Feb. 1, 1938. J. H. WILLIAMS 2,107,020

ADJUSTABLE PAPER ROLL SUPPORT

Filed June 24, 1937

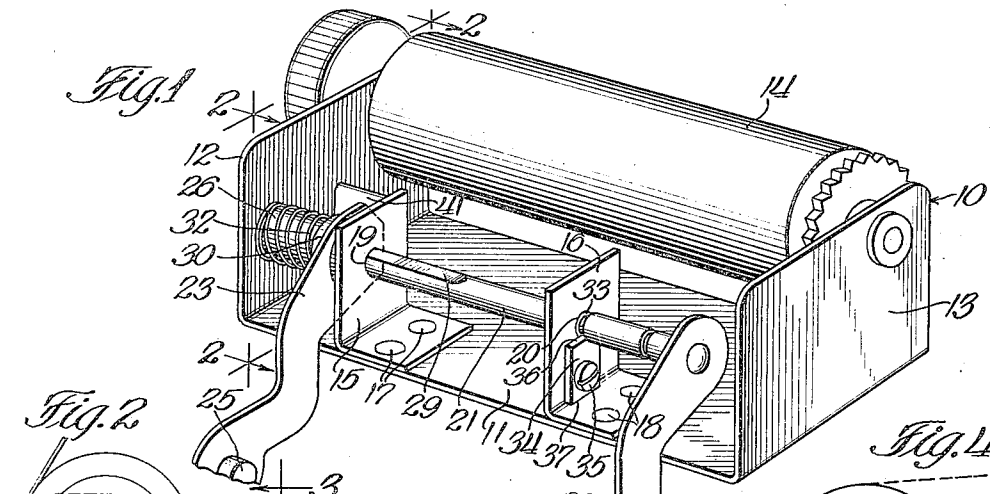


Fig. 1

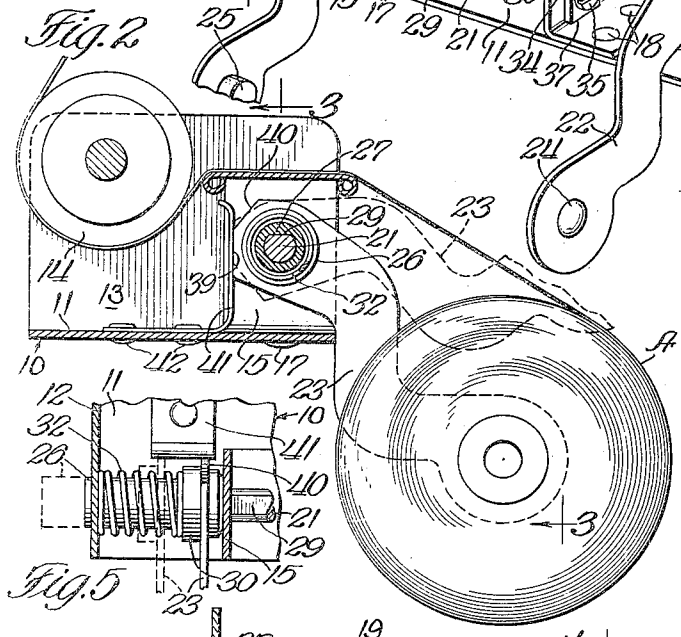


Fig. 2



Fig. 5

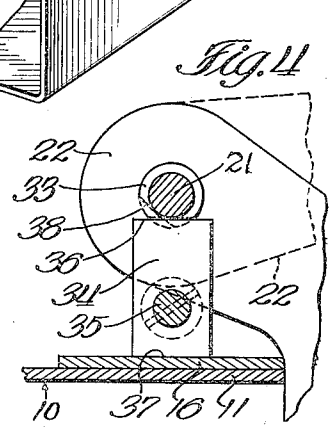


Fig. 4

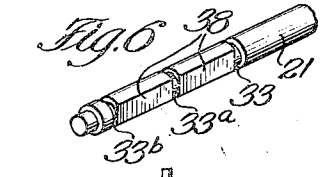


Fig. 6

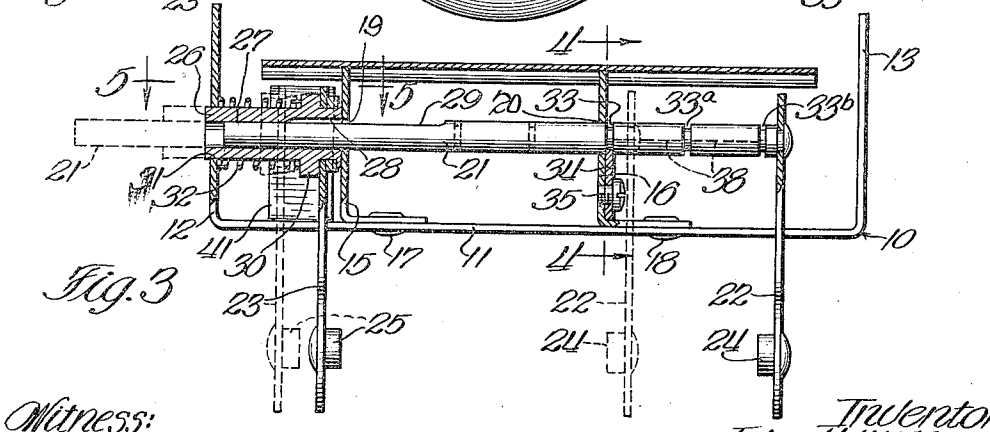


Fig. 3

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# UNITED STATES PATENT OFFICE

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## ADJUSTABLE PAPER ROLL SUPPORT

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Application June 24, 1937, Serial No. 150,086

8 Claims. (Cl. 242—55.2)

This invention relates to a paper roll support, and is more particularly directed to an adjustable support to accommodate for various widths of paper rolls.

The device is shown attached to an adding machine carriage that is provided with a platen around which the free end of the paper is fed from a roll supported by the device, the platen of the machine being of sufficient length to accommodate for different widths of paper.

The chief objects of the present invention are the provision of an adjustable paper roll support which is simple in construction, durable and inexpensive to manufacture and simple in operation, and which may be attached to or made an integral part of the machine.

Another object is the provision of a paper roll support which may be adjusted to different positions to accommodate for various widths of paper rolls, and which support, when adjusted, may be spread to permit of the insertion of the roll.

A further object is to provide a paper roll support which is adjustable to accommodate for various widths of rolls and which has yieldable means coacting therewith for permitting of its positioning to readily insert the roll and for temporarily supporting the same in a position to permit unhampered access to the support.

And a still further object is the provision of a paper roll support that is adjustable and arranged to be swung in a position to permit of accessibility thereto for inserting the roll and to be retained in its swung position during the insertion and in its operative position when the roll is inserted.

Referring to the drawing:

Figure 1 is a detail perspective view of a carriage with my improved paper roll support attached thereto.

Figure 2 is a detail cross-sectional view taken substantially on the line 2—2 of Figure 1.

Figure 3 is a sectional view taken substantially on the line 3—3 of Figure 2 and illustrates the support in changed position in dotted lines.

Figure 4 is an enlarged detail cross-sectional view taken on the line 4—4 of Figure 3.

Figure 5 is a partial detail plan sectional view taken substantially on the line 5—5 of Figure 3; and

Figure 6 is a detail partial perspective view of the means employed for accomplishing the adjustments of the supports.

The invention is illustrated as attached to an adding machine carriage designated as a whole as 10, comprising a bottom portion 11 and side walls 12 and 13, and with a platen 14 pivotally supported on the side walls.

The purpose of the invention is to provide a support for a paper roll A which has its free end fed around the platen and on which impressions are to be made, and which support may be adjustable to accommodate for various widths of rolls.

The support comprises a pair of L-shaped standards 15 and 16 which are secured at 17—18 to the bottom portion 11 of the carriage 10, and these standards are provided with aligned openings 19 and 20, respectively, into which a shaft 21 is journaled. A pair of arms 22 and 23 are carried in spaced relation on the shaft 21 and these arms are each provided at their free ends with roll-engaging heads 24 and 25. The arm 22 is secured to the shaft, while the arm 23 is keyed for turning movements with the shaft and for independent longitudinal movements thereon. This arm 23 has a relatively long hub 26 secured thereto which is provided with a flattened portion 27 in the bore 28 thereof which engages a flattened portion 29 milled longitudinally of the shaft 21. The hub 26 is provided with a shoulder 30 adjacent the arm 23, and its free end extends through an opening 31 in the side wall 12. A compression spring 32 surrounds the hub 26 and is interposed between the shoulder 30 thereof and the side wall 12 and serves to urge the arm 23 against the standard 15.

The shaft 21 is arranged for longitudinal sliding movements in the openings 19 and 20 of the standards, and is provided with a plurality of engageable annular recesses 33, 33*a* and 33*b*, any one of which may be brought into alignment with a retaining member 34 secured at 35 to the standard 16. This retaining member 34 is preferably provided with relatively flat top and bottom edges 36 and 37, respectively, the top edge extending slightly above the lower portion of the opening 20 while the bottom edge of the retaining member engages the inturned end of the standard 16 to prevent its displacement. Between the engageable recesses 33, and 33*b*, the shaft 21 is also provided with a flattened portion 38, which, when aligned with the top edge 36 of the retaining member 34 permits the shaft 21 to be slidably moved longitudinally in the standards 15 and 16.

When the shaft 21 is moved longitudinally, the flattened portion 29 thereof will slide in the hub 26 of the arm 23 which is being yieldingly held against movement by the spring 32. The arm 23 is provided adjacent the shaft 21 with a vertical

edge 39 and an inclined edge 40, which are adapted to be brought into engagement with a spring 41 secured at 42 to the bottom portion 11 of the carriage.

While in their normal positions, the arms 22 and 23 are swung downwardly and rest on the bottom portion 11 of the carriage, and while in this position, the vertical edge 39 of the arm 23 is engaged by the spring 41 which serves to yieldingly retain the arms in their lowered positions. At this time, the arm 23 may be moved outwardly against the tension of the spring 32 to permit of the insertion of the roll A between the roll-engaging heads 24 and 25 of the arms, and during this movement of the arm 23, the vertical edge 39 thereof will be slidably carried on the spring 41. After the roll A is in position, the arm 23 is then released and the spring 32 will urge the same toward the roll with its engaging head 25 in position to support the roll.

When a larger or smaller paper roll A is to be attached to the machine, the arms 22 and 23 are positioned the proper distance apart depending upon the width of the roll. This is accomplished in the following manner:

The arm 22 is swung upwardly and its movement carries the arm 23 therewith through the shaft 21 and the inclined edge 40 of the arm 23 is then brought into engagement with the spring 41 which retains the arms in their raised positions. When the arms are in this raised position, the flattened portion 38 of the shaft 21 is then aligned with the top edge 36 of the retaining member 34 and the shaft may then be moved longitudinally in the standards 15 and 16 with the arm 22. This longitudinal movement of the shaft 21 is for the purpose of varying the space between the arms 22 and 23 to accommodate for different widths of rolls A, and when properly positioned with one of the engageable recesses 33, 33*a* or 33*b* aligned with the retaining member 34, the arms may then be rocked downwardly which causes the flattened portion 38 of the shaft to be rocked out of alignment with the top edge 36 of the retaining member 34 and with this member then aligned in the recess selected. The paper roll A may then be positioned in the manner as above described by manually forcing the arm 23 outwardly against the tension of its spring 32 and then releasing the same permitting the roll-engaging heads 24 and 25 of the arms 22 and 23 to pivotally retain the roll.

I contemplate as being included in these improvements all such changes, variations and departures from what is thus specifically illustrated and described as fall within the scope of the appended claims.

I claim:

1. A paper roll support comprising a base having outwardly extending arms, said arms being pivotally carried for upward swinging movements on the base, means for adjusting said arms to vary the distance therebetween while they are swung upwardly and for locking them in their adjusted positions when lowered, and a pair of cooperating roll-engaging heads carried at the free ends of said arms.

2. A paper roll support comprising a base having outwardly extending arms pivotally carried for upward swinging movements thereon, the pivotal means for the arms being arranged for longitudinal movements with one of the arms on the base, means coacting with said pivotal means permitting the longitudinal movement thereof when said arms are swung upwardly, and means at predetermined positions of said pivotal means serving to retain said pivotal means in adjusted position when said arms are lowered; a pair of cooperating roll-engaging heads carried at the free ends of said arms, and yieldable means coacting with one of said arms permitting of its movement independently of said adjustable arm for inserting the roll.

3. A paper roll support comprising a base having spaced outwardly extending arms, said arms being pivotally carried for rocking movements on the base, means for adjusting said arms to vary the space therebetween while they are rocked upwardly and for locking them in their adjusted positions when lowered, and spring means coacting with one of said arms yieldingly resisting the rocking movements of the arms and forming means for releasably holding them in raised position when rocked.

4. A paper roll support comprising a base having outwardly extending arms pivotally carried for rocking movements thereon, means forming the pivotal means for said arms arranged for longitudinal movements on the base to vary the space between said arms, said means being movable to vary the space between said arms when said arms are rocked upwardly and for holding them in their adjusted positions when lowered, yieldable means normally permitting of independent movement of one of said arms for inserting the roll, and means yieldingly retaining said arms in their raised and lowered positions.

5. A support for a paper roll comprising, a base having standards thereon, a shaft journaled in said standards, a pair of spaced-apart arms carried by said shaft, means permitting of longitudinal movements of said shaft with respect to one of said arms for varying the space between the arms when swung upwardly, retaining means, engageable means at predetermined positions on said shaft arranged to be selectively positioned to coact with said retaining means when the shaft is moved longitudinally, the said retaining means retaining the shaft in adjusted position when the arms are swung to their normal positions.

6. A support for a paper roll comprising, a base having standards thereon, a shaft journaled in said standards, a pair of arms carried by said shaft, said arms being arranged for rocking movements with said shaft on said standards, one of said arms permitting of longitudinal movements of said shaft, retaining means on one of said standards, engageable means at predetermined positions on said shaft arranged to be selectively positioned to coact with said retaining means when the shaft is rocked and moved longitudinally, said engageable means coacting with the retaining means for retaining the shaft in adjusted position when said arms are restored to their normal positions.

7. A support adapted to support various widths of rolls, comprising, a base having standards thereon, a shaft carried for pivotal and longitudinal movements on the standards, a pair of arms carried by said shaft, said arms being arranged for pivotal movements with the shaft and one of said arms permitting of longitudinal movements of the shaft independently thereof, retaining means, means at predetermined positions on said shaft any one of which may be engaged by said retaining means to selectively vary the space between the arms to accommodate for various widths of rolls.

8. In a support for a paper roll, the combina-

tion with a base, a pair of spaced-apart arms supported to be raised or lowered on the base, means for adjusting and retaining one of the arms to vary the space between said arms for supporting different widths of rolls, means permitting of a yielding movement of the other arm for inserting the roll, and resilient means carried on the base and coacting with the arms to releasably retain them in raised or lowered positions.

JOHN H. WILLIAMS.