Oct. 15, 1935. M. N. SMALLEY 2,017,636

STATIONERY GUIDING INSTRUMENTALITY

Filed May 26, 1934

FIG. 1

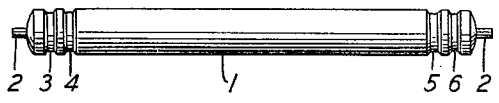


FIG. 2

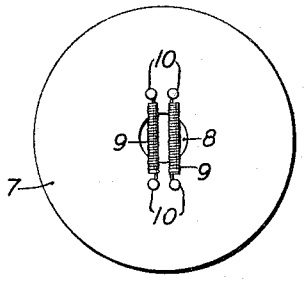
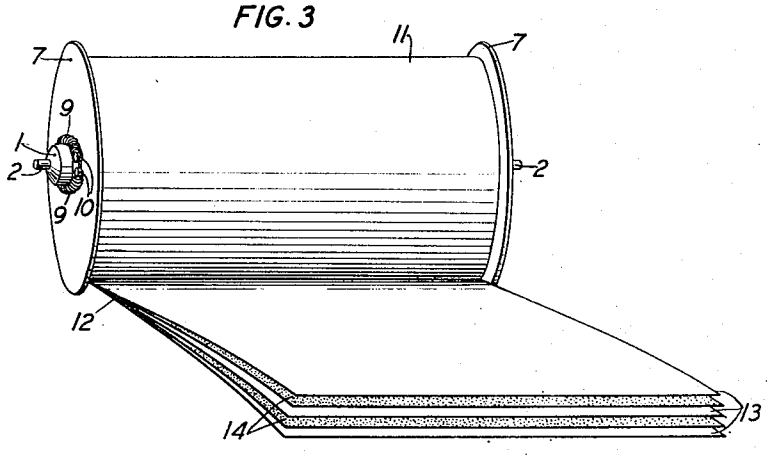


FIG. 3



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STATIONERY GUIDING INSTRUMENTALITY

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1 Claim. (Cl. 242—124)

This invention relates to an improved form of stationery guiding instrumentalities designed primarily for use in guiding unperforated multicopy stationery during the process of feeding it from a supply roll.

When unperforated multicopy stationery is fed from a supply roll by friction feeding instrumentalities into and through a printing machine, such as a teletypewriter, there is a tendency for the individual sheets of the multicopy stationery to weave sidewise and to become laterally misaligned. This tendency is due to differences in tension between different edges of the stationary, to unequal expansion of different parts of the individual sheets due to humidity, and to the fact that the stationery is intermittently unreeled in accordance with line by line typing operations. Such sidewise weaving and lateral misalignment are objectionable because they tend to cause bulging and buckling of the individual sheets of the multicopy stationery. This bulging and buckling impede, and sometimes prevent, the proper feeding of the stationery. This often results in tearing the edges of the stationery and in improper positioning of the words typed upon the stationery.

The purpose of the present invention is to reduce the sidewise weaving and lateral misalignment of unperforated multicopy stationery during feeding operations. In accordance with this invention, a supply roll of unperforated multicopy stationery is placed upon a spindle having a circular end-plate adjustably and detachably mounted on each end of the spindle and held closely against the edges of the supply roll. Due to the fact that this end-plate has a larger diameter than the supply roll has, the individual sheets of stationery cannot weave sidewise nor become laterally misaligned while they are on the supply roll but are held tightly in correct lateral alignment.

Although it has been stated above that these stationery guiding instrumentalities are designed primarily for use in guiding unperforated multicopy stationery, they may also be used in connection with the feeding of perforated stationery whether of the multicopy type or not, as well as single sheet unperforated stationery. These guiding instrumentalities are of great assistance when used for guiding multicopy stationery because the misalignment of the individual sheets of this type of stationery is much more objectionable than the misalignment of single sheet stationery. However, they are most useful when they are used for guiding unperforated multicopy stationery because such stationery is fed only by friction feeding instrumentalities which are not as capable of reducing misalignment of the individual sheets of stationery as are the sprocket feeding instrumentalities used for feeding perforated stationery.

The invention will now be described in detail in connection with the drawing in which:

Fig. 1 shows the spindle used for supporting a supply roll of stationery;

Fig. 2 illustrates the appearance of one of the end-plates when it is not mounted on the spindle; and

Fig. 3 represents the stationery guiding instrumentalities completely assembled for guiding stationery from a supply roll.

It can be seen in Fig. 1 that the spindle 1 has a projection 2 at each end. The purpose of these projections 2—2 is to enable the spindle to be rotatably mounted in a printing machine, such as a teletypewriter. It can also be seen that the spindle 1 has two circumferential grooves 3 and 4 in and near its left end and two more circumferential grooves 5 and 6 in and near the right end. The reason for having a plurality of grooves in and near each end of the spindle is to enable it to be used with supply rolls of different widths as will be explained later. For purposes of illustration, it may be assumed that it is intended to use the spindle 1 for supporting supply rolls which are either eight or eight and one-half inches wide. On the basis of this assumption, the supply roll 11, shown in Fig. 3, would be eight and one-half inches wide, the distance between the grooves 4 and 5 would be about eight inches, and the distance between the grooves 3 and 6 would be about eight and one-half inches.

The end-plate 7, shown in Fig. 2, is one of a pair. Because each of the end-plates is identical in form and construction only one has been shown here for the sake of simplicity. The end-plate 7 has a circular opening 8 in its center portion in order that the end-plate 7 may be mounted upon the spindle 1. Stretched across the circular opening 8 are two helically coiled springs 9—9 which are attached to the end-plate 7 by means of four rivets 10.

To assemble these stationery guiding instrumentalities into a complete assembly, as shown in Fig. 3, a supply roll 11 of unperforated multicopy stationery 12 is placed upon the spindle 1. This stationery 12 consists of individual sheets of paper 13 interleaved with carbon sheets 14. The stationery is usually wound on a cardboard roller (not shown) in order to make a compact

supply roll 11. In placing the supply roll 11 upon the spindle 1, all that is necessary to do is to simply push the spindle 1 inside the cardboard roller (not shown) of the supply roll 11.

After supply roll 11 has been placed upon spindle 1, an end-plate 7 is mounted upon one end of spindle 1, such as the left end, by inserting the end of spindle 1 through the opening 8 in end-plate 7 and between springs 9—9. The end-plate 7 is then pushed against the left edge of supply roll 11 thereby enabling springs 9—9 to fit into, or co-act with, groove 3 in spindle 1 thus securely holding end-plate 7 firmly against the edge of supply roll 11. The other end-plate 7 is then mounted in a similar manner upon the other end (the right end) of spindle 1. In this case, springs 9—9 will fit into groove 6 in spindle 1.

As was stated above, it is assumed that the width of supply roll 11 is eight and one-half inches and that the distance between grooves 3 and 6 is about eight and one-half inches. In other words, grooves 3 and 6 are so located as to cause end-plates 7—7 to be held in close juxtaposition with the edges of supply roll 11.

In Fig. 3, it can be seen that the diameter of each of the end-plates 7—7 is greater than the diameter of the supply roll 11. This serves to prevent any of the individual sheets of the multicopy stationery 12 from slipping or sliding over the edge of supply roll 11. As a result, the individual sheets of stationery 12 are held in correct lateral alignment on the cardboard roller (not shown) of supply roll 11 and, when supply roll 11 is rotated by the feeding of stationery 12 during printing operations, end-plates 7—7 will serve to guide stationery 12 from the supply roll 11 and will prevent stationery 12 from weaving sidewise and becoming laterally misaligned.

If it should be desired to use a supply roll of a different width, such as eight inches, the procedure (after placing it upon the spindle 1) would be to mount an end-plate 7 upon one end, such as the left end, of spindle 1 in the manner described above. This time, however, the end-plate 7 should be pushed over on the spindle 1 sufficiently to allow springs 9—9 to fit into groove 4. The other end-plate 7 would then be mounted on the right end of spindle 1 and should be pushed over closely against the edges of the supply roll. This would enable springs 9—9 to fit into groove 5, thereby holding both end-plates 7—7 in close juxtaposition with the edges of the supply roll.

In this manner, the plurality of grooves in each end of the spindle 1 enable the position of the end-plates 7—7 to be varied, or adjusted, in accordance with variations in the widths of the supply rolls used. The reason for having a plurality of grooves in each end of the spindle 1 instead of just one end is to enable a supply roll to be centered on spindle 1 regardless of the width of the supply roll.

It is to be understood that only two grooves have been shown in each end of the spindle 1 for the sake of simplicity. The invention is not limited to only two, but includes as many as are needed for the different widths of supply rolls that are desired to be used in a particularly printing machine. Likewise, the invention is not limited to circular end-plates but extends to end-plates of different shapes. The use of helical coiled springs has been shown as the preferred embodiment of the holding means for holding the end-plates on the spindle. Some other type of springs or similar holding means could be used without department from the scope of the invention which is to be determined only by the appended claim.

What is claimed is:

A device for holding a roll of stationery upon a roller having a circumferential groove in and near each end, said device including apparatus for reducing lateral misalignment of the stationery, said apparatus comprising flat end-plates having openings therein for enabling the ends of the roller to be passed through the end-plates, each of said end-plates having a larger diameter than the roll of stationery, and instrumentalities for holding the end-plates in place upon the roller and in close juxtaposition with the edges of the roll of stationery, said instrumentalities including a plurality of helically coiled springs attached to each end-plate and stretched across the opening in each end-plate for engaging with the grooves in the roller.

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