

UNITED STATES PATENT OFFICE.

THOMAS R. CLARK, OF NEW YORK, N. Y.

MANUFACTURE OF GLAZED LEATHER.

SPECIFICATION forming part of Letters Patent No. 321,191, dated June 30, 1885.

Application filed November 28, 1884. (No specimens.)

To all whom it may concern:

Be it known that I, THOMAS R. CLARK, of the city, county, and State of New York, have invented a new and useful Improvement in the Manufacture of Glazed Leather; and I do hereby declare that the following is a full and exact description thereof.

My invention relates to that class of leather which is commercially known as "French glazed kid," and which is chiefly employed in the manufacture of ladies' fine shoes.

In the manufacture of this class of leather the presence of any trace of oil or grease in the skin is fatal to the production thereon of the fine glazed surface constituting its distinguishing characteristic, and for which it is so highly prized. Heretofore, consequently, glazed-kid leather has been manufactured chiefly of skins tawed with lime, alum, and salt, and occasionally of skins tanned with bark by processes involving the use of lime, the use of skins tawed with oil being wholly discarded. It is, however, well known that the fiber of the skins is measurably weakened by the use of lime in tawing the same, and that for this reason all the glazed kid heretofore produced is lacking to a certain extent in toughness, and also cracks upon its glazed surface to a greater or less degree.

The object of my invention is to obtain a glazed-kid leather which shall combine, with a perfectly-glazed surface of the highest finish, all the suppleness, strength, and toughness of the best oil-tanned leather, and which shall consequently be free from the objectionable tendency to crack under strain, which, as stated, is inherent in all the glazed alum-tanned shoe-leather heretofore manufactured. I have, as the result of a long-continued series of experiments, attained my object by first subjecting skins which have been thoroughly tanned or tawed by any of the customary processes, in which the skin is toughened and cured by means of oil or grease, or compounds of oil or of grease, to the detergent action of naphtha, or any of its known equivalents, the skin being completely drenched in successive baths of pure naphtha, repeated until every trace of oil or grease or solvent animal matter is removed, and thereafter coloring and polishing one side of the cleansed skin, in manner

as is well known to the art, to produce a fine black glazed or polished surface.

It is unnecessary to describe the method of tanning or tawing the skins with oil to toughen and cure them, which constitutes the first step in my process. Any of the processes of oil-tanning, which are well known to the art, may be employed, and I select for my purpose such of the known processes as have been found to produce the toughest and most durable, as well as soft and supple leather, from the particular character of skins in hand. After the skin has been tawed with oil and finished to the white, and brought to a soft and pliable condition, I thoroughly dry the same to remove therefrom, so far as practicable, every trace of moisture, and then immerse the dry skins in a bath of pure refined naphtha—preferably the ordinary commercial naphtha of about 70° Baumé—or other equivalent volatile hydrocarbon oil, in a tank or close vessel, which is either made to revolve, or in which the skins are otherwise agitated by means of rotating arms or stirring devices, so as to insure a rapid and thorough permeation thereof by the fluid. This agitation is continued until the naphtha becomes so fully saturated with the greasy and oily matter extracted thereby from the skins as that it will take up no more. The skins are then removed to a second clean bath of pure naphtha, and drenched therein as in the first case; and this operation of subjecting the skins to a fresh supply of naphtha in a clean vessel is repeated again and again until the naphtha in which the skins are last placed will remain pure, and so far unaffected thereby as not to show upon proper test the least trace of oil or grease. Where the skins, in the original step of tanning or tawing, were treated with impure oil, it becomes necessary, at this stage of my process, to further purify them from the traces of gummy or resinous matters which have resisted the solvent action of the pure naphtha, and for this purpose I subject such skins to a drenching with alcohol, wood spirits, ammonia, or other equivalent solvent for gummy and resinous substances. The skins are then hung up and dried and staked out, preparatory to being colored, and are finally dyed and polished by the use of polishing-machines, in manner as is

well known to the art, for the purpose of producing thereon the desired glazed surface.

The simplicity of my process renders it comparatively inexpensive, and as a result I obtain the finest quality of glazed leather, having all the toughness and desirable qualities which are inherent in oil-tanned skins, with a peculiar toughness in the glazed surface, which is wholly novel, and has heretofore been deemed to be unattainable.

I am aware that old belting, which has become oily in use, and especially the "card" leather used in woolen-mills, and which becomes completely saturated with oil from the wool, has been cleansed and the oil extracted therefrom by first warming the leather, then immersing it in naphtha, and, after letting it stand for a few hours, submitting it to pressure. I do not, therefore, claim the use of naphtha in extracting oil from leather for cleansing the same, and recovering the oil, my use of naphtha being merely one of a series of steps in a novel process for converting skins, tawed with oil or oily compounds without the use of lime or other chemicals injurious to the fiber of the skin, into an exceedingly tough and supple glazed leather, such as has not heretofore been produced.

I claim as my invention—

1. The improvement in the art of manufacturing glazed leather, which consists, substantially, as herein described, in first tawing skins with oil or oleaginous compounds; second, drying them; third, subjecting them to repeated drenchings in successive baths of clean naphtha until fully cleansed and whitened; fourth, drying and staking them; and, finally, dyeing and glazing them in the customary manner.

2. The method, substantially as described, of manufacturing glazed leather, which consists in first tawing the skins with oil or compounds of oil; second, drying them; third, subjecting them to repeated drenchings in successive baths of clean naphtha until fully cleansed and whitened; fourth, washing them in alcohol, or an equivalent solvent; and, fifth, drying and staking the same preparatory to coloring and finishing them.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THOS. R. CLARK.

Witnesses:

A. PEYROUNET,
H. LORENZ.