

# United States Patent Office.

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*Letters Patent No. 99,979, dated February 15, 1870.*

## IMPROVED SOAP PRODUCT FROM GLUE RESIDUUM.

The Schedule referred to in these Letters Patent and making part of the same

We, ANTHONY VAN HAAGEN and WILLIAM ADAMSON, of Philadelphia, county of Philadelphia, State of Pennsylvania, have invented a new Soap Product, of which the following is a specification.

### *Nature and Object of the Invention.*

Our invention consists of soap made by the treatment substantially as described hereafter, of glue residuum, which has heretofore been considered of little or no value.

### *General Description.*

In manufacturing glue, there remains in the kettles or boilers after the size has been drawn off a residuum consisting of fatty matter, hair, bone, animal fibre, &c., which is almost worthless, the attempts to use it as manure having met with very little success, owing partly to the matted and undistributable condition of the residuum itself, and partly to the difficulty of dissolving or melting the fatty ingredients, the presence of lime used by the tanners in preparing the skins, the clippings of which are used for the manufacture of glue, resisting attempts to disintegrate the residuum by melting the fat.

In order to utilize this residuum, we first boil it on an alkaline solution in an open or closed vessel, and thereby decompose the mass and reduce the fatty matter, hair, bone, animal fibre, &c., to a saponaceous fluid; to this we add common salt, which soon dissolving, sets free the saponaceous matter derived from the action of the alkali on the fat, and this soap rising in the vessel is removed and is at once available for cleaning or other purposes, or may be employed for

conversion into merchantable soaps of different qualities.

The residuum on cooling becomes a jelly-like mass, which owing to its saponaceous properties can be used for coarse cleaning purposes, but is more especially available as a valuable and rapidly-acting manure, either alone or mixed with charcoal or other equivalent absorbents possessing within themselves fertilizing properties.

We have found that about fifty pounds of a solution of caustic alkali of the strength of about 25° Baume will be required for treating about one hundred pounds of glue residuum of the ordinary quality, and that about twelve pounds of salt will be required to set free the soap derived from the fatty ingredients of the same quantity of glue residuum.

In giving these proportions it should be understood that they are not to be adhered to in all cases, for the proportions must be determined to some extent by the judgment of the attendant guided by his knowledge of the quality of the glue residuum to be treated.

### *Claim.*

Soap made from glue residuum by the treatment of the same, substantially in the manner described.

In testimony whereof, we have signed our names to this specification in the presence of two subscribing witnesses.

ANTHONY VAN HAAGEN.  
WM. ADAMSON.

Witnesses:

E. H. BAILEY,  
WM. A. STEEL.