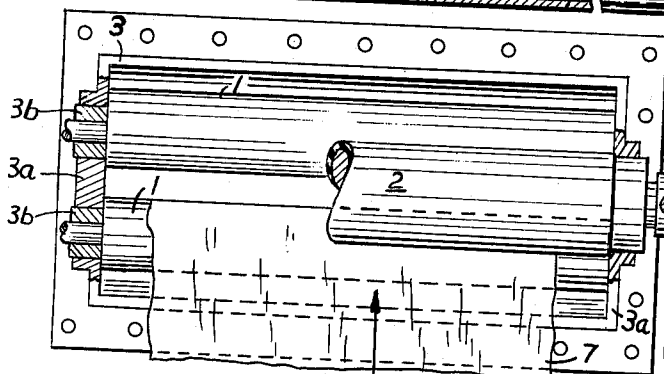
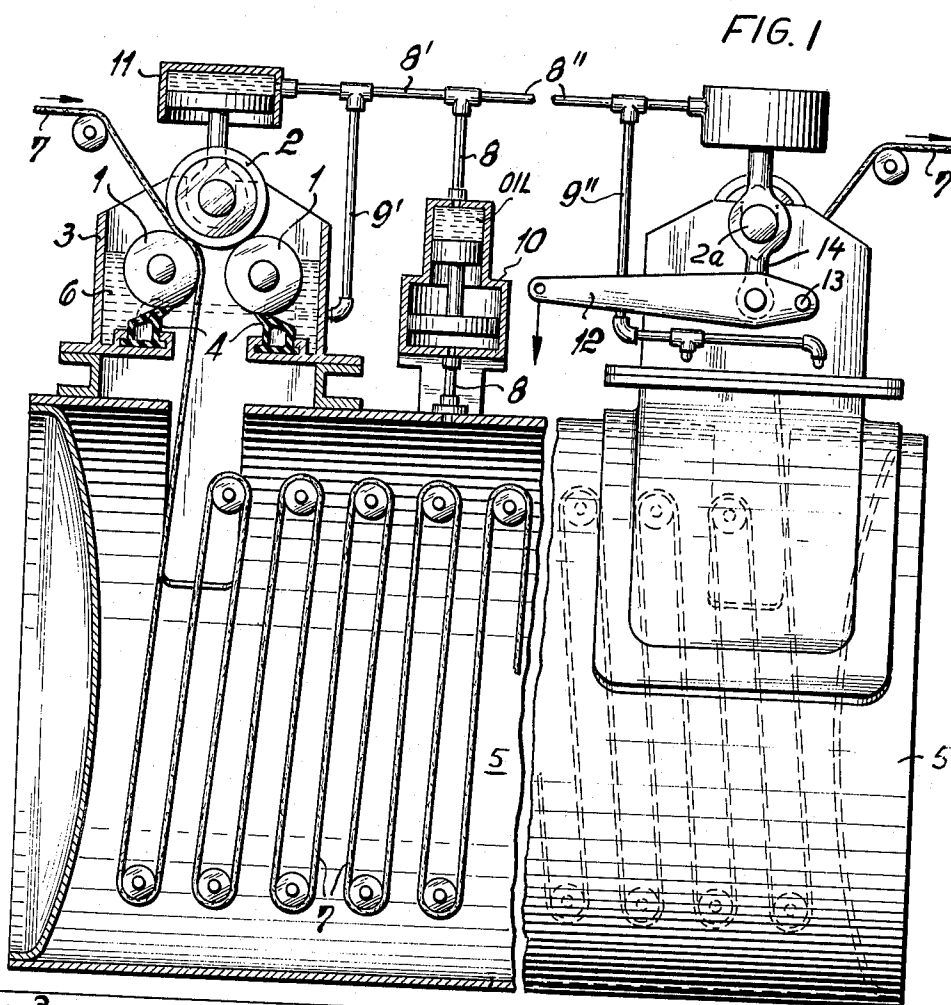


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PRESSURE ABSORBER ARRANGEMENT FOR PROCESSING
WEBS OF TEXTILE GOODS
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PRESSURE ABSORBER ARRANGEMENT FOR PROCESSING WEBS OF TEXTILE GOODS
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The present invention relates to a pressure absorber. Pressure absorbers with continuous passage of goods therethrough are known, according to which a wide web of textile material is subjected to a steam pressure which is higher by several atmospheres than ordinary atmospheric pressure. With these heretofore known pressure absorbers, the goods are passed into a pressure absorber in form of a pressure container through the intervention of a sealing device which, in most instances, consists of a sealing roller system, said goods passing between two sealing rollers. One of the sealing rollers has to be designed as an elastic roller in order to make sure that a good seal is effected not only between the goods and the rollers but also between those portions of the two rollers which are not covered by the textile goods.

It has been found that the sealing ability decreases with higher steam pressures. While this drawback can at least to some extent be overcome by applying a higher squeezing pressure between the sealing rollers, the rollers will in such an instance be operated at high squeezing pressure also when a lower inner pressure prevails, with the result that the sealing strips are subjected to an unnecessarily high stress, and also the drive for the roller system is subjected to unnecessary stresses while the impregnated textile material is squeezed unduly.

It is therefore an object of the present invention to provide a pressure absorber which will overcome the above-mentioned drawbacks.

It is another object of this invention to provide a pressure absorber of the general type set forth above, which will have a relatively long life, is simple in construction, and highly effective.

These and other objects and advantages of the invention will appear more clearly from the following specification in connection with the accompanying drawing in which:

FIG. 1 shows partly in view and partly in section a pressure absorber arrangement according to the present invention;

FIG. 2 is a plan view of a portion of the arrangement of FIG. 1, with parts broken away.

The present invention is characterized primarily in that the pressing device for producing the squeezing pressure is, through a pressure conduit, communicating with the inner pressure of the pressure absorber whereby in addition to a preselected basic pressure, automatically an additional pressure is effected which at all times corresponds to the respective inner pressure.

According to a further feature of the invention, also the pressure to which the sealing strips between the sealing rollers and the pressure container are subjected, is controlled through a pressure conduit in conformity with the inner pressure of the pressure absorber.

Referring now to the drawings in detail, the arrangement shown therein comprises a sealing device in the form of two steel rollers 1 having pressed thereagainst an elastic roller 2, which is located above said steel rollers 1. The elastic roller 2 is pressed against the steel rollers 1 by a pressing device 11 which may be of any standard construction. The sealing of the steel rollers 1 with regard to the pressure container 5 of the pressure absorber is

effected by two sealing strips 4 which are equipped with elastic or metallic sealing lips. The said sealing rollers and sealing strips are journaled in a rectangular body 3. It is at the end faces 3a of said body 3 that the pressure-resistant seal is effected with regard to the end faces of the sealing rollers 1 and 2. More specifically with regard to FIG. 2, the end faces 3a of body 3 have inserted therein fitting pieces 3b which serve for sealing the gap between end faces 3a and rollers 1 and also for rotatably supporting said rollers. Fitting pieces 3b are adjustable to compensate for wear at the end faces of rollers 1. The goods 7 to be introduced into the pressure absorber pass between a steel roller 1 and the elastic roller 2 into the pressure container 5 and leave the pressure container again through a similar sealing device at the right-hand end of the pressure absorber. Above sealing strips 4, body 3 is filled with a liquid 6, for instance water, which may serve for dissolving aggressive gases leaking out of container 7. However, liquid 6 may also be an impregnating liquid for goods 7. The main function of liquid 6, however, consists in lubricating the rollers 1 and the sealing elements 4 and 3b.

The arrangement of the sealing rollers may be such that the elastic roller is located below the two steel rollers. Furthermore, the central roller may be designed as steel roller, and the two rollers 1 may be designed as elastic rollers. Arrangements are known according to which five or seven sealing rollers are employed with a corresponding larger number of sealing strips.

According to the present invention, the pressing devices 11 which, as a rule, are in the form of pneumatic or hydraulic pressure cylinder piston systems, are in addition to the selected basic pressure, also subjected to an additional pressure through a pressure conduit 8 which is connected to the pressure container 5. In order to avoid that the pressure cylinder 11 will not have too large a diameter, a pressure transformer or intensifier 10 may be disposed in the pressure conduit 8. This pressure transformer will in the manner of a servo effect, control a pressure medium of a very high pressure. The basic pressure is produced by a spring urged or weighted lever 12 pivotally supported at 13 and connected to shaft 2a of roller 2 through the intervention of an arm 14 so as to press roller 2 into pressing engagement with rollers 1.

According to a further feature of the invention, the pressure exerted upon the sealing strips 4 may also be varied in conformity with the inner pressure of the pressure absorber. In conformity with the invention, the sealing strips 4 are designed as elastic hollow bodies which, through a pressure conduit 9' likewise communicate with the inner pressure of the pressure absorber. The conduits 8" and 9" lead to a sealing device at the outlet end of the pressure absorber, which sealing device may correspond to that described above for the inlet to the pressure chamber 5.

It is, of course, to be understood that the present invention is, by no means, limited to the particular construction shown in the drawing, but also comprises any modifications within the scope of the appended claims.

What I claim is:

1. A pressure absorber arrangement for processing webs of textile goods, which includes: a pressure container for receiving and containing a pressure medium, said pressure container being provided with an inlet and an outlet, a first conveying and sealing unit arranged at said inlet, a second conveying and sealing unit arranged at said outlet, each of said units including a plurality of roller means for passing a web of textile goods therethrough and respectively into and out of said pressure container, first means connected to at least one of said

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roller means and continuously pressing it in the direction toward the other roller means of the same unit, second means connected to at least one of said roller means for pressing the same in the direction toward the other roller means of the same unit, said second means being pressure fluid operable, means for supplying fluid to said pressure fluid operable means comprising piston means including a smaller first effective area connected with said fluid operable means and a larger second effective area, and means communicating with the interior of said pressure container for conveying pressure from the latter to said second effective area thereby to cause said first area to supply fluid at a pressure greater than the pressure in said container to said pressure fluid operable means.

2. A pressure absorber arrangement according to claim 1 in which inflatable sealing means are provided engaging said other roller means on the side thereof opposite said one roller means, said sealing means being connected to said first area.

3. A pressure absorber arrangement according to claim 2 in which said other roller means are located in the re-

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spective unit adjacent said container while said one roller means is located in the unit remote from said container.

4. A pressure absorber arrangement according to claim 2 in which said other roller means are located in the respective unit adjacent said container and comprise a pair of spaced parallel rigid rollers while said one roller means comprises a single resilient roller engaging both of said rigid rollers on the side thereof opposite said container.

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