

UNITED STATES PATENT OFFICE.

FRANZ DAUBITZ, OF RIXDORF, AND ALFRED LOEWY, OF BERLIN, GERMANY.

METHOD OF MANUFACTURING MOLDED ELASTIC GOODS.

SPECIFICATION forming part of Letters Patent No. 715,462, dated December 9, 1902.

Application filed June 12, 1902. Serial No. 111,294. (No specimens.)

To all whom it may concern:

Be it known that we, FRANZ DAUBITZ, a resident of No. 47 Kopfstrasse, Rixdorf; and ALFRED LOEWY, a resident of No. 92 Dorotheenstrasse, Berlin, Prussia, German Empire, subjects of the King of Prussia, German Emperor, have jointly invented certain new and useful Improvements in Methods of Manufacturing Molded Elastic Goods, (for which we have made application for Letters Patent in Germany, Serial No. L. 15,985, dated July 10, 1901,) of which the following is a specification.

Our invention relates to an improved method of manufacturing molded elastic goods by casting into a mold the fluid substance just before the mass begins to become consistent, which after cooling down forms a coherent body of great elasticity and resistance. The substance employed for casting it into molds, and thereby forming elastic molded goods, consists of a fat oil of any suitable kind with an addition of sulfur in a suitable form, preferably in the form of chlorid of sulfur. It is a well-known fact that fat oils treated or mixed with sulfur, particularly with chlorid of sulfur, are rapidly converted into a consistent mass of great elasticity, such mass being known as "factice" and usually employed in a finely-reduced state as an addition to india-rubber in the manufacture of rubber goods. Likewise additions for rubber have been produced by oxidizing drying-oils on the air at an increased temperature, whereby the glycerids of the linseed-oil series are transformed into glycerids of the oxyfatty acids, which then are treated with chlorid of sulfur, whereby an adulterant for rubber is obtained. We have found that by casting a mass of this kind while still in a fluid state just before the mass begins to become consistent into molds of any kind elastic goods may be formed, which being taken from the mold retain the exact form of the mold and are ready for use.

In carrying our invention into practice we prepare in a suitable receptacle, preferably provided with a spout, the mixture of oil and sulfur, preferably chlorid of sulfur, and to obtain an intimate mixture of the two ingredients we prefer to employ a stirrer of suitable kind. It is important to watch carefully the state of the fluid mixture thus prepared. The same must be cast into the molds at the right moment, just before the mass be-

gins to become consistent and to form solid elastic lumps. When cast at the right moment, then the fluid mass will readily become consistent, but without materially shrinking, as other fluid substances do, such as plaster, when becoming solid within a mold. When taken from the mold, the cast article retains the exact form of the mold and is ready for use. The degree of softness or hardness of the elastic body thus obtained by casting will be variable, according to the quantity of sulfur which has been added to the oil. By adding an increased quantity of sulfur the hardness of the substance obtained will be greater than with a reduced quantity of sulfur admixed. The degree of softness accordingly may be varied, as desired. In general, an addition of fifteen per cent. of chlorid of sulfur to the quantity of oil to be prepared for casting will be found expedient; but useful results may be obtained by reducing the addition of sulfur to ten per cent. or by increasing the same to twenty per cent. The quantity of sulfur to be admixed also may be varied, according to the nature of the oil employed. We have found that rape-oil mixed with chlorid of sulfur gives very good results; but other fat oils may be employed.

As a specimen of goods which may with good result be cast according to our invention we mention the pads of hernia-trusses, which pads not only require great elasticity, but must be exempt of becoming soft by the temperature of the body and must not suffer any change by the transpiration; but we wish it to be understood that we do not limit our invention to the manufacture of pads by casting the same. Other articles of use may as well be produced by the method described.

We claim as our invention—

The method of manufacturing molded elastic goods consisting in first preparing a mixture of fat oil with sulfur, such as chlorid of sulfur and then casting the mixture into molds just at that moment before the mass begins to become consistent.

In witness whereof we have hereunto set our hands in presence of two witnesses.

FRANZ DAUBITZ.
ALFRED LOEWY.

Witnesses:

HENRY HASPER,
WOLDEMAR HAUPT.