June 16, 1925.

1,542,221

H. DE JARNETTE

SECTIONAL INKING ROLLER

Filed March 12, 1923

2 Sheets-Sheet 1

Fig. 1

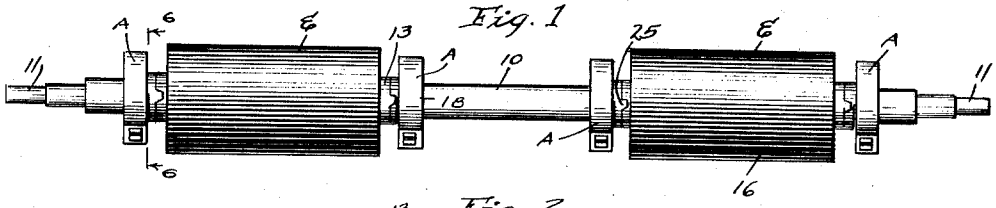


Fig. 2

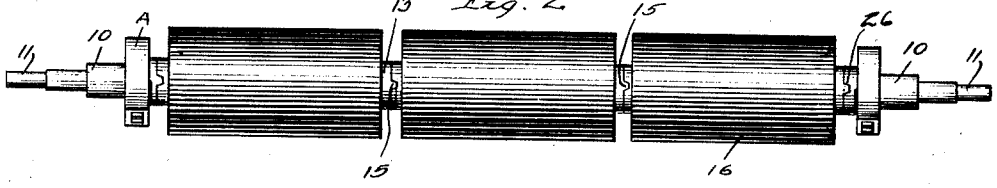


Fig. 5

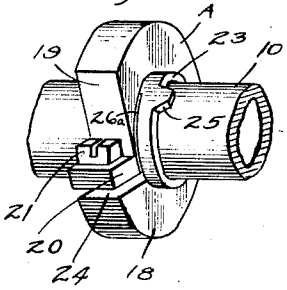


Fig. 3

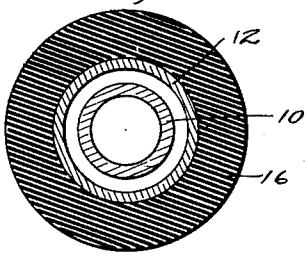


Fig. 6

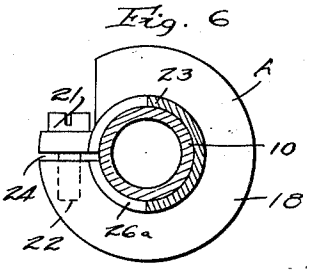


Fig. 4

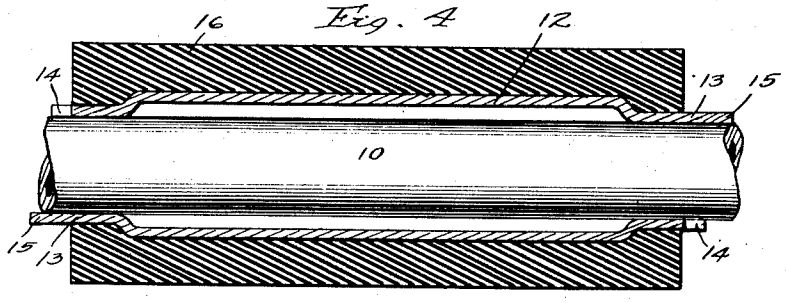
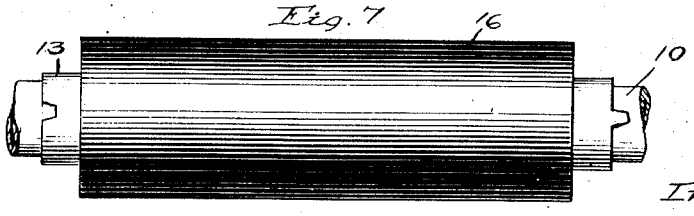


Fig. 7



Witness
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June 16, 1925.

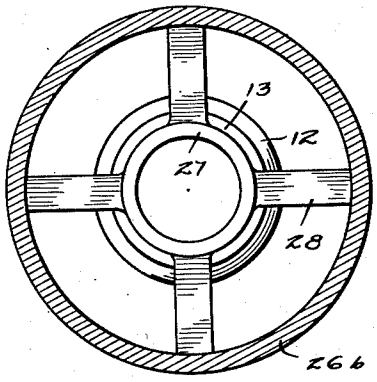
1,542,221

H. DE JARNETTE

SECTIONAL INKING ROLLER

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Fig. 10



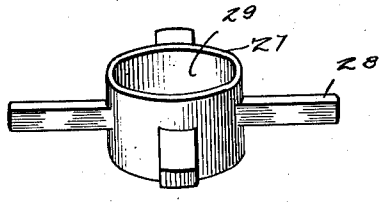


Fig. 11

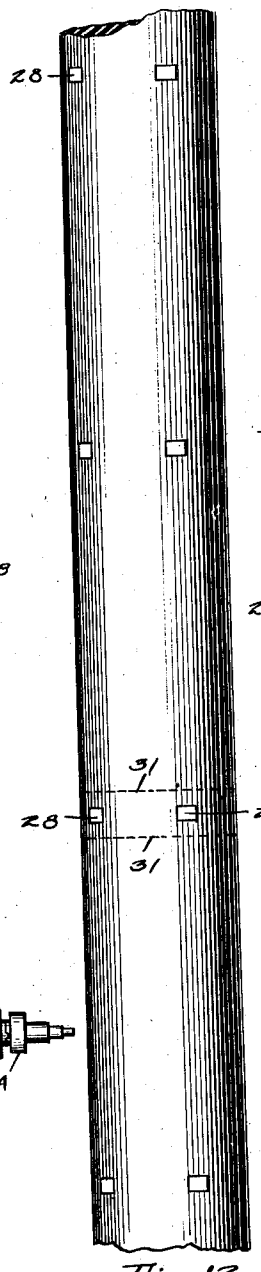


Fig. 12

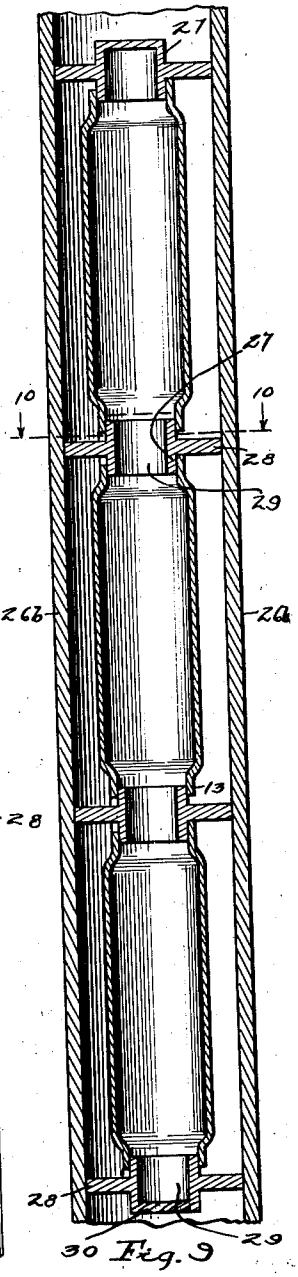
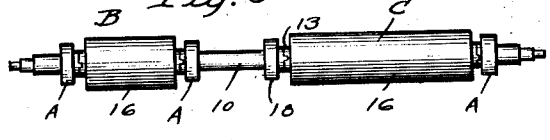


Fig. 9

Fig. 8



Witness
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Inventor
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By Bair & Freeman Atty's

Patented June 16, 1925. 1,542,221

UNITED STATES PATENT OFFICE.

HENRY DE JARNETTE, OF DES MOINES, IOWA.

SECTIONAL INKING ROLLER.

Application filed March 12, 1923. Serial No. 624,481.

To all whom it may concern:

Be it known that I, HENRY DE JARNETTE, a citizen of the United States, and a resident of Des Moines, in the county of Polk and State of Iowa, have invented a certain new and useful Sectional Inking Roller, of which the following is a specification.

It is the object of my invention to provide a sectional inking roller for printing, offset, lithographing and all other presses for making impressions or prints with ink, whereby substantial economy in the use of such rollers may be effected.

A further object is to provide such sectional inking rollers together with means whereby they may be mounted on a core without weakening the core.

An additional object is to provide sectional rollers so constructed as to use a minimum of material.

With these and other objects in view, my invention consists in the construction, arrangement and combination of the various parts of my sectional inking roller, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claim, and illustrated in the accompanying drawings, in which:

Figure 1 shows a plan view of a core having thereon sectional rollers embodying my invention.

Figure 2 shows a similar view with the sectional rollers arranged in a different way.

Figure 3 shows a transverse, sectional view through the core and one of the sectional rollers thereon.

Figure 4 shows a longitudinal, sectional view taken at right angles to the view shown in Figure 3.

Figure 5 shows a perspective view illustrating one of the clamps for holding the sectional rollers in place mounted on the core.

Figure 6 shows a detail, sectional view taken on the line 6—6 of Figure 1.

Figure 7 shows an enlarged, plan view of one of the rollers on the core.

Figure 8 shows another plan view, showing the core with a quarter length and a one-half length roller thereon.

Figure 9 shows a detail, sectional view through the mold and the means used for properly supporting and spacing the sectional roller linings therein.

Figure 10 shows a detail, sectional view taken on the line 10—10 of Figure 9.

Figure 11 shows a perspective view of one of the separator members; and

Figure 12 shows a plan view of several of the sectional rollers as they are taken from the mold.

In the process of printing, it is well known that ink is distributed from a fountain by a series of rollers. In the series, metal-faced rollers alternate with composition-faced rollers.

It is well known to pressmen that in common practice, the rollers are made of maximum length but that in printing certain comparatively narrow sheets, it is necessary and it is the practice to ink only a portion of the length of each roller.

The portions not inked deteriorate during the use of the machine. At the edges of the inked portion, ink dries on the surface of the roller, and sometimes that portion of the roller on which the ink has dried is rendered dead and useless.

It also frequently occurs that those portions of the composition rollers, which are not inked, bulge or crack on account of heating.

Sometimes when it is desired to print two or more colors from the same fountain at one impression, the pressman cuts grooves in the composition roller, and it sometimes occurs that after the work for which the cut roller is used is finished, there is no further use for such a roller, and it is obvious that since rollers are expensive, such a process involves the loss of a piece of property of substantial value.

It is my purpose to provide sectional rollers, whereby the evils above referred to may be obviated in a printing plant.

I have therefore provided my sectional rollers, which will now be described.

In the accompanying drawings, I have used the reference numeral 10 to indicate generally the central portion of a core of a composition roller. In practice, the central portion 10 is usually made of a piece of steel tubing, having the spindle 11 welded into its ends.

My improved sectional composition roller comprises a tubular section lining 12, having reduced ends 13.

Each end 13 is provided with a notch 14 and transversely opposite with a tongue or projecting lug 15. The notch 14 at one end 13 of the lining 12 is arranged in line with the tongue 15 at the other end thereof.

The lining 12 is covered by composition 16 of the kind used on any kind of composition rollers.

I have found by experience that the core 10 must not be grooved or otherwise weakened because it is comparatively thin-walled, and if grooved or otherwise weakened will sag somewhat and result in improper distribution of the ink from roller to roller. This sagging will occur even with a solid core, if the core is grooved throughout a substantial portion of its length. Therefore, in order to secure the sectional roller in place on the core 10 against the relative rotation therein and against longitudinal movement on the core, I have provided the clamps A, which in each instance comprise a split annular ring 18, each having in its periphery a portion cut away at as 19, leaving a projecting shoulder or the like 20 in which is mounted a screw bolt 21 adapted to project across the break in the ring and to be screwed into an opening 22, as illustrated for instance in Figure 6.

The screw bolts 21 may be provided with angular heads or with screw driver notches or both as may be desired.

Each ring 18 has secured thereto an annular hub 23. The hub 23 is secured to the ring 18 for a portion only of the circumference of the hub, so as to leave no connection between the body of the ring 18 and the hub 23 for a considerable distance on each side of the break or split 24 in the ring.

Each hub 23 is provided with a tongue or projecting lug 25 and diametrically opposite with a recess 26. The tongues 25 and recesses 26 are designed to respectively enter and receive the recesses 14 and tongues 15 on the ends 13 of the lining 12.

It will be understood that the sectional rollers may be made of any desired length to properly ink the page to be printed.

In Figure 8, I have shown a quarter length sectional roller B and a half-length sectional roller C mounted on the core 10.

In Figure 1, I have shown one-third length rollers E mounted on the core 10 in the ends thereof and have shown the central portion of the core without the sectional rollers.

In Figure 2, I have shown three sectional rollers mounted on the core in a way which will not ordinarily be used with their adjacent ends connected together with the tongues 15 of one roller received in the notches 14 of the adjacent roller.

Where sectional rollers of the kind herein shown are employed, a number of advantages are secured.

By using a sectional roller of the proper length for inking the page to be printed, I do away with the danger of overheating or otherwise spoiling a considerable portion of the length of an ordinary roller.

It is necessary to provide metal linings in order to be able to detachably mount and hold the sectional rollers on the cores. By using the linings 12 of the form shown, spaced from the cores 10, except at the ends of the linings, I make it possible to use less composition and thus effect a substantial saving of that material.

The sectional rollers can be placed at any point on the length of the core and by the use of the tongues and notches in the ends 13 and by the use of the clamp devices hereinbefore described, the sectional rollers can be locked on the core wherever desired, without any weakening and consequent danger of sagging of the core with the roller thereon.

The rollers can be mounted wherever desired, are easy to adjust, and neither they nor the clamps will get out of order, nor mar or weaken the surface of the core. They do away with the danger of spoiling long rollers by heating or the drying of the ink on the surface of the long rollers. They do away with the necessity for notching or grooving long rollers.

The use of the sectional rollers accomplish another substantial saving in the following respect:

It is well known that after composition rollers have been used for a certain length of time, they have to be sent back to the factory to have the composition taken off and replaced. With the ordinary rollers, it is necessary to send the entire cores at a considerable freight expense. Where the sectional rollers are employed only the sectional linings 12 need be returned to the factory for recovering with composition.

Where the composition on a small portion of the ordinary roller is spoiled, then before that part of the roller can be used again, the whole roller must be recovered and this involves removal of that part of the composition, which is still good, and recovering the whole roller. This old method involves the expense of shipping and handling the whole roller and core. Where one of my sections, for instance of one-fourth length, deteriorates, only that section, without the core, need to be shipped and recovered.

My sectional rollers can be used with the old or ordinary cores and their use therefore does not necessarily involve the expense of buying new cores.

My experience has been that by leaving the space between the lining 12 and the core 10, the rollers do not heat so quickly as where the composition is placed on the core itself, nor where the linings fit snugly on the core. I find that by making the linings with the reduced ends, it is easier to slip the sectional rollers to the proper place on the core than where the linings fit the core snugly for their entire length. This is especially true if there should be a slight

variation from true in the core. These sectional rollers are less expensive to use than the ordinary rollers, are more durable and are more practicable for the general line of work.

Some changes may be made in the construction and arrangement of my sectional rollers, and it is my intention to cover by my claim any modified forms of structure or use of mechanical equivalents, which may be reasonably included within their scope.

I claim as my invention:

In a sectional composition roller, a cylindrical metal core, a sectional roller supported thereon comprising a tubular lining having reduced ends to fit said core, and a composition cover for said lining, clamp devices for securing said lining to said core, said clamp devices and the reduced ends of the lining having coacting tongues and notches.

HENRY DE JARNETTE.