paper, substantially as set forth.

10. The herein-described paper carrying and feeding attachment for adding-machines, comprising the frame C adapted to be secured to the rear end of the adding-machine, the roller B mounted in the upper end thereof, the bow-frame D, the roller A supported by the frame D above the roller B, means for turning the rollers to advance the paper, and the guideway T supported by the frame C and adapted to receive the attaching-bar of the paper-holder or spindle-support, substantially as set forth.

11. The herein-described paper carrying and feeding attachment for adding-machines, comprising the frame C adapted to be secured to the rear end of the adding-machine, the roller B mounted in the upper end thereof, the bow-frame D, the roller A supported by the frame D above the roller B, means for turning the rollers to advance the paper, the bracket U secured to and projecting rearwardly from the frame C, and the guideway T carried by said bracket U and adapted to

receive the attaching-bar of the paper-holder or spindle-support, substantially as set forth.

12. The herein-described paper carrying and feeding attachment for adding-machines, comprising the frame C adapted to be secured to the rear end of the adding-machine, the roller B mounted in the upper end thereof, the bow-frame D, the roller A supported there by above the roller B, the roll-supporting spindle V removably supported within the bow-frame D, the storage-reel A' removably supported upon the bow-frame D, and means for turning the rollers A B to draw the paper strip from the roll upon the spindle V and advance it toward the storage-reel A', substantially as set forth.

13. The herein-described paper carrying and feeding attachment for adding-machines, comprising the frame C adapted to be secured to the rear end of the adding-machine, the roller B mounted upon the upper end of said frame, the bow-frame D, the roller A supported by the frame D above the roller B, the guideway T secured to the frame, the spindle-support W fitting in said guideway and carrying the spindle V, the bracket B' detachably supported upon the bow-frame D, the reel A' mounted in the bracket B' and provided with the handle C' for turning it, the friction-spring E' bearing against the roll of paper upon the reel A', and means for turning the rolls A B to advance the paper strip, substantially as set forth.

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