

UNITED STATES PATENT OFFICE.

JOHN D. GAT, OF NORTH CANTON, OHIO, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE HOOVER COMPANY, OF NORTH CANTON, OHIO, A CORPORATION OF OHIO.

PROCESS OF TREATING FILTER BAGS.

No Drawing.

Application filed April 30, 1921. Serial No 465,893.

To all whom it may concern:

Be it known that I, JOHN D. GAT, a citizen of the United States, residing at North Canton, in the county of Stark and State of Ohio, have invented a certain new and useful Improvement in Processes of Treating Filter Bags, of which the following is a specification.

My invention relates to a process of treating bag material intended for use in the manufacture of bags for vacuum sweepers. Such bags are attached to the sweepers in such a way that the dust laden air is driven into the bag and the air freed from the dust should escape therefrom leaving the dust in the bag. Obviously, under various conditions and with various kinds of fabrics, there will be trouble due to the escape of dust itself or dust laden air through the fabric of the bag. My invention is intended to minimize or prevent this. Another object of this invention is to provide a bag of such fabric that while retaining the dust it will freely let out the air. If the fabric of the untreated bag is made firm enough to retain all of the dust the air will with difficulty pass out of the bag, and the back pressure against the suction element in the cleaner will thus be built up. It is therefore one object of this invention to produce a bag which while holding all of the dust within itself will still not create back pressure against the suction element.

The structure of this invention is of particular importance where the suction element is not one which creates a very high degree of suction. With a high degree of suction or a high pressure a loose fabric is not necessary. It is with a comparatively low degree of pressure and suction that the loose fabric or one through which air can be readily driven is of the greatest importance. This invention is therefore primarily concerned with the production of the proper bag for use with a suction sweeper in which there is a comparatively low degree of suction.

In the application of my invention in connection with fabrics which are liable to this objection, I make a solution of approximately 100 lbs. of petrolatum, 60 lbs. of paraffin, 150 gallons of gasoline as solvent. This mixture is heated and the finished bags are preferably arranged in bundles and dipped in the solution, and then put on racks to dry. The drying is preferably carried out under conditions which distill out the gasoline which is then recovered. Such a process consists in depositing in the fabric of the bag or in the materials from which it is made, a small amount of the non-evaporating residuum. After use the inside of the bag will be found to be coated with dust so that the escaping air must pass through a sort of dust screen which serves as a filter and which is held in position by its adhesion to the deposited non-volatile material, and through the mesh of the cloth which has a series of minute holes therethrough.

The process may be carried out in various ways but that above suggested seems to be the preferable method. Other materials of a somewhat similar nature to those suggested could be used, but I have preferred gasoline because it requires less time to evaporate. Many volatile solvents can be substituted for the gasoline but the quicker the evaporation the better. It is necessary that there should be an even distribution of the material through the fabric of the bag.

I claim:

The process of rendering suction sweeper bags dust retaining which consists in subjecting the bag to a solution of approximately 100 lbs. of petrolatum and 60 lbs. of paraffin and 150 gallons of gasoline then evaporating the gasoline.

Signed at North Canton, county of Stark and State of Ohio, this 22nd day of April, 1921,

JOHN D. GAT.