

F. H. McDEVITT.
CLEANER ROLL MOUNTING.
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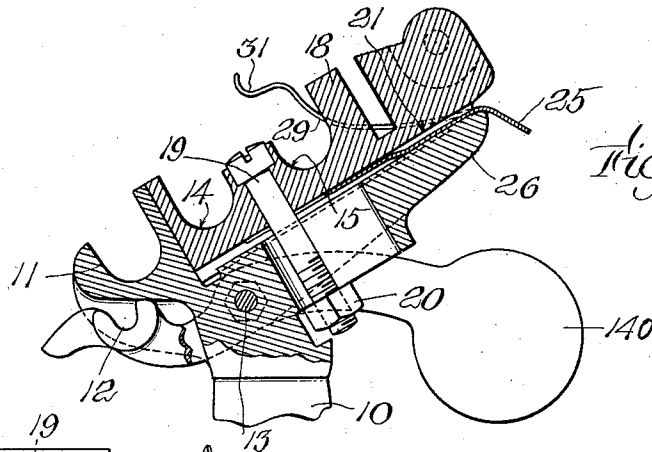
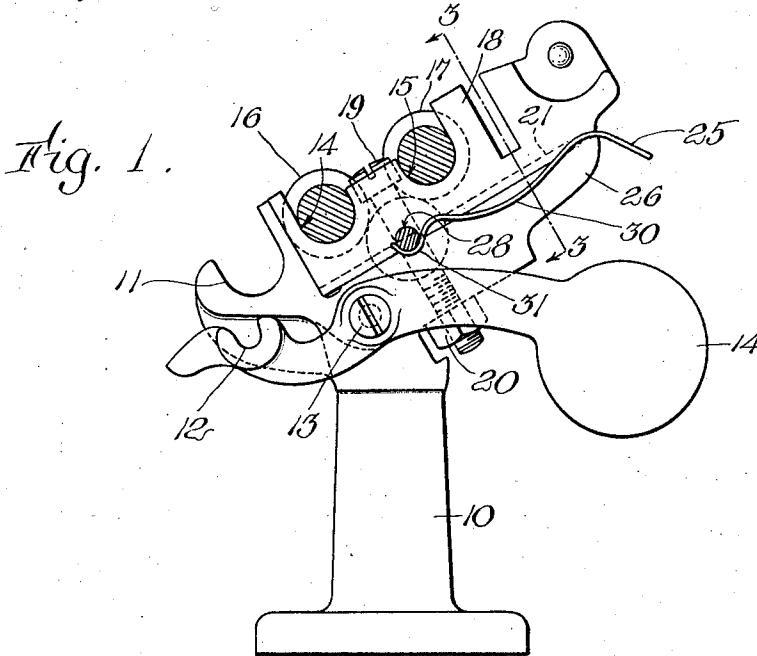
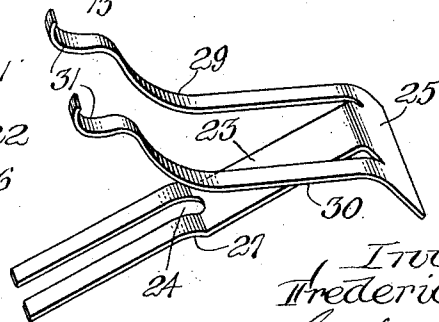
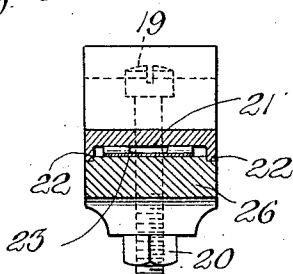


Fig. 3.



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UNITED STATES PATENT OFFICE.

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CLEANER-ROLL MOUNTING.

1,058,773.

Specification of Letters Patent.

Patented Apr. 15, 1913.

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To all whom it may concern:

Be it known that I, FREDERICK H. McDEVITT, a citizen of the United States, and resident of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Cleaner-Roll Mountings, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My present invention relates to structure used in textile machinery, and more especially to spinning or like mechanism.

The special object of the invention is to provide improved mountings, preferably of a spring type, for holding a cleaner roll yieldingly pressed up against one or more spinning or other operative textile rolls, such cleaner rolls being commonly employed in the art for gathering up broken ends, waste and dirt which results from the spinning operation, and winding such debris on the cleaner roll to be removed *en masse* at intervals.

The invention will be better understood from the following detailed description, taken in connection with the accompanying drawings, and will be thereafter pointed out in the appended claims.

Referring to the drawings, Figure 1 is a side elevation of a roller stand, furnishing bearings for the spinning or other operative rolls and showing my improved spring mounting for the cleaner roll, the several roll shafts being shown in section; Fig. 2 is a vertical lengthwise sectional view centrally through the stand; Fig. 3 is a transverse section on line 3—3 of Fig. 1; and Fig. 4 is a perspective view, showing the preferred form of spring mounting removed.

The roller stand 10 is of known form, adapted to be set at intervals along the length of the spinning rolls, to furnish bearings therefor, and also furnishing bearings for the ends of the cleaner or clearer rolls. This stand has a usual forward bearing 11 for the front spinning roll, and a bearing 12 swingingly mounted at 13 for the cleaner or scavenger roll to cooperate with the front spinning roll, the scavenger roll in said bearing being pressed up to cooperate with the spinning roll by a counterweight 140. The bearings 14, 15 for the two spaced apart rear spinning rolls 16, 17 are formed in a bearing block 18 which is accurately fitted to a re-

cessed portion of the stand, as shown and clamped in place by a screw bolt 19, shown as provided with a clamping nut 20 underneath. In practice it is highly essential that the bearings for the spinning rolls be accurately alined, since these rolls are of considerable length, and to better produce an accurate fit of this block on its seat, it is customary to cut away or recess the lower face of this block centrally lengthwise, as seen at 21, so that only relatively narrow portions 22 have to be machined to fit the seat therefor on the stand. In carrying out my invention, I take advantage of this recessed formation at the bottom of the block 18, and clamp therein a spring bearing member which presses the cleaner or scavenger roll against the two rear spinning rolls for cooperation therewith. To this end I provide a member preferably of the general form shown in Fig. 4, preferably stamped from sheet or plate metal. This member is formed with a tongue or friction support 23 with its projecting end forked at 24, this tongue projecting from a bent down rear extremity 25, which serves as a hand grip. This bent down portion 25 is also useful as a limiting stop to determine the proper positioning of the bearing member, the parts being so proportioned that when this portion strikes the edge of the stand underneath at 26 the bearings are arranged to hold the cleaner roll in proper position. The tongue 23 is laterally offset at an intermediate portion 27, constituting compressible or yielding means for providing the support with a friction grip on the adjacent surfaces, said offset being shown as adjacent the fork 24, the extent of this offset being such that with the screw bolt 19 somewhat loosened, the tongue can be easily inserted in the recess 21, but as the block 18 is clamped to place by setting up the bolt 19, the tongue 23 is, by reason of this offset, tightly clamped between the block 18 and the stand.

The bearings for the pins 28 at the ends of the cleaner rolls are provided by spring prongs 29, 30 from the part 25, which extend at either side of the stand to receive them. The prongs 29, 30 for this purpose have their ends cupped or concaved, as at 31, to constitute bearing seats to receive and hold the roll pins 28 and hold the cleaner roll pressed up against the spinning rolls. The prongs 29, 30 are preferably bent rela-

tive to the tongue 23, and the hand grip portion 25 approximately as seen in Fig. 4, so that as the tongue 23 is inserted in place, these prongs normally extend upward at
 5 some little angle, and thus being pressed down from such normal position, furnish the requisite pressure for holding the cleaner roll against the spinning roll and holding the roll pins 28 in the bearings 31 which are
 10 open at the top. This construction of the bearings 31 is desirable in that it permits the necessary amount of self-adjustment of the cleaner roll relative to the two spinning rolls so that it presses equally against both, the
 15 bearing prongs 29, 30 being proportioned and arranged so that the pressure of the bearings 31 is substantially midway between the two spinning rolls and in a plane having like relation to both of them.

20 My invention thus enables a very practicable and serviceable form of spring mounting for the cleaner rolls to be produced of exceedingly simple form and insignificant expense from a single piece of
 25 ordinary stamping, and this mounting is adapted to be positioned and rigidly clamped in operative position on the roller stand without the use of any additional screws, nuts, etc., or other fastening means, or any
 30 modification whatever of the standard usual form of roller stand. Further, by reason of the turn down hand grip 25 engaging the edge 26 of the stand when the tongue 23 has been inserted just to the right extent,
 35 any necessity for attention to adjustment is avoided, it being only necessary to push the tongue in as far as it will go when the bearings will be in correct position to receive and hold the cleaner roll against the spinning rolls.

40 My improved spring mountings thus produced in this simple, inexpensive manner are adapted to be applied to roller stands for any of the ordinary uses in the textile
 45 arts, without any additional fitting or modification whatever of such stands, requiring no holes for bolts or screws in the stands, and can be very quickly and easily applied to the stand. The invention is equally applicable to roll stands or supports for ring
 50 spinning frames, mule spinning frames, fly frames, jack frames, speeders, and in fact, all the usual frames wherein operative rolls requiring cleaner or scavenger rolls are employed. A further important feature is that
 55 my improved mounting enables the cleaner roll or scavenger stick to be applied to and removed from its operative position much more easily and conveniently than heretofore,—this for the reason that the spring
 60 mounting drops down at the back and allows the stick to be thus readily removed, the spring being of such a shape as not to interfere with any of the other parts of the
 65 roller stand, while at the same time closely

fitting in with the stand structure without any parts protruding to any considerable extent.

I do not desire to be limited to the precise form of the invention shown, since the same can be modified in some respects without departing from the spirit thereof, and I therefore refer to the appended claims rather than to the illustrative embodiment herein shown to indicate the scope of my invention.

Having described my invention, what I claim as new, and desire to secure by Letters Patent is:

1. Apparatus of the kind described, comprising a roller stand, a bearing block fitted thereto, one of said members being recessed along its bearing face which fits the other member, and a mounting for a cleaner roll fitted in said recess and clamped between said bearing block and said stand.

2. Apparatus of the kind described, comprising a roller stand, a bearing block fitted thereto with provision to be held in clamped engagement therewith, one of said members being recessed on one face, and a mounting for a cleaner roll having a projecting part fitted in said recess and adapted to be clamped between said bearing block and said stand by the same means that clamps the block in place.

3. Apparatus of the kind described, comprising a roller stand, a bearing block fitted thereto, said members having a recess formed between their adjacent faces, and a mounting for a cleaner roll provided with a tongue fitting in said recess and adapted to be fixedly held as said block is clamped in place.

4. Apparatus of the kind described, comprising a roller stand, a bearing block, said members having a recess formed between their adjacent faces, and a spring mounting having a tongue fitting said recess, said tongue being laterally offset to be rigidly clamped as the bearing block is clamped to place.

5. Apparatus of the kind described, comprising a roller stand, a bearing block fitted thereto, said members having a longitudinal recess formed between their adjacent faces, and a spring mounting formed with a tongue having a lateral offset for fitting said recess and to be clamped in place by said block, said mounting having integral spring arms provided with bearing seats for the roller pins.

6. Apparatus of the kind described, comprising a roller stand, a bearing block fitted thereto, said members having a longitudinal recess formed between their adjacent faces, a cleaner roll mounting having a tongue with a lateral offset portion fitted in said recess to be fixedly clamped by said block, said mounting having spring prongs with

bearing seats at their extremities, and a down turned hand grip adapted to engage a fixed portion of the structure to properly position the mounting.

5 7. In an apparatus of the kind described, a roller stand, a bearing block movably mounted thereon, and a cleaner roll mounting having a compressible friction support
10 ably clamped by said block and stand, and a spring part extending from said support and provided adjacent its free end with a bearing seat for supporting a cleaner roll
15 in operative position with relation to a roll on said movable block.

8. In an apparatus of the kind described, a roller stand, a bearing block movably mounted thereon and containing two spaced apart bearings for rolls, and a cleaner roll
20 mounting having a compressible friction

support extending lengthwise between and adjustably clamped by said block and stand, and a spring part at either side of said support, extending from the latter, and provided adjacent their free ends with bearing
25 seats for supporting a cleaner roll in operative position with relation to said two rolls when mounted in said spaced apart bearings, said cleaner roll mounting having at its outer end a combined limiting stop and
30 hand grip for so positioning said spring parts with relation to said rolls.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

FREDERICK McDEVITT.

Witnesses:

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