Jan. 2, 1934. W. SCHOULTHEIS 1,941,495

SLEEVE FOR PRINTING PRESS PAPER ROLLS

Filed Nov. 21, 1932

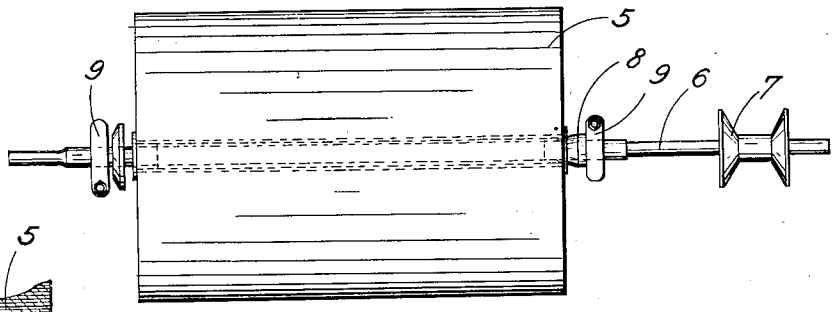



Fig. 1

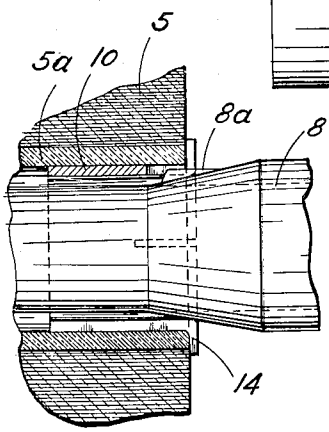



Fig. 3

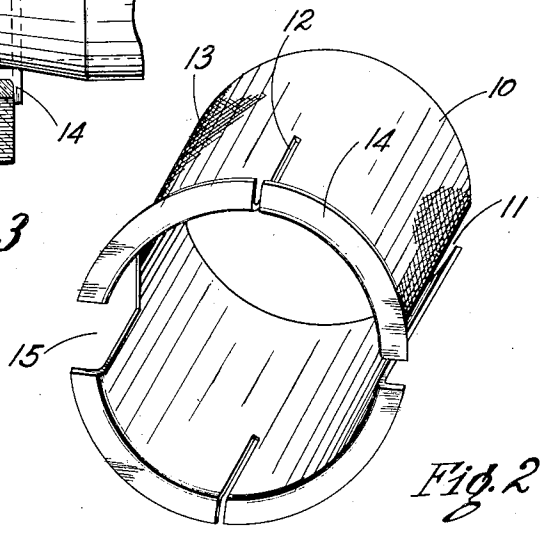



Fig. 2

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Patented Jan. 2, 1934 1,941,495

# UNITED STATES PATENT OFFICE

1,941,495

## SLEEVE FOR PRINTING PRESS PAPER ROLLS

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Application November 21, 1932
Serial No. 643,646

5 Claims. (Cl. 242—68)

This invention relates to chuck sleeve for paper rolls as used in web printing presses.

It is common practice in the operation of web printing presses to wind the paper on a tubular core of suitable material, such as heavy cardboard or the like, having fixed on each end thereof a metal ring or sleeve adapted to engage the paper roll chucks with which the presses are equipped, said chucks constituting part of the braking or tension mechanism for the traveling paper web. In the event the braking mechanism is of the belt or other type which acts on the peripheral or side portion of the roll instead of on a central roll shaft or axis, said metal rings or sleeves serve simply to protect the ends of the core. The cores together with their end rings or sleeves constitute a fixed or unitary structure which the paper manufacturer ships to the consumer, or printing establishment with each roll of paper. Since the cost of this type of core is too high to permit scrapping of the cores after the paper rolls have been run off, it becomes necessary to ship them back to the manufacturer after a certain number have accumulated at the printing establishment, entailing additional labor, storage space and return freight or shipping costs.

The primary object of the present invention is to provide a simplified, efficiently acting type of detachable chuck sleeve for paper rolls which may be kept in stock by the printing establishment and easily and quickly applied to and removed from an ordinary paper core. Thus the paper may be wound on a plain paper core or any other suitable cheap material, the improved detachable chuck sleeves inserted when the roll is placed in operative position in the press, and after the paper has been run off, the sleeves removed and the cores scrapped, thereby eliminating the necessity of return shipment and the items incident thereto.

The foregoing and other objects and advantages will become apparent in view of the following description taken in conjunction with the drawing, wherein:

Figure 1 is a view in elevation of a roll of paper having the improved detachable chuck sleeve inserted in the ends of the core thereof and mounted in operative position on a conventional type of brake shaft and chuck assembly for web printing presses;

Fig. 2 is a view in perspective of the improved sleeve, and,

Fig. 3 is an enlarged fragmentary view in section of the end of a core showing the sleeve inserted therein and its relation to the paper roll chuck.

Referring in detail to the drawing, the numeral 5 designates a roll of paper, 6 a shaft on which the roll with its core 5*a* is mounted, 7 a tension pulley, 8 the paper roll chucks each of which is provided with a driving lug 8*a*, and 9 the clamp rings for said chucks.

The improved detachable chuck sleeve is shown in detail in Fig. 2 and is generally designated at 10. The sleeve may be, and preferably is formed of tubular steel stock having a certain amount of flexibility to permit the sleeves to spring slightly when applied to the chucks 8 the inside diameter of the sleeve being slightly less than the greatest diameter of the said chucks. 11 is a slot which extends the full length of the sleeve and permits flexing of the latter when inserted in the paper roll core, while 12 are expansion kerfs that are preferably formed at diametrically opposite points in the sleeve to facilitate application over the tapered chucks 8. The exterior surface of the sleeve is preferably roughened as at 13 to ensure against slippage of the core 5*a* on the sleeve.

The chuck end of the sleeve is formed with a stop lip 14 which abuts against the end of the core when the sleeve is inserted therein. 15 designates a notch or recess which is formed in the sleeve and is adapted to engage the lug 8*a* and provide a driving connection between the sleeve and chuck.

The sleeves form part of the stock of the pressroom and are applied to the cores of the rolls when the latter are mounted on the presses. The cores on which the paper is wound may be made up from a cheap grade of material such as paper so that they may be discarded when the roll has been run off. To apply the sleeves, they are simply contracted and inserted into the core until the lip 14 abuts against the end thereof. The roll is then ready to be mounted on the shaft 6. When the chucks and sleeves are moved into engagement, the slot 15 registers with the lug 8*a* and the chucks cause the sleeves to expand against the core.

On presses that regulate tension by friction belts or other means, the improved sleeves serve as a detachable protective cap to prevent breaking of the core with resultant mutilation of the paper wound thereon.

What I claim is:—

1. In a printing press, a tubular core having a roll of printing paper wound thereon, brake mechanism for said roll including a supporting shaft

and tapered chucks mounted on said shaft, and detachable, interchangeable chuck-engaging sleeves being formed with a full-length slot to permit flexing of the sleeve when inserted in the core and kerfs to facilitate expansion of the sleeve when engaging the chuck.

2. A detachable chuck-engaging sleeve for paper roll cores for printing presses consisting of a tubular member formed with a full length slot to facilitate insertion in said core and kerfs to facilitate expansion of the sleeve against the core when telescoped over a chuck, and a stop lip at one end of the sleeve.

3. In a printing press, a tubular core having a roll of printing paper wound thereon, brake mechanism for said roll including a supporting shaft and tapered chucks mounted on said shaft, each of said chucks being provided with driving lugs, and detachable, interchangeable chuck-engaging sleeves for said core, each of said sleeves consisting of a resilient tubular piece of steel tubing formed with a full-length slot to facilitate flexing of the sleeve when inserted in the core and a recess adapted to engage the lugs of the chuck and establish a driving connection between the sleeve and chuck, each of said sleeves being also formed with expansion kerfs to facilitate expansion of the sleeve against the core and a stop lip at one end of the sleeve.

4. A chuck engaging sleeve for paper rolls comprising a tubular member formed with a full length slot to facilitate insertion into the paper roll, a kerf extending inwardly from the outer end of said tubular member, and a driving lug engaging notch extending inwardly from said last named end of the tubular member.

5. In a printing press, a tubular core having a roll of printing paper wound thereon, brake mechanism for said roll including a supporting shaft and tapered chucks mounted on said shaft, each of said chucks being provided with driving lugs, and detachable, interchangeable chuck-engaging sleeves for said core, each of said sleeves consisting of a resilient tubular piece of steel tubing formed with a full-length slot to facilitate flexing of the sleeve when inserted in the core and a recess adapted to engage the lugs of the chuck and establish a driving connection between the sleeve and chuck, each of said sleeves being also formed with expansion kerfs diametrically opposed and circumferentially disposed intermediate said slot and said recess to facilitate radial expansion of the end portion of said sleeve against the core and a stop lip at one end of the sleeve.

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