

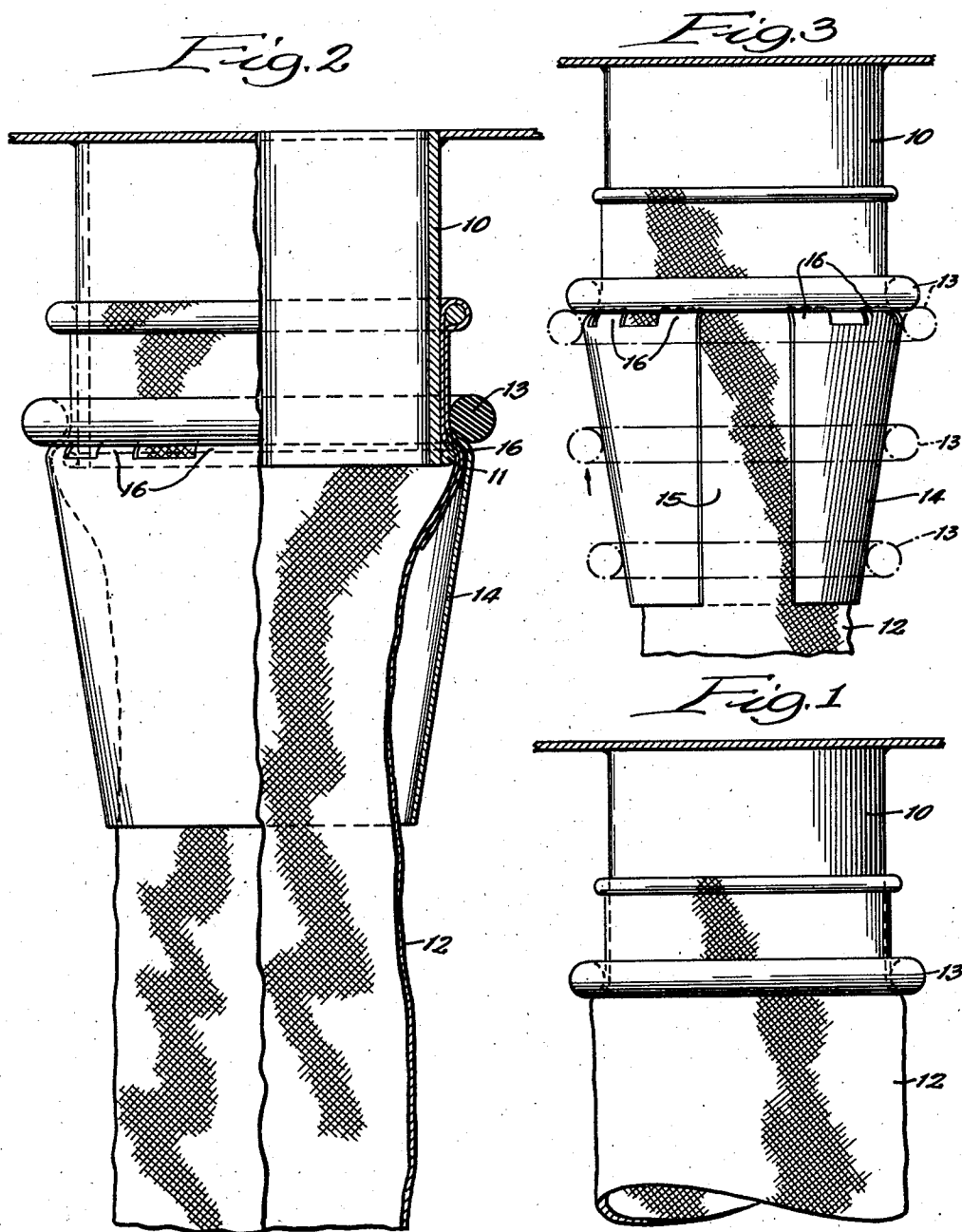
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FASTENING MEANS FOR COLLECTOR BAGS

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FASTENING MEANS FOR COLLECTOR BAGS

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This invention relates to fastening means for collector bags and more particularly to means for detachably connecting collector bags to nipples or the like.

Fabric collector bags have heretofore been widely used for collection of dust, chemical powders and like materials. Ordinarily the bags have been clamped to tubular nipples by metallic clasps or straps. Fastenings of this type are slow and difficult to attach and detach, do not hold the bags in dust tight relationship with the nipples, and tend to cause excessive wear on the bags when are subjected to vibration.

It is one of the objects of the present invention to provide a fastening means by which collector bags can be quickly and easily attached and detached, which holds the bags in dust tight relationship to the nipples and which causes a minimum amount of wear on the bags in use.

Another object of the invention is to provide a fastening means including an annular resilient ring to hold the neck of a collector bag tightly against an annular bead on the nipple.

Still another object is to provide a conical guide member by which the ring may be easily and quickly placed over the nipple. Preferably the ring is split so that it can be sprung onto and off of the nipple.

The above and other objects and advantages of the invention will be more readily apparent from the following description when read in connection with the accompanying drawing, in which—

Figure 1 is a partial elevation illustrating a collector bag fastened to a nipple according to the invention;

Figure 2 is a view partly in elevation and partly in section showing the ring and guide member in place; and

Figure 3 is an elevation illustrating the manner of fastening the bag to the nipple.

The present invention may be utilized in connection with any type of apparatus which produces dust or powder to be collected and which includes a tubular discharge nipple 10 thru which the dust or powder flows. At the outer end of the nipple 10 an annular bead 11 is provided which may be formed by a wire welded or soldered to the end of the nipple. A collector bag 12 of any desired type is formed with a tubular neck portion to fit over the nipple and the bead 11 and to collect any dust or powder flowing thru the nipple.

According to the present invention the bag is held in place on the nipple by an annular resilient ring 13 which is preferably of circular cross section. The ring 13 may conveniently be formed

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of rubber altho other resilient materials could be employed equally well. When the ring is in place as shown in Figure 1, it engages the bag uniformly around its circumference and presses it evenly and tightly against the nipple at a point just above the bead 11. Thus a dust tight connection is formed between the bag and the nipple without any pinching of the material. Due to the uniformity of the connection between the bag and the nipple and the resilience of the nipple wear on the bag will be minimized in the event it is subjected to vibration in use.

In order to install the ring 13 easily and conveniently on the nipple, a conical guide member 14 is provided. The guide member 14 is split as indicated at 15 so that it can be sprung to be slipped over the bag and over the outer end of the nipple. At its larger end the guide member 14 is formed with a series of inwardly turned fingers 16 which hook over the bead 11 as best seen in Figure 2, to hold the guide member in place.

To connect a bag to the nipple a ring 13 is first slipped over the neck of the bag and the bag is then slipped over the nipple. The guide member 14 may then be placed over the bag with the fingers 16 thereon hooking over the bead 11. The ring 13 may then be forced up over the guide member 14 as indicated by the several dotted line positions in Figure 3 until it finally slides over the fingers 16 to engage the bag and the nipple just inside of the bead. The guide member 14 may then be sprung away from the nipple and removed from the bag. At this time, the installation is completed and the bag is ready for use.

In moving the ring 13 over the guide member 14 the ring may be rolled along the surface of the guide member. It may be seen that in such rolling movement the ring rotates about its own annular axis. Preferably, this ring 13 is circular in cross section to facilitate the rolling movement.

The bag may easily be removed when desired simply by grasping the ring 13 and sliding or rolling it over the bead 11 to free the bag. It will thus be seen that the bag may easily and quickly be connected to and removed from the nipple. The circular cross section of the ring facilitates its removal as well as its assembly in the improved structure.

While one embodiment of the invention has been shown and described in detail herein, it will be understood that this is illustrative only and is not intended as a definition of the scope

of the invention, reference being had for this purpose to the appended claims.

What is claimed is:

1. Fastening means for collector bags comprising a tubular nipple having a bead adjacent its outer end over which the neck of a collector bag is adapted to fit, a conical guide to fit over the neck of the bag with its larger end overlying the bead, and an annular resilient ring adapted to be moved over the guide to a position around the bag neck and the nipple adjacent the bead.

2. Fastening means for collector bags comprising a tubular nipple having a bead adjacent its outer end over which the neck of a collector bag is adapted to fit, a conical guide to fit over the neck of the bag and having a series of inwardly turned fingers at its larger end to hook over the bead, and an annular resilient ring adapted to be moved over the guide to a position around the bag neck and the nipple adjacent the bead.

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