April 28, 1931. W. K. TAVENDER ET AL 1,802,587

METHOD FOR CLEANING GARMENTS

Filed May 21, 1929 2 Sheets-Sheet 1

Fig. 1.

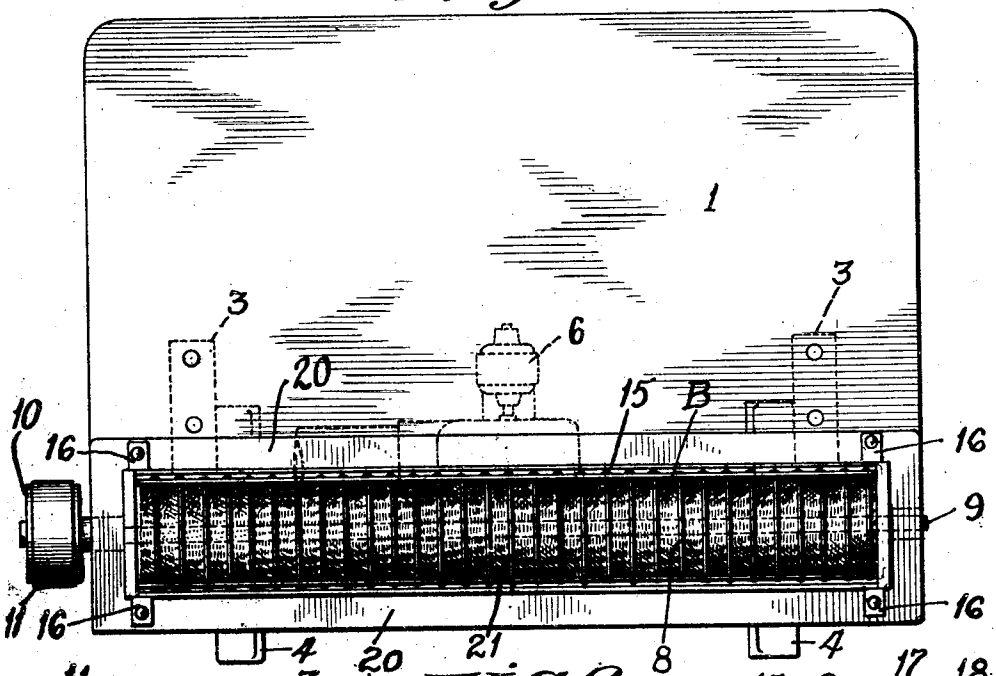
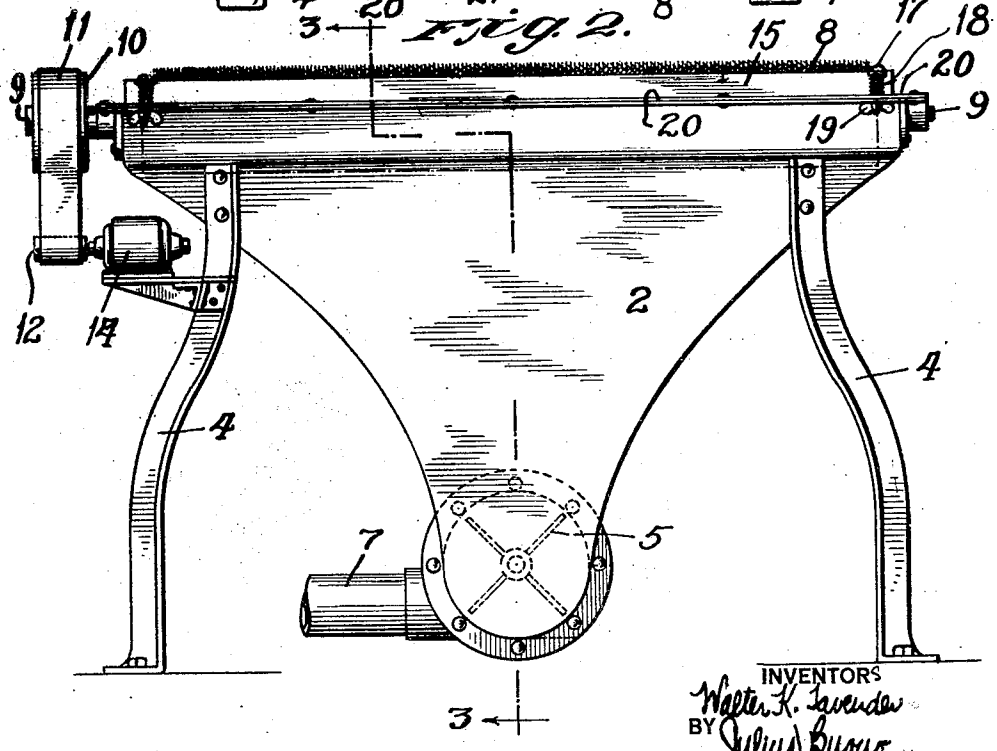


Fig. 2.



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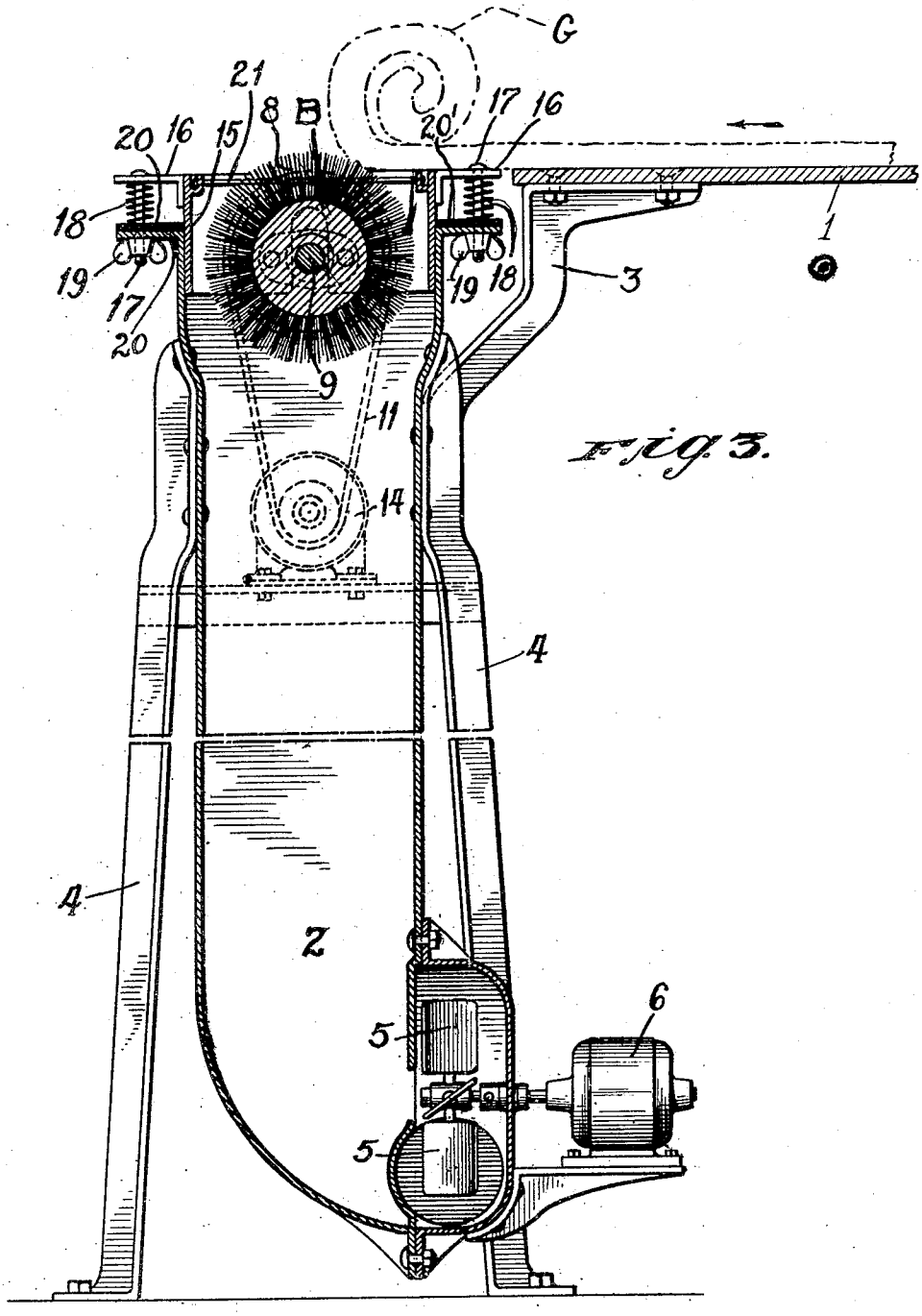


Fig. 3.

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Patented Apr. 28, 1931 1,802,587

UNITED STATES PATENT OFFICE

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METHOD FOR CLEANING GARMENTS

Application filed May 21, 1929. Serial No. 364,714.

Our invention relates to a new and improved method of and mechanism for cleaning garments.

One of the objects of our invention is to provide a new and improved method of and mechanism for thoroughly cleaning men's outer garments such as coats for example.

Another object of our invention is to provide an improved adjustable mechanism for subjecting garments to a combined brushing and suction action, so as to effectively remove from the garments practically all the dust, and to also remove adhering bits of fibre.

Other objects of our invention will be set forth in the following description and drawings which illustrate a preferred embodiment thereof, it being understood that the above general statement of the objects of our invention is intended to generally explain the same and not to limit it in any manner.

Fig. 1 is a top view.

Fig. 2 is an elevation.

Fig. 3 is a sectional view on the line 3—3 of Fig. 2.

Heretofore, it has been extremely difficult and troublesome to thoroughly clean outer garments and particularly, men's coats and the like, in the factory. The operations in the factory cause bits of thread or other fibrous material to cling tightly to the garments. An ordinary brushing operation is expensive and ineffective. It has been proposed to use small vacuum cleaners for this purpose but this expedient has not been found satisfactory because men's coats, for example, have an irregular shape and the vacuum cleaner could not remove the adhering bits of thread and the like.

According to our invention, the machine which is used for carrying out our method has a casing 2 provided with supporting legs 4 riveted thereto. The casing 2 also has bracket arms 3 riveted thereto and said bracket arms 3 support the work table 1. The bottom of the casing 2 is provided with a suction fan 5 which is mounted on the shaft of a suitable electric motor 6. Air is thus discharged through the outlet pipe 7 of the casing which is led to any suitable place so as to discharge the dust, thread and the like.

The casing 2 is provided with a snugly fitting and vertically slidable top 15. The casing top 15 is provided with a plurality of lugs 16 which cooperate with the flange 20 of the casing by means of pins 17 and compression springs 18. The compression springs 18 yieldingly support the slidable casing top 15. The bottoms of the pins 17 are threaded and wing-nuts 19 are provided whereby the casing top 15 may be lowered against the force of the springs 18. A gasket 20′ made of felt or other suitable material is mounted upon the flange 20 and serves to produce an air-tight fit between the casing 2 and the casing top 15. A brush B, provided with continuous bristles 8 is mounted upon a shaft 9 which is supported in suitable bearings at the upper end of the casing 2. The shaft 9 is provided with a pulley 10 which is connected by means of a belt 11 to a pulley 12 mounted upon the shaft of a second electric motor 14. The brush B is therefore caused to turn with considerable velocity, about 200 revolutions per minute. In order to clean a garment such as a man's coat or the like, the garment is laid upon the table 1 and the end of the garment is pressed down so as to contact with the bristles 8 of the brush B. At the same time, suction is produced within the casing 2. The direction of movement of the garment G is opposite to the direction of movement of the brush B. That is, assuming that the garment G is moved to the left, as shown in Fig. 3, the brush B revolves in the clock-wise direction. The casing top 15 is provided with a grid consisting of wires 21, which are preferably somewhat yieldable, in order to prevent the garment from being pulled within the casing top 15 by the suction developed within the casing 2. The casing top 15 has its height adjusted so as to permit the bristles 8 to project more or less, depending upon the class of work which is being done.

Experience has shown that if a garment is pulled over the brush B while the garment is either flat or is longitudinally folded, effective cleansing is not secured because the bris-

tles do not act uniformly upon the irregular surface of the garment. Hence, we prefer to roll the garment G into spiral form while it is being brushed. The beginning of this rolling operation is shown in Fig. 3. This produces a yielding cylinder, consisting of the turns of the garment G, and this resilient, yielding cloth cylinder can be pressed upon the bristles so that said bristles are effective to remove the dust and bits of thread and the like from the surface of the garment. The suction developed is not very high because the garment does not ordinarily cover the entire open top end of the casing top 15. However, the suction within the casing 2 is sufficiently high to remove the dust and bits of thread from the bristles 8 so that the garment G is acted upon by a clean brush.

Experience has shown that the results produced are much superior than when a small vacuum cleaner, even a vacuum cleaner having a revolving brush, is moved over the coat. Likewise, experience has shown that the results secured are much superior than if the garment is pulled over the brush in the flat condition.

We do not wish to be limited to the use of suction in the device as the revolving brush B could have its bristles cleaned by other means. While it is preferable to roll up the work in the form of a yielding cylinder and to place the work across the machine in a direction opposite to the movement of the bristles of the brush, we do not wish to be limited to these details, as our invention covers subjecting garments or materials to the brushing and suction operation, while said garments or materials are in the flat condition. Likewise, the material could be fed across the brush in the same direction as the movement of the bristles. Likewise, we do not wish to restrict our application to feeding the work or materials by hand, as this might be done mechanically. Whenever we refer in the claims to cleansing a garment, it is to be understood that this also covers the cleansing of flat material such as cloth or the like.

We have shown a preferred embodiment of our invention, but it is clear that numerous change and omissions could be made without departing from the spirit of our invention.

We claim:

1. A method of cleansing a garment which consists in subjecting the successive portions of said garment to the action of a brush, while rolling the brushed portion of said garment into substantially a yielding cylinder which is forced against the brush.

2. A method of cleansing a garment which consists in subjecting the successive portions of said garment to a brushing action and to suction while rolling the brushed portions of said garment into substantially a yielding cylinder which is subjected to the brushing action.

In testimony whereof we affix our signatures.

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JULIUS BUONO.