

UNITED STATES PATENT OFFICE.

PAUL KLEIN, OF BUDAPEST, HUNGARY, AND ALBERT HEALEY, OF BIRMINGHAM, ENGLAND, ASSIGNORS TO THE AMERICAN ANODE INCORPORATED, OF NEW YORK, A CORPORATION.

DIRECT PRODUCTION OF RUBBER GOODS FROM RUBBER DISPERSIONS.

No Drawing. Application filed September 14, 1927, Serial No. 219,555, and in Great Britain August 4, 1926.

This invention relates to the manufacture of rubber goods from rubber dispersions.

Processes have been proposed based on the fact that it is possible to deposit rubber on a deposition stratum by electrical means and obtain deposits of different even considerable thicknesses without having the risk of totally cutting off the electric current by insulation, which would prevent further deposition.

One of the main features of these processes is to get the right degree of coagulation in the deposit thus obtained. The deposit must be of a certain nature such as adhesion to the mould when the latter is removed from the bath, and the like. On the other hand a too strong coagulation of the deposit increases the electrical resistance in an undesirable manner. The object of this invention is to obviate these disadvantages. We have now found that an addition of certain protective substances or peptizing agents furnish a good means of regulating the degree of coagulation.

According to this invention we add to the rubber dispersion a peptizing agent such as a protective colloid (for example, soft soap) or an alkali, and carry out the process described and claimed in any of the said specifications. This has the effect of producing a much tougher deposit than is obtainable without such prior addition without increasing the electrical resistance in an undesirable manner as aforesaid.

As an example of the above described proc-

ess we may add 6 to 12 grams of soft soap to 1 litre of latex containing about 30% of rubber, which may or may not be preserved by ammonia or by any other preserving agent, and then depositing out of this dispersion, for example on a porous mould, using a current density of 3 amperes per square decimetre of mould surface during a time of 5 minutes to produce a deposit of approximately 2 millimetres in thickness. The current density or time may be varied according to the thickness of deposit required.

Without departing from the scope thereof the present invention is applicable not only to unvulcanized or vulcanized natural or artificial rubber emulsions with or without additional substances and conditioning agents, but also to natural or artificial, vulcanized or unvulcanized, emulsions of other rubber like substances, as for example gutta-percha or balata, with or without additional substances and conditioning agents.

What we claim is:

In the manufacture of rubber and the like or articles manufactured therefrom the process which comprises regulating the degree of coagulation by adding soft soap to natural latex in the proportion of 6 to 12 grams of soft soap to 1 litre of latex and depositing the latex by electrophoresis upon an anodic mould.

In witness whereof, we have hereunto signed our names.

DR. PAUL KLEIN.
ALBERT HEALEY.

CERTIFICATE OF CORRECTION.

Patent No. 1,683,588.

Granted September 4, 1928, to

PAUL KLEIN ET AL.

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows: Strike out transposed lines 13 and 14, and insert instead "coagulated to a certain extent to fulfill technical requirements such as adhesion to the"; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 27th day of November, A. D. 1928.

(Seal)

**M. J. Moore,
Acting Commissioner of Patents.**