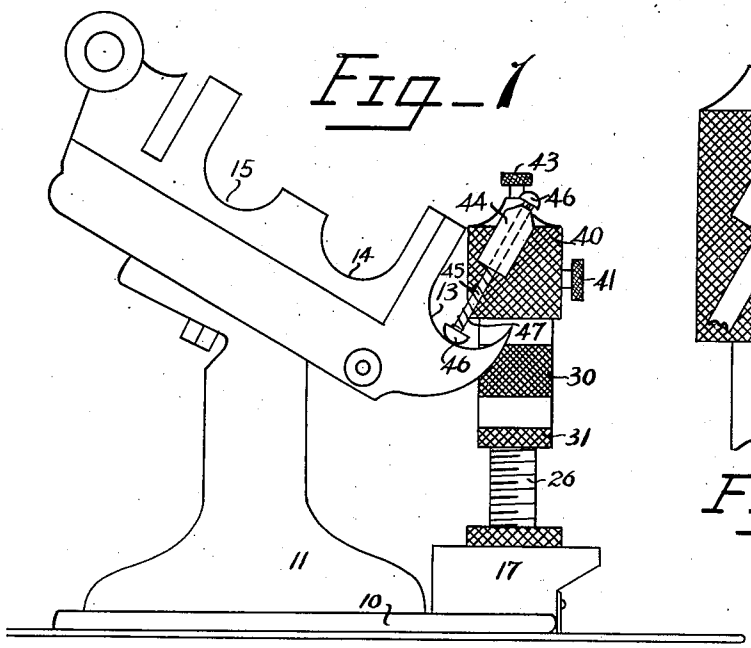
June 27, 1944. A. M. GUILLET 2,352,535

ROLL STAND BEARING GAUGE

Filed Dec. 11, 1943

Fig. 1



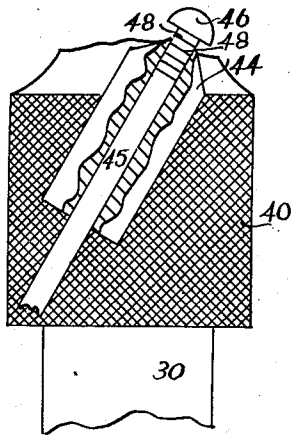


Fig. 3

Fig. 2

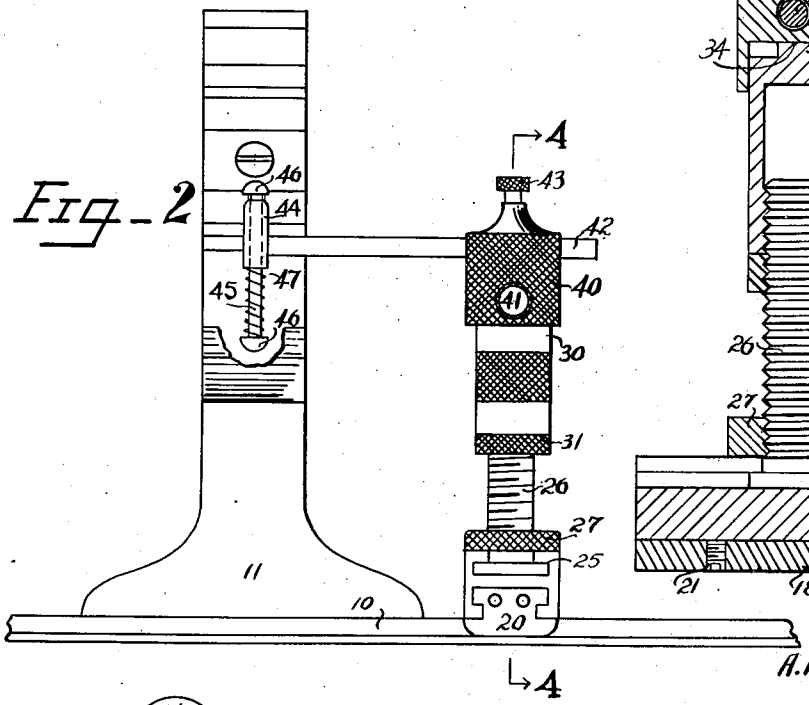
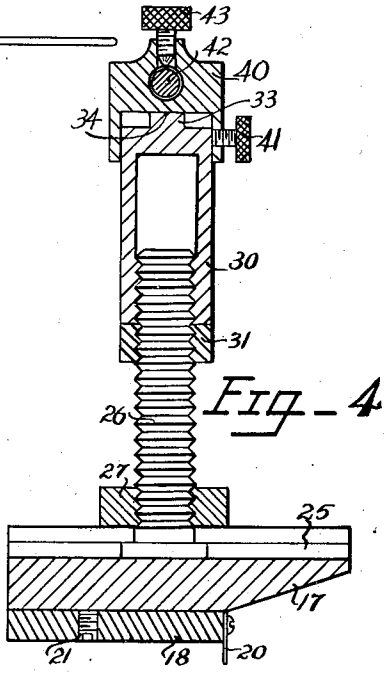


Fig. 4



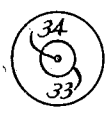


Fig. 5

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ROLL STAND BEARING GAUGE

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Application December 11, 1943, Serial No. 513,904

4 Claims. (Cl. 33—171)

This invention relates to a gauge for gauging the bearings in roll stands such as roll stands for spinning and twisting frames and in fact any kind of drawing, twisting, or spinning machinery, as employed in textile mills. In textile mills, in drawing, spinning, and twisting, there are machines equipped with a plurality of roll stands disposed along an elongated frame which sometimes is forty or more feet in length. On these fames are disposed a plurality of aligned roll stands having bearings in their upper surfaces which are adapted to receive elongated rolls and to serve as supports for the same while these rolls in association with top rolls are employed through which fibers such as slivers, rovings, and the like, are passed. It is necessary from time to time to align these roll stands and to see that the bottoms of the bearings are of the proper height from the roll stand beam, so that the elongated roll will be in perfect alignment from end to end; otherwise, faulty yarns will be produced, and undue wear of the machine will result.

It is an object of this invention to provide a roll stand bearing gauge whereby the bottom of the bearing can be gauged to determine if it is the proper height from the roll stand beam on which the roll stands are located, said gauge having a laterally adjustable member and said laterally adjustable member having a vertically adjustable member thereon with the vertically adjustable member having a member detachably secured thereto, and provided with a spring pressed graduated plunger for engaging the bottom of the bearing when the apparatus is disposed alongside the bearing to determine as to whether or not the bearing is the proper distance from the roll stand beam on which the roll stand is located. When one roll stand bearing has been determined to be of the proper height, then the gauge can be left set as it is, and can be moved from one roll stand bearing to another along the entire machine to see that all of the bearings are of the proper height above the roll stand beam.

It is another object of this invention to provide a laterally and vertically adjustable gauge having a laterally adjustable arm secured thereon with the arm being provided with a vertically movable graduated and spring-pressed plunger for gauging the height of a given surface from the space on which the gauge member is disposed.

Some of the objects of the invention having been stated, other objects will appear as the description proceeds, when taken in connection with the accompanying drawing, in which:

Figure 1 is a side elevation of a roll stand for a spinning or twister frame showing my invention associated therewith;

Figure 2 is an elevation of the structure shown in Figure 1, and looking towards the left of the right-hand side thereof with a portion of the roll stand bearing being broken away;

Figure 3 is an enlarged detail view of the upper portion of the gauge appearing in Figure 1, and showing portions thereof broken away;

Figure 4 is a vertical sectional view taken along the line 4—4 in Figure 2;

Figure 5 is a top plan view of the upper end of the gauge after the top cap member having the spring-pressed plunger therein has been removed from the gauge.

Referring more specifically to the drawing, the numeral 10 indicates a roll stand beam on which a plurality of roll stands 11 are mounted. These roll stands have bearings 13, 14, and 15 for the reception of the bottom rolls, as employed in drawing, twisting, and spinning machinery. The gauge member for gauging the height of the bottom of the bearings 13, 14, and 15 above the roll stand beam 10 comprises a base member 17, having a member 18 slidably mounted in a T-shaped groove in the lower side of the base member, the member 18 having a downwardly directed plate 20 secured thereon which is adapted to fit against the outer edge of the roll beam 10. The member 18 can be adjusted longitudnally of the base 17 by means of a set screw 21 threadably mounted in the member 18 and adapted to contact the base member 17 to hold the member 18 in adjusted position. The upper surface of the base member 17 has a T-shaped groove 25 therein in which a lower end of a threaded shank 26 is adapted to have sliding movement. A nut 27 is threadably secured on the threaded shank 26 which can be tightened to hold the threaded shank 26 in adjusted position along the T-shaped groove 25. The threaded shank 26 has also threadably mounted thereon a barrel 30, and this barrel 30 can be tightened and held in adjusted position by means of a nut 31 threadably mounted on the threaded shank 26. The upper end of the barrel 30, as shown in Figure 5 has a central projection 33 with a center dot 34 thereon so that the gauge can be used in aligning the bottom of the bearings of the roll stands when a wire is stretched from end to end of the frames through the bearings and the upper surface of the barrel 30 is slid along the roll stand beam with the plate 20

engaging the edge of the beam, and the wire should pass the central portion of the upper face of the barrel 30 at all places; otherwise, the frame and bearings are out of alignment. This gauge can also be used as above-recited for gauging the distance of the bottom of the roll stand bearings above the roll stand beam 10.

The upper end of the barrel 30 may have detachably secured thereover a cap member 40 which is releasably secured to the upper end of the barrel member 30 by means of a set screw 41. The cap 40 has a transverse bore therethrough in which is adjustably mounted a rod 42 which can be adjusted in any desired position by means of a set screw 43. The rod 42 has on its outer end a substantially vertically disposed barrel member 44 which has slidably mounted therein a plunger 45 which has an enlarged end 46 at its lower end, as well as at its upper end to hold the plunger 45 in position. A compression spring 47 is disposed between the lower end of the barrel 44 and the lower head 46 to normally press the plunger 45 downwardly to cause the upper head 46 to press against the upper end of the barrel 44. When the lower head 46 barely touches the lowermost surface of a bearing 13, 14, and 15, this is noted, and then the gauge can be picked up and placed in position alongside another roll stand on the frame progressively down the frame and if the lower head 46 fails to touch the lowermost surface of the bearing, then this roll stand must be elevated slightly in order to cause the bearing to be in alignment with the bearings in the other roll stands. If the bearing is too high above the roll stand beam 10, then the plunger 44 will be moved upwardly against its compression spring 47 and the graduations 48 on the upper end of the plunger 45 will indicate as to how far the bearing surface is elevated beyond what it should be and adjustment of the bearing is in order. In this way, the gauge can be placed alongside the bearing and transferred quickly from one roll stand to another, and the operator can look down from above into the roll stand bearing, and see that the gauge is contacted properly or improperly, and make notations and have corrections made accordingly.

In the drawing and specification, there has been set forth a preferred embodiment of the invention, and although specific terms are employed, they are used in a generic and descriptive sense only and not for purposes of limitation, the scope of the invention being defined in the claims.

I claim:

1. In gauge for gauging the distance of bearings in a roll stand above the roll stand beam of a twisting, spinning, or like machine, a base member having a guide member slidably mounted therein, said guide member having a downturned lip at one end adapted to engage the outer edge of the roll stand beam, said base member having a longitudinally disposed groove in its upper surface, an uprising member slidably mounted in the groove, a nut threadably secured on the uprising member for confining the uprising member in adjusted position along the groove, a barrel member threadably mounted on the uprising member, a cap member releasably secured on the upper end of the barrel member, said cap member having a transversely disposed bore therethrough, a rod adjustably mounted in said bore, the free end of the rod having a substantially vertically disposed member having a longitudinal bore therethrough, a plunger slidably mounted in the last-named bore, a spring for normally pressing the plunger downwardly to engage the bottom portion of a bearing in a roll stand and the like.

2. A gauge for leveling and aligning the bearings in roll stands in textile machines, such as spinning frames, twisting frames, and the like, said gauge compising a base member having a longitudinally disposed groove in its lower surface, a member having a lip on one end thereof slidably mounted in said groove, means for confining the slidable member in adjusted position in said groove, the lip on the outer end of the slidable member being adapted to engage the outer edge of a roll stand beam, said memebr having a longitudinally disposed groove in its upper surface, an uprising threaded member having its lower end slidably mounted in said last-named groove, a lock nut threadedly mounted on the uprising member for confining the uprising member in adjusted position in the last-named groove, a barrel member threadably mounted on the upper end of the uprising member and having an upwardly projecting portion in the central portion thereof adapted to serve as a gauge for gauging a wire or the like which is passed through the bearings of a plurality of the roll stand members.

3. In a gauge for gauging the positions of the lower surface of a bearing in a roll stand relative to the roll stand beam, comprising a base member having a longitudinally slidable member in its lower surface provided with a downturned lip at one end adapted to engage one edge of the roll stand beam on which the roll stand rests, the upper surface of said base member having a groove therein, an uprising member slidably mounted in said groove, means for confining the uprising member in adjusted position in the groove on the upper surface of the base member, a vertically adjustable member on the uprising member having a central projection on its upper end adapted to serve as a gauge relative to a line passing through the bearings of a plurality of separated roll stand members.

4. In a gauge for gauging the height of the bottom portions of the bearings in roll stands relative to the roll stand beam on which the roll stands are mounted, comprising a base member maving a guide member adjustable relative thereto and provided with a downturned lip for engaging the outer edge of the roll stand beam, the upper end of the base member having an uprising member slidably mounted therein with means on the uprising member for confining the uprising member in adjusted position relative to the base member, the upper end of the uprising member having threadably secured thereon a barrel member, a cap releasably secured to the upper end of the barrel member and having a laterally projecting arm, said arm being provided with a slidable plunger with compression means for normally forcing the plunger downwardly towards a bearing when the gauge member is disposed on a roll stand beam at one side of the roll stand member.

ALBERT M. GUILLET.