March 9, 1954 B. J. KURLINSKI 2,671,618

REWIND CORE SPACER

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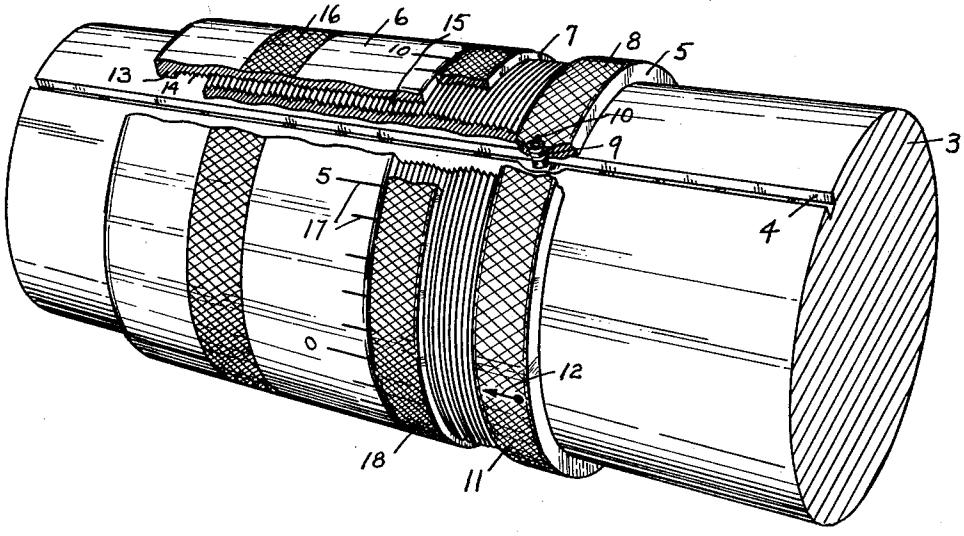


FIG. 1

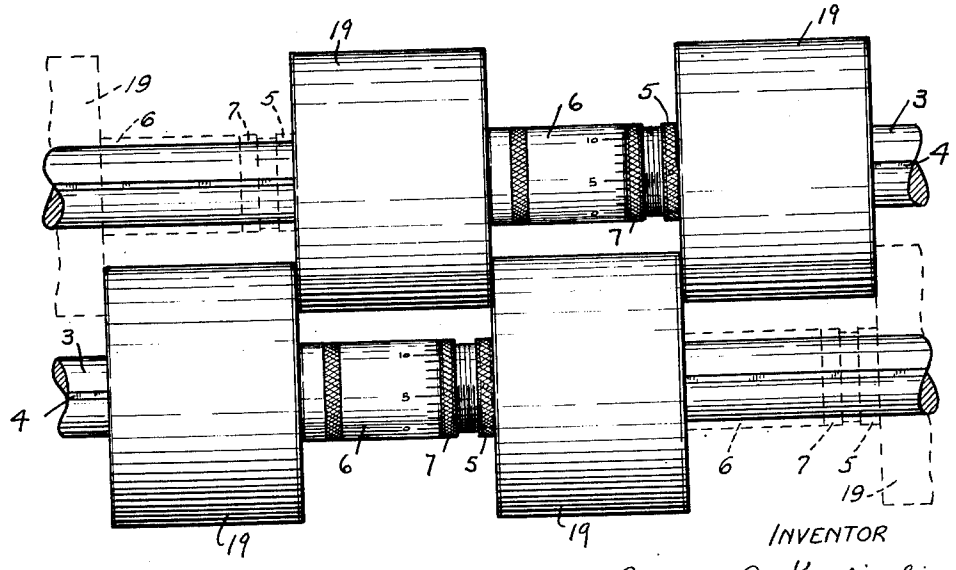


FIG. 2

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REWIND CORE SPACER

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2 Claims. (Cl. 242—68)

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The invention relates to adjustable spacers for the rewind shafts of duplex type paper roll rewinding machines.

In the rewinding of paper from a long paper roll that has been slit into a number of smaller rolls, the smaller rolls are rewound on cores mounted on a pair of spaced roll shafts, and these cores have to be accurately spaced apart so that the rolls will be wound on these shafts without interference. The object of this invention is to provide an adjustable spacer of metal, plastic, or other suitable relatively hard material for accurately spacing the cores on each rewind shaft and whose effective length may be readily and quickly adjusted without the use of tools.

A further object of the invention is to provide an accurate micrometer adjustment of the spacer between roll cores on duplex shaft paper rewinding machines.

The invention further consists in the several features hereinafter set forth and more particularly defined by claims at the conclusion hereof.

In the drawings:

Fig. 1 is a perspective view of a spacer embodying the invention, parts being broken away and parts being shown in section;

Fig. 2 is an elevation view of the invention as applied to the two rewind shafts of a duplex rewinder, with paper rolls wound up on these shafts.

Referring to the drawings, the numeral 3 designates each of the spaced rewind shafts. Each of these shafts is provided with a keyway 4 which extends substantially the entire length of the rewind area of the shaft so that the spacer may be mounted at any desired point along the length of the rewind shaft.

The spacer comprises a pair of sleeves 5 and 6 having a lengthwise adjustable threaded connection with each other and a locking collar 7 for securing these sleeves in their adjusted position.

The first named sleeve 5 slidably bears or fits throughout its length on the rewind shaft 3 and has an external thread extending its full length except for an annular flange end portion 8 which carries a key 9 that works in the keyway 4 of the shaft 3. The key 9 is here shown as an Allen-headed member having a threaded connection with the flange 8 and which may be locked to said flange by upsetting a part of the threaded connection at 10 between the flange and the key 9 by the use of a prick punch. The knurled or roughened surface 11 on the flange facilitates its handling, and said flange also has a zero point mark 12 punched or otherwise suitably formed on its outer surface.

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The second named sleeve 6 has a short end portion 13 which slidably bears on the rewind shaft 3 and is internally threaded throughout the greater portion of its length with threads 14 which have a smooth working fit with the external threads 15 of the sleeve 5. A portion 16 of the outer surface of the sleeve 6 is knurled or roughened to provide a hand grip. At its inner end a series of radially spaced micrometer graduations 17 are cut in the outer surface of the sleeve 6, which graduations cooperate with the zero point mark 12 in determining the final angular adjustment of the sleeves 5 and 6 relative to each other. The graduations 17 may provide five major radially spaced divisions 0–5–10 etc., with four or more equally spaced subdivisions as indicated on Fig. 1.

The locking collar 7 is internally threaded to engage the threads 15 of the sleeve 5 and has a knurled or roughened hand gripping outer surface 18 so that said collar may be turned up by hand into abutting locking engagement with the inner end of the sleeve 6 after the desired adjustment of the sleeve 6 relative to the sleeve 5 has been made.

In use an appropriate number of the spacers above described are slipped onto the rewind shafts 3 together with the cores (not shown) for the paper rolls 19. The cores are positioned so as to aline with the paper webs coming from the slitter of the machine, and then the sleeves 5 and 6 are adjusted lengthwise relative to each other and locked so as to hold the cores against endwise movement relative to the rewind shaft 3.

The sleeves 5 and 6 and lock collar 7 may be made of metal, plastic, or other durable material so that they will have a long life and have in practice been found to save considerable time in the setting up of the rewinder as compared to the usual practice of using spacers cut from roll core paper stock.

I desire it to be understood that this invention is not to be limited to the details of construction herein described except in so far as such limitations are included in the appended claims.

What I claim as my invention is:

1. In a duplex paper rewinding machine, the combination of a smooth surfaced rewind shaft having a keyway extending the effective length thereof, and an adjustable core spacer comprising a pair of sleeves having lengthwise adjustable threaded connection with each other throughout the major portions of their lengths and each having a part slidably bearing on said shaft, one of said sleeves having an annular flanged end portion, a locking key mounted in said end portion

and engaging in said keyway to fix this sleeve against rotation and lengthwise movement relative to the shaft and constituting the sole means for holding the spacer on the shaft against lengthwise movement, the other of said sleeves having a roughened exterior surface providing a hand grip for rotating this sleeve relative to the keyed sleeve to vary the effective length of said spacer, and a locking collar in threaded engagement with the keyed sleeve and having a roughened exterior surface providing a handgrip for rotating this collar into abutting locked engagement with the inner end of the other sleeve.

2. The structure as defined in claim 1, wherein one of said sleeves has a zero point indicator marking, and the other of said sleeves is provided with micrometer graduations adapted to cooperate with said indicator for adjusting said sleeves in a definite lengthwise relation with each other.

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