A. LIBERT.

FEED ROLLER FOR LUMBER WORKING MACHINES.

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1,192,540.

Patented July 25, 1916.

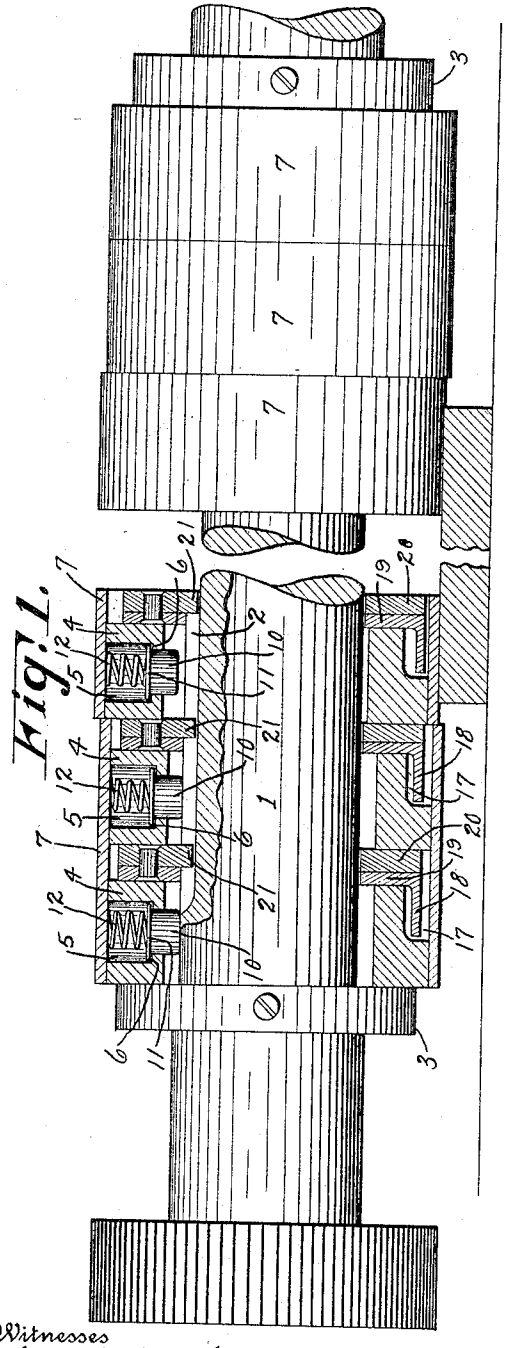


Fig. 1.

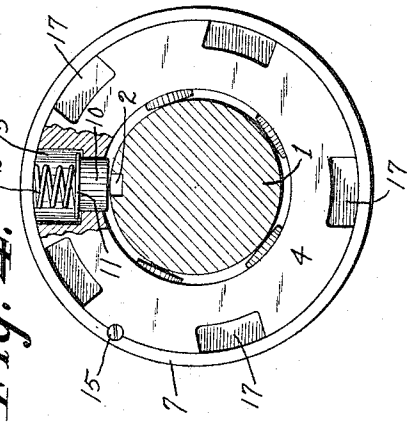


Fig. 4.

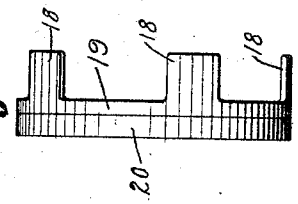


Fig. 3.

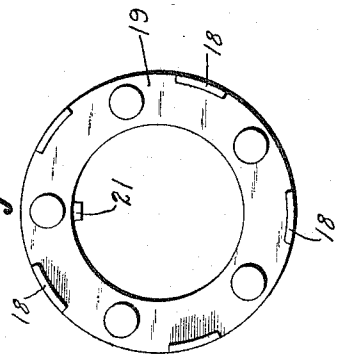


Fig. 2.

Witnesses
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

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FEED-ROLLER FOR LUMBER-WORKING MACHINES.

1,192,540. Specification of Letters Patent. Patented July 25, 1916.

Application filed August 15, 1913. Serial No. 784,862.

To all whom it may concern:

Be it known that I, ARTHUR LIBERT, a citizen of the United States, residing at Green Bay, county of Brown, and State of Wisconsin, have invented new and useful Improvements in Feed-Rollers for Lumber-Working Machines, of which the following is a specification.

The object of my invention is to provide a form of feed roller for lumber working machines, the periphery of which is composed of a series of yielding annular units, whereby boards of unequal thickness may be simultaneously fed between rollers, one or both of which embody my invention, and substantially equal pressure exerted upon all of them.

In the drawings—Figure 1 is a view, partly in axial section, of a feed roller embodying my invention and with the left hand unit partially broken away to a plane cutting one of the clutch fingers. Fig. 2 is a side view of one of the individual clutch members. Fig. 3 is an edge view of the same. Fig. 4 is a side view of one of the yielding units partially broken away to expose one of the cushioning members.

Like parts are identified by the same reference characters throughout the several views.

The roller shaft 1 is provided with a key groove 2. A set of annular units are loosely mounted upon the shaft between retaining end collars 3. Each of these units comprises a ring 4 provided with radial holes 5 shouldered at 6 and covered peripherally by a rim 7. A headed plunger pin 10 is socketed in each of the holes 5 through which it projects into contact with the shaft 1, the inward movement of the pin being limited by the head 11 of the pin, which bears upon the shoulder 6. Coiled springs 12 are interposed between the heads 11 of the pins and the exterior rim 7. These springs are inserted and partially compressed preparatory to the adjustment of the rim upon the ring 4, after which the ring and rim are secured together by screws 15. The pins 10 bear upon the shaft 1 and normally hold the ring 4 out of contact with it on all sides, the shaft receiving aperture of the ring being large enough to allow the ring to move radially under pressure sufficient to push the pins farther into their sockets on the side at which the pressure is applied. The springs 12 being normally under pressure, resistance will be offered to the radial movement of the pins, but the springs are of such length that their resistance will not be greatly increased by any ordinary movements of the pins.

Each ring is independently connected with the shaft by a yielding clutch ring. The rings are provided with notches 17 to receive clutch fingers 18. A flexible, and preferably non-metallic annulus 19 supports the fingers 18, the latter being preferably integral therewith. The annulus 19 is riveted to a rigid and preferably metallic annulus 20, which has a key projection 21 adapted to fit the shaft groove 2, whereby the rotary motion of the shaft is transmitted to the unit. The clutch member, comprising members 19 and 20, the former having the clutch fingers 18 and the latter the shaft engaging projection 21, is adapted to rotatively actuate the connected unit from the shaft, and the fingers 18 yield sufficiently along radial lines to permit the eccentric movement of the unit above described. The fingers 18 and annulus 19 are preferably formed of leather.

I claim—

1. A feed roller provided with a central shaft, yielding annular sections constituting core pieces surrounding said shaft and each provided with sockets extending inwardly from the periphery and terminating inwardly in reduced openings, headed pins mounted in the sockets, the points of said pins projecting through the openings in the bottoms of the sockets, an outer sleeve covering the sockets, and springs located between the heads of the pins and the sleeve.

2. A feed roller provided with a central shaft, yielding annular sections surrounding said shaft and each provided with sockets extending inwardly from the periphery partially through the sections, the bases of said sockets having inwardly extending openings

of less diameter, headed pins mounted in the sockets with the shanks of said pins projecting through the openings in the bottoms of the sockets, separable means for closing the outer ends of said sockets, and springs located between the heads of the pins and the socket-closing means.

In testimony whereof I affix my signature in the presence of two witnesses.

ARTHUR LIBERT.

Witnesses:
JAS. B. ERWIN,
I. D. BREMER.

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