

R. LUNGSTRAS.
 PROCESS OF CLEANING GLOVES OF KID OR LEATHER.
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986,072.

Patented Mar. 7, 1911.

Fig-1-

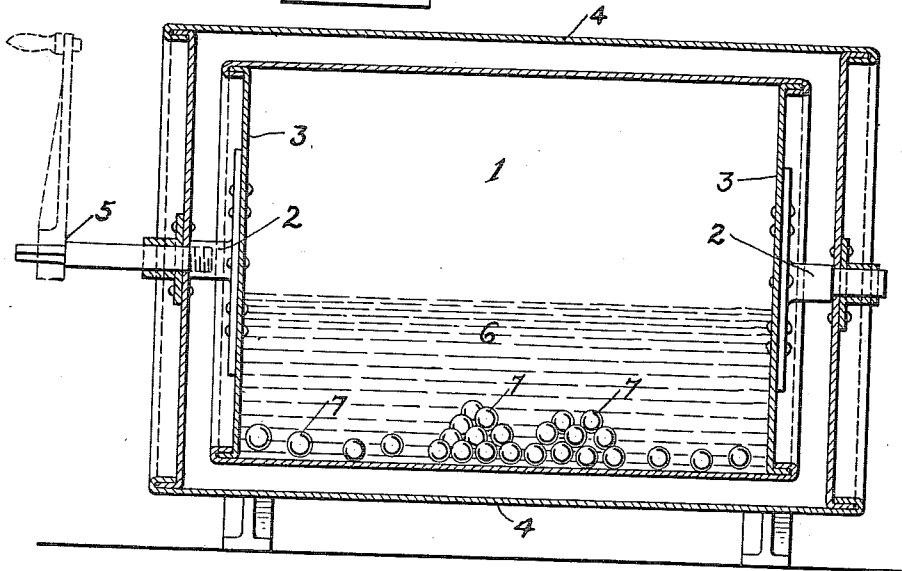
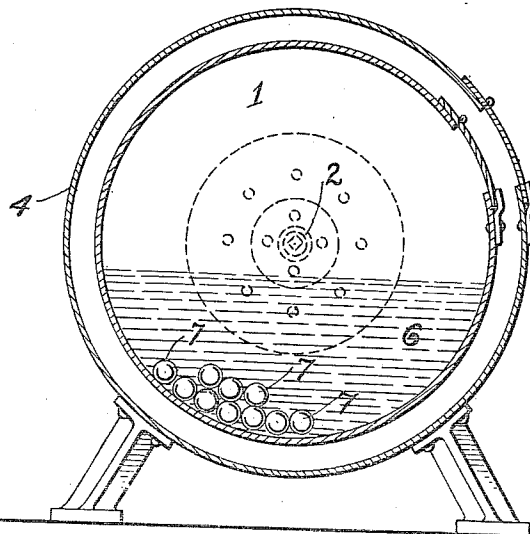


Fig-2-



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UNITED STATES PATENT OFFICE.

ROBERT LUNGSTRAS, OF ST. LOUIS, MISSOURI.

PROCESS OF CLEANING GLOVES OF KID OR LEATHER.

986,072.

Specification of Letters Patent.

Patented Mar. 7, 1911.

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To all whom it may concern:

Be it known that I, ROBERT LUNGSTRAS, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented new and useful Improvements in the Processes of Cleaning Gloves of Kid or Leather, of which the following is a specification.

This invention relates to processes or methods of extracting the accumulation of grease, dirt, perspiration, etc., which is found upon gloves, and particularly upon the finger tips thereof, which have been worn for any considerable period; and has for its object to afford a process not merely simple and inexpensive, but, also, rapid and effective.

In the earlier methods of cleaning gloves the article would be first soaked in a volatile dissolving or cleaning fluid, next placed on forms, then rubbed by hand with a bristle brush or sponge moistened with the cleaning fluid, and finally rinsed in a receptacle containing fresh (or clean) dissolving fluid. Subsequently came attempts to eliminate the large expenditure of time and manual labor entailed in the earlier process described and machines were introduced comprising bristle brushes which revolved or otherwise moved in a cleansing fluid in contact with the gloves placed in said machines. In some of these mechanical contrivances the brushes referred to were given a reciprocatory or "scrubbing" movement with the idea of more efficaciously cleaning the gloves, while in other types one field or series of brushes is moved in a direction opposite to that given another field or series. Here, also, the gloves were rinsed in fresh cleaning fluid after removal from the machine and the finger tips would then be examined, whereupon it would be found that approximately 75% were insufficiently cleaned and these would be put on a "hand stick" or forms and the tips "worked" clean by friction with a moistened brush or sponge as in the earlier process. Where stains are stubborn the glove is removed from the form and "kneaded" between the fingers of the operator for the three-fold purpose of softening the material, raising the fiber or nap if the glove be of the undressed variety, and, primarily, to squeeze out (as it were) the dirt, the article being moist or damp with cleaning fluid while so kneaded.

In the accompanying drawing Figure 1 is a longitudinal section of an apparatus by the aid of which my process, hereinafter to be described, can be carried out, and Fig. 2 a cross-section of the same apparatus.

In the practice of my invention I employ, preferably, the cylindrical device depicted, comprising a chamber 1 suspended, by axles 2 affixed to its opposite heads 3, in a casing 4, and adapted to receive reciprocal rotation or rotation continuously in the same direction through the agency of a crank and handle 5 prolonged from one of said axles. It will be understood, of course, that other means for imparting motion may be substituted for said crank, such as a belt and pulley arrangement or the well-known automatic reversing-gears. Into such a vessel, or other suitable device, I introduce the gloves or similar articles to be cleaned, a quantity of volatile dissolving or cleaning fluid 6, preferably a high-grade gasoline, an alkali, preferably caustic potash or ammonia, and an acid, preferably oleic acid (acidum oleicum or hydrogen oleate), and to the mixture so composed I add a quantity of small objects 7, each about an ounce in weight, preferably spherical in shape, and of a semi-porous, rough, crumbling character.

The machine selected having been set in motion, the gloves are constantly submerged in and washed by the gasoline, the oleic acid, being readily soluble in the volatile fluid employed, is saponified by the alkali and attacks and disintegrates the oily deposits and dirt of other character upon the gloves, while the highly important function of the objects aforesaid is to compress between themselves and between themselves and the interior wall of the machine the glove fabric, constantly grind and work upon every portion of its exposed surface and from every possible angle, and so to not only supply the valued "kneading" motion formerly imparted by the hands of the operator, but to gently and persistently abrade the material by reason of their rough character, as aforesaid.

Many and repeated experiments have been conducted in the determination of the character of the object best suited to be used in this process and steel, aluminum, wood, glass and agate have been tried and abandoned as inefficient. The substance finally selected is a baked white clay of peculiar

qualities which is found principally, if not exclusively, in Saxony, and enters into the composition of the celebrated Dresden porcelain or china.

5 I am quite well aware, as one long engaged in the garment cleaning industry, that the prior art discloses washing contrivances wherein are used plain, cloth-covered, or loaded spheres whose function is
10 to facilitate the cleaning of garments in water, but in sharp contrast thereto the objects which I have adopted are naturally rough and gradually wear away in use until they reach that small size where their
15 weight, either singly or in contact with each other in their massage of the glove, is a negative factor, whereupon they are removed and replaced by new objects of a standard size. Where cloth-covered objects are used
20 it entails a prohibitive cost both in original manufacture and in renewals, leaves scraps of lint or other substance upon the gloves, and requires the constant inspection of an
25 operative to see that the covering upon each of the many objects required used is in fit condition to be of any utility whatever. Moreover, the action of cloth upon kid or
30 leather, dressed or undressed, is obviously of decidedly less result than the action thereupon of comparatively rough, hardened mineral. This may be simply, although imperfectly, demonstrated to the satisfaction
35 of any one by enfolding any small object in a handkerchief or other fabric and then rubbing the same over a piece of blotting-paper, kid or leather, and then removing the fabric, roughening the surface of the object
40 and then gently rubbing the same upon a different portion of the blotting-paper. When steel, aluminum, wood, glass or
agate objects are used the gloves may be
45 "kneaded" or compressed thereby and thus the greasy or other deposits "squeezed" out with the aid of the softening or dissolving fluid, but compression is the only factor secured by the introduction of the objects mentioned or anything similar thereto, for

being smooth they cannot possibly grip or engage the glove surface.

The abrading effect the substance of my 50 selection produces, as aforesaid, may be likened to that produced by an extremely fine sand-paper or scouring powder applied with the lightest touch, which necessarily removes any dirty nap or glaze and ex- 55 poses the underlying comparatively clean "strata", and smooth objects naturally are incapable of effecting any such result. Bristles are not only very expensive, but are unsatisfactory in view of the fact that they 60 soon lose their rigidity and mash down upon their support when brought in contact with the articles they are supposed to scour. Moreover, any undesirable effect which might be anticipated from the employment 65 of a substance calculated to abrade or engage with the glove leather is obviated by the important fact that my objects are not hard and unyielding, but, on the contrary, they wear away constantly and quite freely. 70 Their loss of size, and consequent loss of weight, is gradual and regular, however, so that throughout their life each one retains its original outline and therefore presents to glove a point of contact always of the 75 same physical character.

What I claim as new and desire to secure by Letters-Patent is:—

The process of cleaning articles of kid or leather which comprises the disposition 80 of said articles in a dissolving fluid, in adding to said fluid an acid and an alkali, in imparting motion to the vessel containing said fluid, acid and alkali, and in subjecting said articles in the moving vessel to mas- 85 sage and compression by a plurality of comparatively heavy objects of gritty character adapted to readily wear away in use, substantially as and for the purpose described.

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