J. W. SNYDER.

FEED ROLL.

APPLICATION FILED AUG. 28, 1915.

1,180,676.

Patented Apr. 25, 1916.

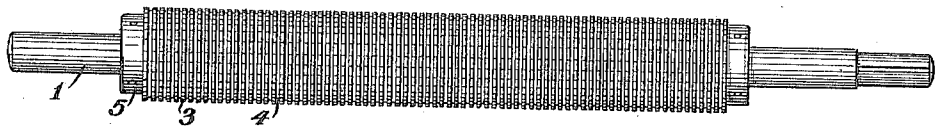


Fig. 1

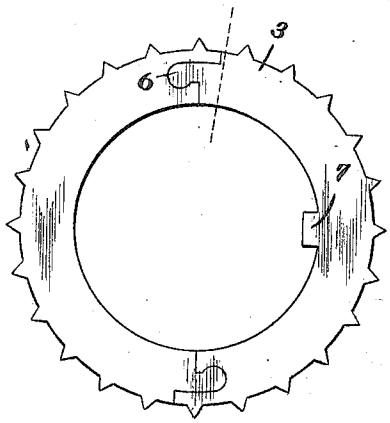


Fig. 3

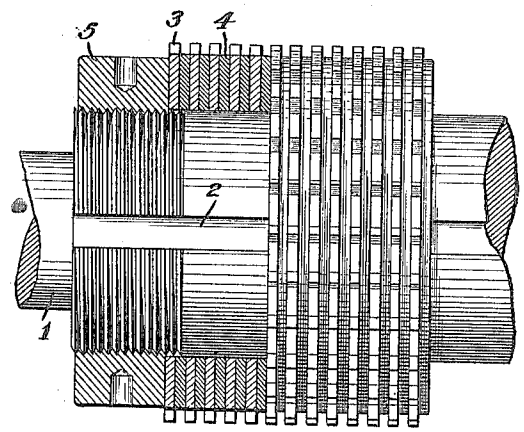


Fig. 2

Witness:
Geo. Johnson

Julius W. Snyder
Inventor
by James W. See
Attorney

UNITED STATES PATENT OFFICE.

JULIUS W. SNYDER, OF NEW ORLEANS, LOUISIANA, ASSIGNOR TO C. T. PATTERSON COMPANY, OF NEW ORLEANS, LOUISIANA.

FEED-ROLL.

1,180,676. Specification of Letters Patent. Patented Apr. 25, 1916.

Application filed August 28, 1915. Serial No. 47,753.

To all whom it may concern:

Be it known that I, JULIUS W. SNYDER, a citizen of the United States, residing at New Orleans, Orleans parish, Louisiana, have invented certain new and useful Improvements in Feed-Rolls, of which the following is a specification.

This invention pertains to feed-rolls designed for the feeding of, for instance, lumber in wood-working machinery in which the article to be fed forward is gripped between a pair of rolls, one or both of which are driven by power. In many cases where such feed rolls are employed, one or both of the rolls are serrated or fluted, and, in some cases, the flutes are divided longitudinally so as to provide the roll with a plurality of circumferential series of teeth.

My invention directs itself to the building up of a roll carrying a plurality of toothed disks.

I further provide special facilities for the removal of damaged individual toothed disks and the placing of new ones, without entirely dismantling the roll.

My invention will be readily understood from the following description taken in connection with the accompanying drawing in which:—

Figure 1 is a side elevation of a feed-roll exemplifying my improvements: Fig. 2 a side elevation, part diametrical section, of a portion of the improved roll on an enlarged scale: and Fig. 3 a face view of one of the serrated disks.

In the drawing:—1, indicates the shaft of the feed-roll, this shaft having preferably a portion of enlarged diameter between the end portions of the shaft: 2, a key-way in the enlarged portion of the shaft: 3, toothed or serrated feed-disks strung upon the enlarged portion of the shafts, these disks being preferably formed of interlocking halves: 4, spacing disks strung upon the shaft, a spacing disk being disposed between each pair of feed disks: 5, nuts on the shaft for clamping the disks together into a rigid structure: 6, interlocking lugs formed upon the halves of the feed disks to prevent their separation from each other when they are in a common plane: and 7, a projection inwardly from the bore of each of the feed disks.

Feed-rolls, as a general thing, comprehend the body-portion which is to engage in the feeding operation, and end portions to form journals and to receive actuating gears, or the like. In the present case the feed disks and spacing disks are strung upon the shaft and firmly clamped thereto by means of the nuts 5, it being obvious that one of the nuts may, instead of being a nut proper, be a collar fixed on the shaft to serve as an abutment when the other nut is screwed up to clamp the disks. The projections 7 of the disks engage the key-way of the shaft and prevent the slipping of the feed disks if insufficiently clamped. For light feeding work the projection and the coöperating key-way may, of course, be omitted, the friction of the clamping being depended upon to insure the rotation of the feed-disks.

If it becomes necessary to replace a feed disk it is only necessary to slacken one of the nuts sufficiently to permit the separation of the disks at each side of the disk to be removed, the degree of separation being equal to a trifle more than the thickness of the disk to be removed. One of the halves of the defective disk may then be shifted sidewise relative to the other half, whereupon both halves of the disk may be removed from the shaft. The two halves of the substitute disk are applied to the shaft in an obvious manner, after which the clamping nut is to be screwed up. The interlocking of the halves of the feed disks insures the integrity of each disk when clamped in place, but for light feeding work the interlocking feature may be omitted and the friction of the clamping be depended upon to keep the halves of the disks from separating from the shaft. The feed disks and the spacing disks may be formed of metal punchings, though metal is not absolutely essential for the spacing disks. If it is convenient to remove the roll from its working position, the clamping nut may be unscrewed and removed and all or a desired number of the disks removed from the shaft in order to substitute a new disk for a defective one. In such case the feeding disks need not be formed in halves.

I claim.

A feed-roll comprising a shaft, an abutment carried by the shaft near one of its ends, a clamping nut carried by the shaft near its other end, a series of flat-faced spacing-disks disposed upon the shaft, a flat-

sided feeding-disk formed in sections disposed between each pair of spacing-disks and having equal thickness throughout its extent, and interlocking members integrally formed on the contiguous edges of the sections of the feeding disks and having a thickness not exceeding the thickness of the peripheries of the feeding-disks, combined substantially as set forth.

JULIUS W. SNYDER.

Witnesses:
T. J. TOMENY, Jr.,
JOSEPH J. IRWIN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."