

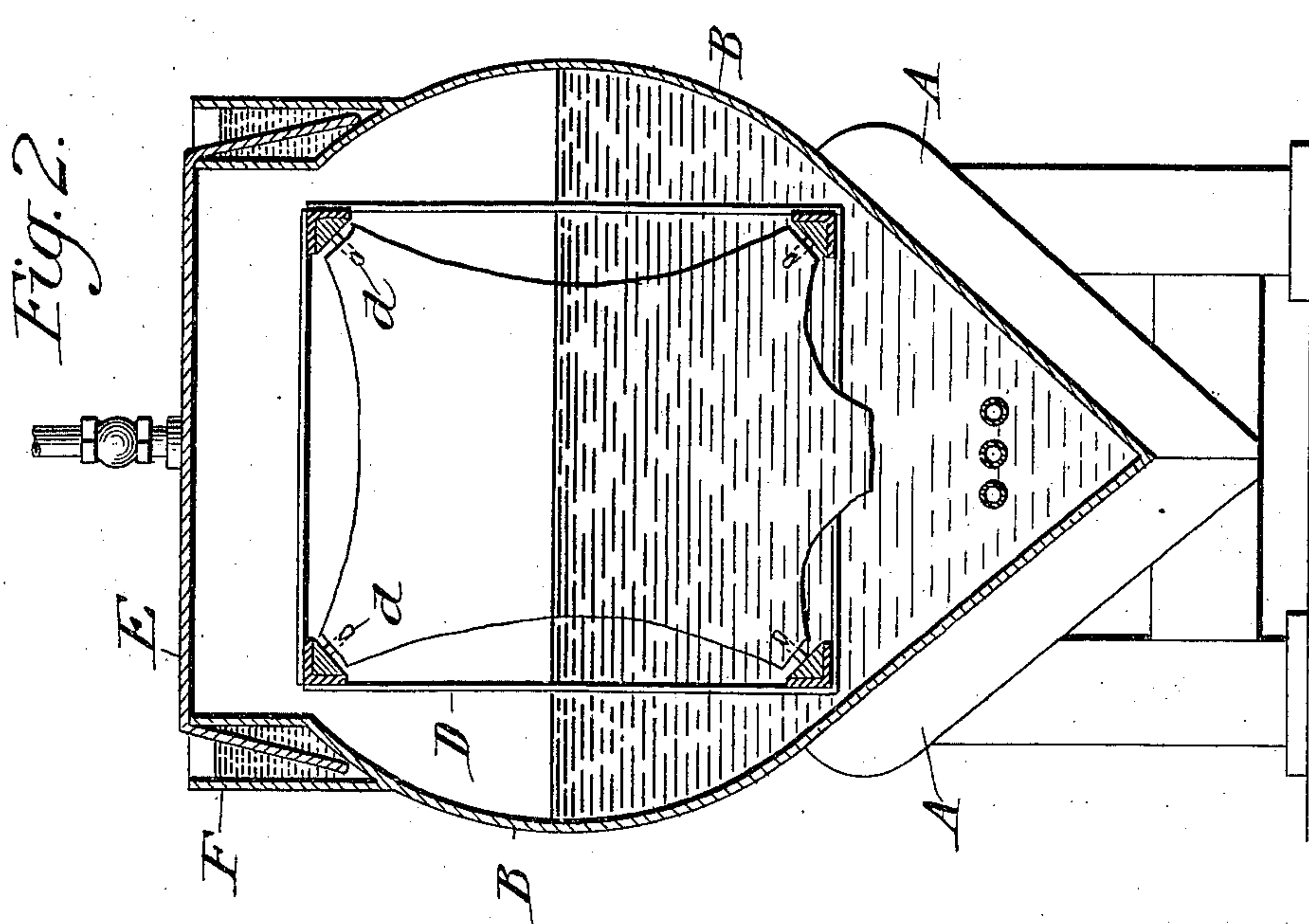
No. 685,552.

Patented Oct. 29, 1901.

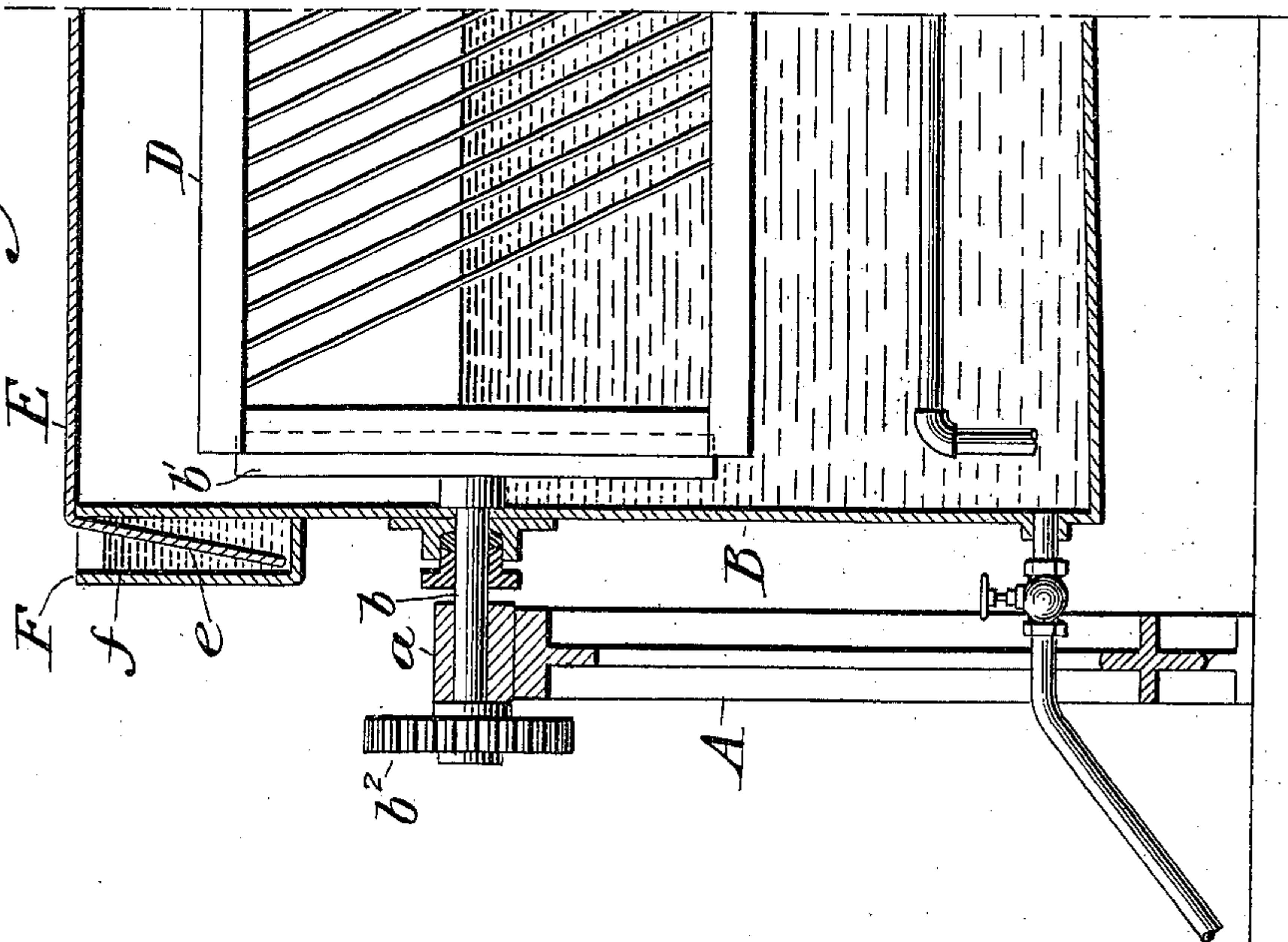
W. W. ADAMS, JR.  
PROCESS OF DEGREASING LEATHER.

(Application filed Feb. 28, 1901.)

(No Model.)



*Fig. 1.*





# UNITED STATES PATENT OFFICE.

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## PROCESS OF DEGREASING LEATHER.

SPECIFICATION forming part of Letters Patent No. 685,552, dated October 29, 1901.

Application filed February 28, 1901. Serial No. 49,351. (No specimens.)

*To all whom it may concern:*

Be it known that I, WILLIAM WALLACE ADAMS, Jr., a citizen of the United States, residing at the city of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Processes of Degreasing Leather, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to the process of degreasing tanned skins, leather, and other like stock for the extraction therefrom of natural and applied grease, and has for its object to effect that result more rapidly and evenly.

Skins of leather vary in density and thickness throughout the superficial area, and some parts contain or take up more natural and applied grease than other parts of the same skin. Hence it has been found difficult to thoroughly, evenly, and completely degrease it by any of the usually-employed methods or means.

In all or at least the principal processes and machines for degreasing leather and like stock heretofore employed the principle involved is the quiescent or still subjection of the skins to be treated, usually by suspending them in a fixed position, to the action of a volume of liquid grease solvent discharged against them or simply by immersing them in the solvent. In my view that principle is defective, the quickest and most effective results being attained by agitating the stock itself and bringing it forcibly against a volume of the liquid. In my improved process or method of extracting the grease and drying the skins the essential and distinguishing steps are threefold—first, to hold the skins flat and distended by means of suitable devices, each being so held separately; next, to so present them in rapid motion by suitable mechanical means against a body of grease-extracting liquid, such as naphtha, contained in a suitable vessel in order that the solvent will simultaneously reach every part of the skin and remove the grease completely, evenly, and rapidly, a difficultly attainable result, as the skin of leather varies in thick-

ness and density in its several parts, some parts containing and absorbing more natural and applied grease than other parts, and, lastly, to quickly and thoroughly dry the degreased skin in a manner which will not injure or in any way change the density, pliability, or leather character of the tanned skin by volatilizing the naphtha or other grease solvent held in the skin by absorption and evaporating other moisture therein by supporting the skins, still distended, in a suitable chamber to which radiated heat of a temperature of less than, say, 200° Fahrenheit is admitted, or by means of a rapidly-moving current of air directed against the skins in the chamber. I have devised special means or apparatus best adapted for carrying out this process, the same forming the subject of separate application for Letters Patent, Serial No. 43,821, filed January 18, 1901, to which reference is hereby made, and I have shown in the accompanying sheet of drawings only sufficient of such apparatus to disclose the general process, in which—

Figure 1 is a longitudinal section of a portion or one end of the apparatus, and Fig. 2 is a cross-section thereof.

In the drawings, A represents the supporting-frame, of any desired form and dimension, upon which is mounted the closed chamber B, adapted to contain the grease solvent. Journaled within suitable bearings *a* is a suitable shaft *b*, preferably one at each end of the apparatus, and each provided with holding means *b'* for a suitable frame D, having devices, such as hooks *d*, by which the skins may be held in a distended condition. The shaft *b* is driven from any suitable source of power through the gear *b*<sup>2</sup>, by which the frame D is given the necessary rotary movement for the proper treatment of the skins. The chamber B is preferably closed by a detachable cover E, having the downturned edges *e*, projecting into a suitable sealing device, as the flange F, in which is contained liquid *f*. In said apparatus or in some other operating on the same principle the skins of leather are to be held in a flat and distended position in a suitable frame and said frame supported by



and in a suitable mechanical means adapted to be rotated within a closed chamber containing the liquid grease solvent, so that the skins may be separately given a rapid motion  
5 against the still body of grease-extracting liquid, and thus completely, evenly, and rapidly be degreased; but the mechanical construction of such means may be of any character desired. The effect will be produced  
10 more quickly if the supporting-frame in which the skins are held distended is rotated at a vertical incline, so that in its rotation it is intermittent, partly within and partly without the body of liquid solvent. In the same cham-  
15 ber after removing the liquid solvent or in a separate chamber the skins are dried by evaporating the liquid naphtha and moisture which they have absorbed in the process of degreasing, and this evaporation may be ef-  
20 fected by subjecting them to a current of rapidly-moving air or by radiated heat from any suitable means.

Having thus described my invention, what I claim as new, and desire to secure by Letters  
25 Patent, is—

1. The process of extracting grease from tanned skins or leather, which consists in supporting them separately in a flat and distended position, by suitable devices, and giving

them rapid motion, while so held, in a body 30 of liquid grease solvent, such as naphtha, in a suitable containing vessel, and then volatilizing the moisture and solvent held in the skin by absorption, by any suitable drying means; substantially as described. 35

2. The process herein described of degreasing tanned skins and other like stock which consists in supporting the skin flat and distended in a suitable frame held at an incline, and in that condition and at that angle rotat- 40 ing it partly within and partly against a volume of liquid naphtha or other grease solvent.

3. The process herein described of degreasing tanned skins and leather, which consists in agitating the same in a flat and distended 45 condition in direct contact with a body of still liquid grease solvent, such as naphtha, then removing the skin from the body of liquid and finally drying out of the skin the absorbed solvent and moisture, by vaporization. 50

In testimony whereof I have hereunto affixed my signature this 21st day of February, A. D. 1901.

WILLIAM WALLACE ADAMS, JR.

Witnesses:

E. T. MURRAY,  
HERBERT K. ADAMS.