Nov. 21, 1933. J. B. SANDO ET AL 1,936,461

EXTRACTOR SUSPENSION

Filed Feb. 26, 1932

Fig. 1.

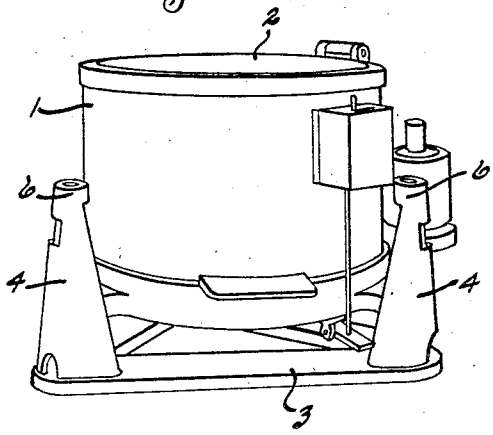


Fig. 2.

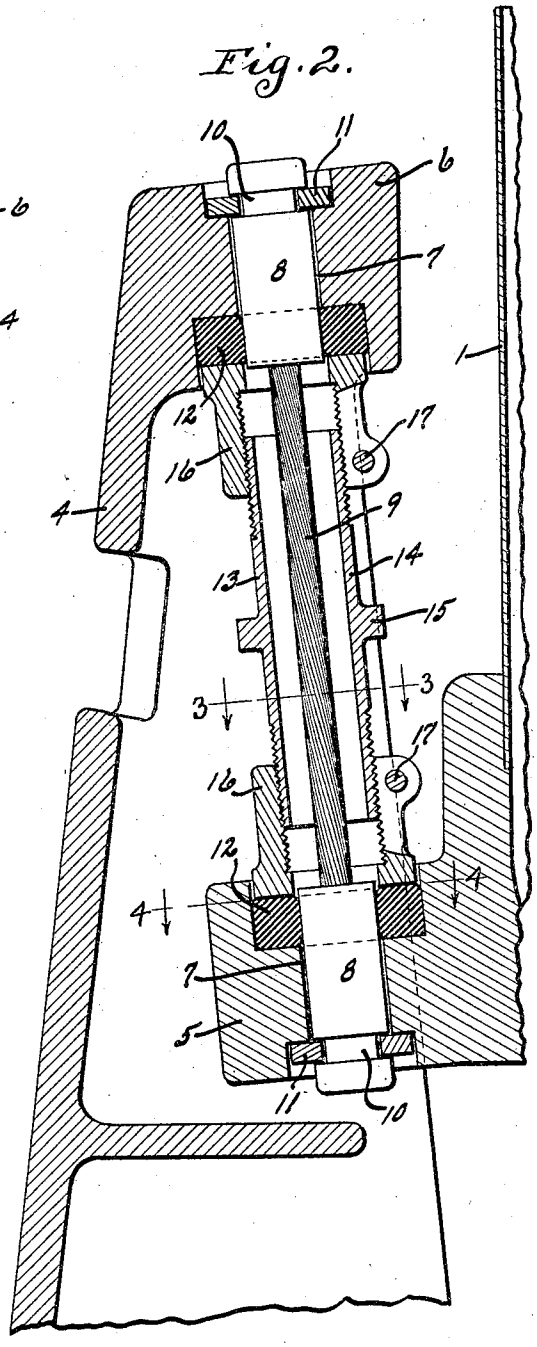


Fig. 3.

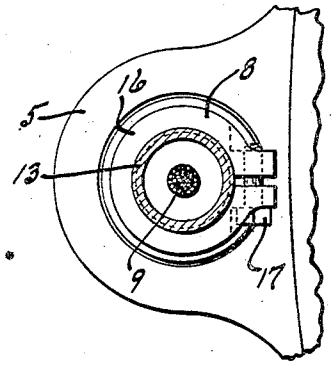
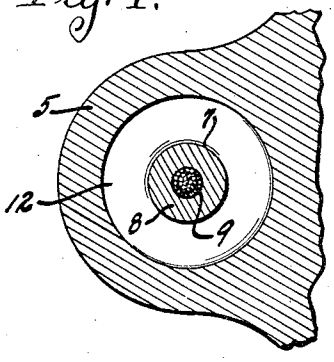


Fig. 4.



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EXTRACTOR SUSPENSION

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2 Claims. (Cl. 210—71)

This invention relates to centrifugal extractors for use in the laundry and other industries, to extract liquids from solids. Such an extractor includes a fixed base, a rotatable basket, and a non-rotatable casing carrying the basket and movably mounted upon the base. It is customary in the art to suspend the casing from the base by three tension members arranged to act as links, allowing a certain tilting of the casing but preventing rotation thereof.

This invention relates particularly to such general type of mounting.

The theoretical load upon the mounting is merely the weight of the casing and its contents, always acting downwardly; but it will be apparent that in practice the basket will usually be unevenly loaded, so that when rotating, its center of mass describes a path with wobbling effect upon the casing. Thus, often, for every revolution of the basket there is actually an upward thrust or kick, which must be resisted periodically in succession at the points of application of the mounting means.

The principal object of this invention is to provide an improved form of mounting means capable of minimizing vibration due to such unbalance of the basket.

The exact nature of the invention together with further objects and advantages thereof will be apparent from the following description taken in connection with the accompanying drawing, in which Fig. 1 is a perspective view of an extractor provided with the improved suspension means; Fig. 2 is a central vertical sectional view of one of the suspension brackets shown in Fig. 1; Fig. 3 is a sectional view taken on line 3—3, Fig. 2; and Fig. 4 is a sectional view taken on line 4—4, Fig. 2.

As will be seen from Fig. 1 the extractor shown is of the usual construction as to principal parts and their disposition. It has a casing 1 with hinged cover 2 giving access to the usual basket rotatably mounted within the casing. The casing is supported upon a fixed base 3 having three brackets 4 extending upwardly alongside the casing and spaced thereabout.

The brackets 4 have hollows to receive lugs 5 provided, one for each bracket, on the casing. Each bracket has a head 6 overhanging the corresponding lug 5 of the casing as indicated Fig. 2. Each pair of parts 5 and 6 have aligned openings 7 to receive the head parts 8 of a tension member 9 in the form of the multiple strand steel cable indicated. Each head 8 is provided with a groove 10 to receive a split collar 11, whereby the upper end of the tension member is supported by its bracket 4 and the lower end of the tension member supports its lug 5 of the casing. Obviously, the arrangement being similar for each of the three brackets 4, the casing is suspended swingably but non-rotatably.

The described cable form of tension element has advantage that it requires no lubrication and has a slight resilience. But the cable is incapable of substantially resisting compressive stresses therealong.

According to our invention we provide means about the tension member for resisting such comprehensive stresses therealong as may be set up in the operation of the extractor. For this purpose, the part receiving each head 8 of the tension member is provided with a recess annular thereabout to provide a seat for a heavy ring 12 of resilient material such as rubber. Between these rings 12 and about the cable 9 is provided a tubular compression member 13. It is preferable that this compression member be adjustable as to length, and therefore it may be made of a plurality of parts in threaded relation. As shown it comprises a central tubular part 14 having a nut 15 threaded at its ends to fit head parts 16 bearing against the rings 12. The threads at the opposite ends of the compression member run in opposite directions so that turning of the central part 14 relative to the end parts 16 will increase or decrease the spacing of the latter depending upon direction of the turning. The end parts 16 are preferably split as indicated in Fig. 3 and provided with bolts 17 that the adjusted relation may be maintained.

In practice each tubular compression member is lengthened by adjustment until its ends seat snugly against the two resilient rings 12, yet without appreciably increasing the stress upon its tension member 9. Thereafter, when the extractor is in operation the casing will be free to swing to accommodate itself to the unbalance and will be opposed by the compression members 13 acting between the yieldable resilient rings 12. By this arrangement vibration set up by these upward forces are largely damped out and therefore not transmitted by the frame to its supporting surface as has been usual heretofore.

What we claim is:

1. Means for movably mounting an extractor casing on its base, and comprising a flexible cable tension member, means fixedly securing the opposite ends of said tension member with said casing and base respectively, a compression member arranged adjacent said tension member, and means

associating the ends of said compression member with said casing and base respectively to permit swinging movement of said casing relative to said base accompanied by flexure of the tension member, but to oppose relative approaching motion of said casing and base lengthwise of said tension member.

2. Means for movably mounting an extractor casing on its base, and comprising a flexible cable tension member having heads at its ends, said casing and base having sockets to receive said heads, means securing said heads in said sockets, a compression member arranged adjacent said tension member, and at each end of said compression member resilient means arranged to be effective between that compression member end and the extractor part with which the corresponding end of the tension member is associated, whereby said casing is supported on said base by said tension member for swinging movement accompanied by flexure of the tension member, and said motion will be permitted by said compression member, accompanied by yielding of said resilient means.

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