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V. J. BUKOLT

2,652,575

SLIDABLE CONNECTION FOR THE DROP SIDES OF CRIBS

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Fig. 1

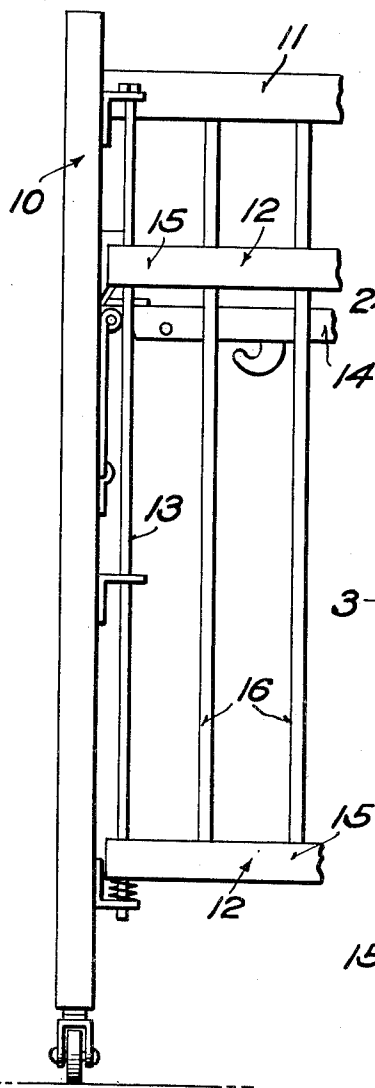


Fig. 2

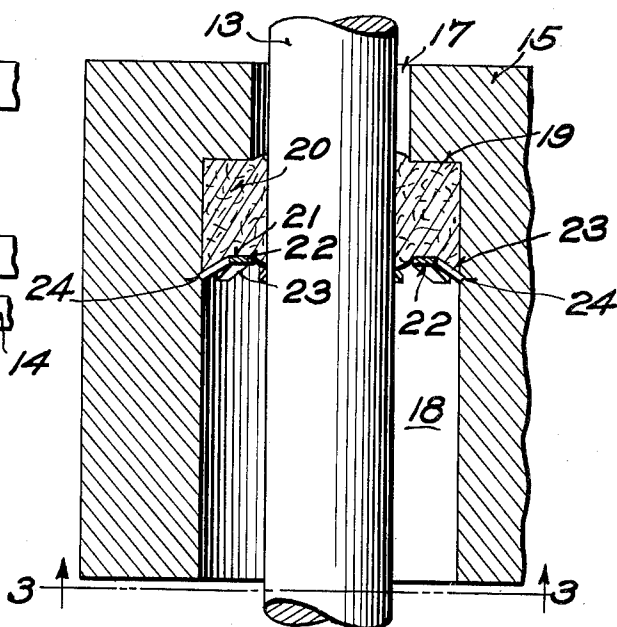


Fig. 3

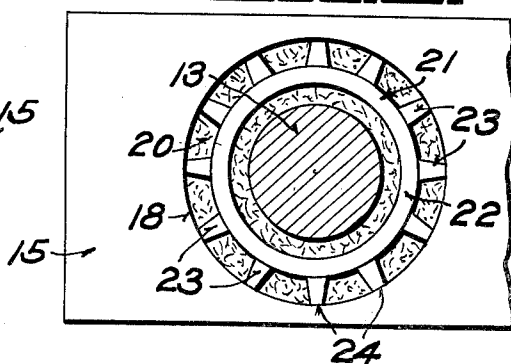
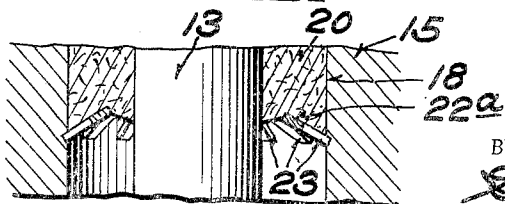


Fig. 4



INVENTOR

VICTOR J. BUKOLT,

BY

A. B. Wilson & Co.
ATTORNEYS

UNITED STATES PATENT OFFICE

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SLIDABLE CONNECTION FOR THE DROP
SIDES OF CRIBS

Victor J. Bukolt, Stevens Point, Wis.

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2 Claims. (Cl. 5—100)

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My invention relates to children's cribs made of wood, and more particularly to silent or noiseless slidable connections between the vertically movable crib sides and the metal guide rods on which they slide.

In the manufacture of cribs with the usual drop side or sides made of wood, felt washers have been inserted in vertical bores formed adjacent the ends of the top and bottom bars or rails of the drop sides for contact with the upright metal guide rods passing through such bores, the rods being fastened at their ends to the two end walls of the crib. Such sound deadening washers have usually been cemented in the bores and great difficulty has been experienced in retaining them in position, especially when they are lubricated with liquid wax or the like.

The object of the invention is to provide an extremely simple and inexpensive means which will effectively lock such washers in the bores and permit them to be lubricated without danger of loosening them and which will also permit the washers when worn to be compressed and adjusted into tight sliding engagement with the guide rods.

The above and other objects and advantages are attained by the preferred embodiments of the invention illustrated in the accompanying drawings in which:

Fig. 1 is a side elevation of one end portion of a crib;

Fig. 2 is an enlarged vertical section showing my improved slidable connection;

Fig. 3 is a section on line 3—3 of Fig. 2; and

Fig. 4 is a detail section similar to Fig. 2 showing a modified form.

Children's cribs of the character referred to are variously constructed but comprise two ends and two sides forming a rectangular frame in which is mounted a mattress-supporting spring bottom which may be either fixed or vertically adjustable. The head and foot ends may be solid panels or corner posts connected by open-work panels. The sides are usually of open formation and either or both may be vertically slidable on pairs of guide rods. In Fig. 1 I have shown one end of a crib of the construction shown in the Roman B. Bukolt Patent No. 2,240,978, May 6, 1941. In that view 10 denotes one of the two ends, 11 a fixed side, 12 a drop side, 13 a guide rod on which the side 12 is vertically slidable and 14 the bottom on which a mattress may be supported. The cylindrical guide rods are spaced from the ends and may be connected to the end frames or corner posts in any manner.

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The drop side 12 consists of upper or lower bars or rails 15 of wood suitably connected, usually by spaced upright rods 16. Adjacent the ends of the bars 15 are cylindrical vertical bores to receive the guide rods 13. Each bore has two diameters, its upper portion 17 being short and of only slightly larger diameter than the rod 13, while its lower portion 18 is longer and has a much larger diameter to form a flat annular downwardly facing shoulder 19. Against the shoulder 19 thus formed in the bore is a thick washer or cylindrical bushing 20 made of wool felt or similar material which is compressible and somewhat elastic or expansible. It snugly surrounds the guide rod 13 but is readily slidable thereon. It is saturated with liquid wax or other lubricant and is effectively retained in the bore by a metallic gear-shaped compressing and retaining ring 21. The latter is made of suitable resilient metal and has a continuous solid portion 22 from the outer edge of which radiates an annular series of integral spaced and tapered prongs 23. The opening through the solid annular body portion 22 of the combined compressor and retainer ring is of slightly greater diameter than the small upper portion 17 of the bore so that when the felt washer wears the metal ring will not contact with the guide rod. The annular series of prongs or teeth 23 are angled downwardly and outwardly as seen in Fig. 2, and the overall diameter of the device is greater than the diameter of the larger portion 18 of the bore so that the retainer ring must be forced into the bore. That will cause the spring teeth or fingers to bite into the wood and the device will be locked in the position to which it is forced. By making the teeth or prongs with straight ends 24 the retainer and compressor ring will be centered in the bore and be guided by the latter when it is forced inwardly against the felt washer to compress the latter. In Fig. 2 the solid body portion 22 of the device is flat and disposed in a diametrical plane of the device but if desired that portion may be dished or of frusto-conical shape as shown at 22^a in Fig. 4. When the retainer ring is first installed it need not compress the felt or fibrous bushing 20, but as the latter wears the ring may be forced further inwardly to compress the felt bushing vertically and force its central portion against the guide rod 13 and thus compensate for wear. When that is done the sharp or angular edges of the flat ends 24 of the teeth will bite into the wood, and because of the dished formation of the toothed peripheral portion of the ring there is no likelihood of either the ring

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or the felt washer dropping downwardly in the bore portion 18. It will be noted that in both forms Figs. 2 and 4 the body portion 22 and 22a of the device has an annular top surface that is flat or straight from its inner to its outer edge and that is in contact with the bottom surface of the bushing, the area of the top surface of the ring being sufficient to cause it to vertically compress the major portion of the bushing to force its central part against the guide rod when the device is forced toward the shoulder 19. The device thus serves as an effective compressor for the bushing as well as a retainer for it.

From the foregoing it will be seen that I have provided an extremely simple, inexpensive and effective means for not only retaining the felt washer in the bore of the drop side of a crib but also a construction which enables the washer to be compressed to tighten it around the guide rod.

Excellent results have been obtained from the details disclosed and they are preferably followed, but it will be understood that within the scope of the invention as claimed, numerous minor changes may be made.

I claim:

1. In a child's crib of the class wherein a wood rail of a drop side is slidable on a vertically disposed cylindrical guide rod, the rail having a two-diameter cylindrical bore through which the rod extends, the upper portion of the bore having a diameter greater than the rod and the lower portion having a diameter greater than the upper portion to provide a downwardly facing annular shoulder within the rail, there being a cylindrical bushing of elastic compressible lubricant-impregnated fibrous material fitting the upper part of the enlarged lower portion of the bore and in contact with the shoulder, the bushing having a central opening snugly receiving the rod; the combination with said rail, rod and bushing, of shiftable means in the lower portion of the bore to retain the bushing therein and to enable the bushing to be compressed to compensate for wear, said means comprising a bushing-compressor ring of resilient metal surrounding said rod and movable upwardly in the enlarged

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lower portion of said bore, said ring having a flat annular top surface initially disposed in contact with the bottom surface of said bushing and having its inner and outer edges spaced from the inner and outer edges of the bushing, the area of the top surface of said ring being sufficient to vertically compress and flatten said bushing and force its inner edge portion inwardly against said rod to compensate for wear when said ring is shifted upwardly from its initial position to a higher position in said lower portion of the bore, and an annular series of spaced spring teeth formed integrally with said ring and extending downwardly and outwardly from the outer edge of said ring, said teeth being of a length to dig into the wall of the enlarged portion of the bore and hold the ring in any of its adjusted positions and retain the bushing in compressed condition.

2. In a slidable connection for the drop side of a child's crib, a vertical guide rod, a wood rail of a drop side, said rail having a bore to receive said rod, the bore having a lower portion of greater diameter than its upper portion to form a downwardly facing annular shoulder, a compressible elastic fibrous lubricant-impregnated bushing slidably engaging said rod and seated against said shoulder, and a resilient metal retainer ring in the enlarged lower portion of the bore and engaged with said bushing, said ring having an annular series of downwardly inclined spring teeth to bite into the wall of the bore to lock said bushing, the ring being upwardly shiftable in the bore to compress the bushing.

VICTOR J. BUKOLT.

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