(No Model.)

J. KRISTEN.

APPARATUS FOR DYEING HIDES.

No. 442,628. Patented Dec. 16, 1890.

Fig. 2

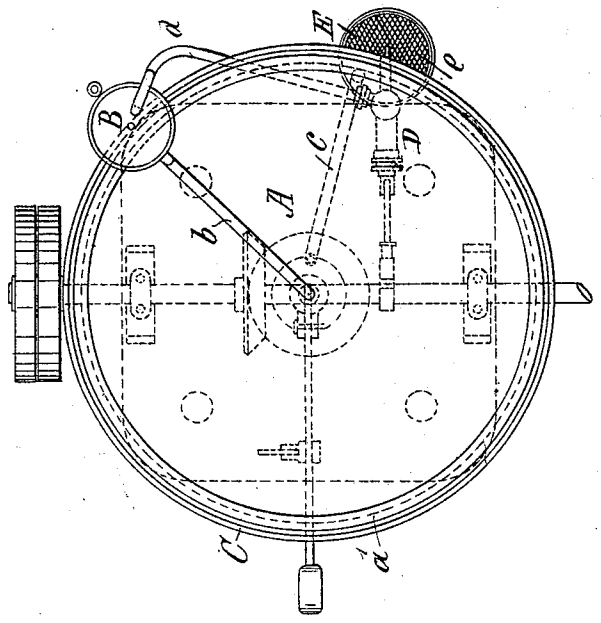
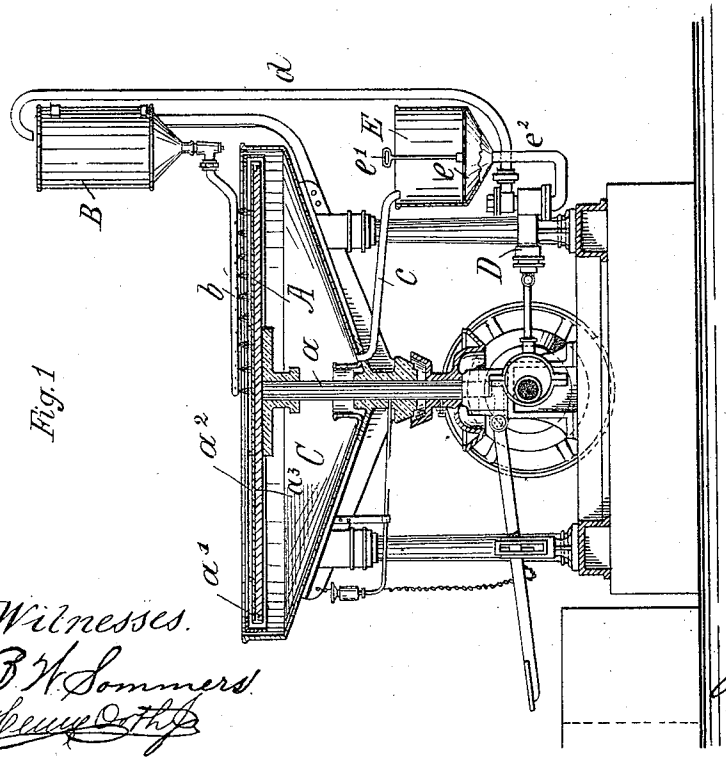


Fig. 1



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att'y

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOSEF KRISTEN, OF BRÜNN, AUSTRIA-HUNGARY.

APPARATUS FOR DYEING HIDES.

SPECIFICATION forming part of Letters Patent No. 442,628, dated December 16, 1890.

Application filed August 6, 1890. Serial No. 361,182. (No model.)

To all whom it may concern:

Be it known that I, JOSEF KRISTEN, leather-dyer, a subject of the Emperor of Austria-Hungary, residing at Brünn, in the Province of Moravia, in the Empire of Austria-Hungary, have invented certain new and useful Improvements in Apparatus for Dyeing Hides; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Referring to the drawings, Figure 1 is a vertical sectional elevation of an apparatus for dyeing hides, embodying my improvements. Fig. 2 is a top plan view thereof.

This invention relates to that class of machines for dyeing hides in which the hide is stretched upon a table adapted to revolve in a horizontal plane, the dye-liquor being distributed over the hide by centrifugal action, and is an improvement on my invention described in Letters Patent of the United States granted to me under date of May 13, 1890, No. 427,697.

The invention has for its object certain improvements on the machine described in my Letters Patent referred to, which improvements relate chiefly to the construction of the revolving table, to the means for supplying the dye-liquor, and to means for filtering the excess of dye-liquor before returning the same to the supply-reservoir.

To these ends the invention consists in the construction of the revolving table that supports the hide, and in the combination therewith of means for supplying the dye-liquor over a radial line.

The invention further consists in the combination, with the supply-reservoir, the reservoir for the collection of the excess of dye-liquor, and the pump, of a filter interposed between the pump and the collecting-vessel, as will now be fully described, reference being had to the accompanying drawings, in which—

A indicates the revoluble table or support for the hide or skin, which consists of a disk a^2, of a hard material, having a highly-polished surface or surfaces and that is impermeable to moisture—as, for instance, a disk of glass, or porcelain, or of some other material of an impervious nature, and capable of receiving a high polish, or of a material having an enamel-like surface.

In my Letters Patent hereinabove referred to I have described a revoluble support or table of wood. I have, however, found that such a support has many disadvantages, in that it becomes rapidly saturated with the dye-liquor, hence unfitted for use when dye solutions of different colors are used, unless the support is first thoroughly dried and the dye neutralized. On the other hand, the hide or skin to be dried does not as firmly adhere to a surface of wood as it will to a hard and highly-polished surface that is impervious to moisture, the hide being liable to wrinkle, and the operation of dyeing cannot be carried out as uniformly as this can be done with a support of the nature of that which forms a part of this invention, and upon which the hide may be laid and to which it may be caused to firmly adhere or cohere, thus permitting the smoothing out of all wrinkles.

In practice and with a view to more conveniently revolve the glass table a^2, I secure the same to a backing of wood a^3, to the edges or periphery of which is secured a hoop a', so as to form an encompassing flange for the reception of the glass or porcelain table or disk a^2, which is cemented to its backing and to the hoop by means of any well-known and suitable water-proof cement. The wood backing a^3 is provided with a socket-bearing for the upper end of the driving-spindle a, to which the table is rigidly secured.

The table is adapted to revolve in a receptacle C, that has a conical bottom for the purpose of collecting the dye-liquor thrown off the hide by centrifugal action, said receptacle being supported from any suitable framework, and is provided with an axial upwardly-extending tubular hub or sleeve, through which the spindle a passes, thus preventing the dye-liquor from escaping along the spindle. The vessel C is connected by a pipe c with a filter E, that has a removable filtering medium—as, for instance, a false bottom e of some foraminous material, as wire-gauze or like material, and provided with a handle e' for the purpose of removing the filtering me-

dium whenever this becomes necessary for cleansing the same.

The filter E has a conical bottom connected by pipe e^2 with the suction-port of a pump D, the forcing or exhaust port of which is connected by pipe *d* with the supply or feed reservoir B.

To the reservoir B is secured a pipe *b*, that extends across the table A, the outer end of said pipe *b* being closed. The pipe *b* is perforated for the greater part of its length, so as to supply the dye-liquor to the hide on a line radiating from the center to near the periphery of the table A, the outer perforations being in or about in the vertical axial plane of said table.

By means of the described arrangement of supply or feed pipe *b* the dye-liquor is spread over a greater area of the hide, and the operation of dyeing proceeds much more rapidly than is the case when the dye-liquor is caused to flow upon the hide at a single point and to be spread or distributed over the hide by centrifugal action only, as is the case in the machine described in my Letters Patent hereinabove referred to. On the other hand, by filtering the dye-liquor before returning the same to the feed-reservoir B all danger of choking the pump or the feed-pipe or its perforations is avoided, as I have found in practice that particles of skin and other foreign matter adhering to the hides are washed off during the operation of dyeing, and are carried with the dye-liquor to the pump, which is liable to become choked, or such foreign matter is carried back into the supply-reservoir, and thence to the feed or supply pipe *b*, frequently choking the same and causing a stoppage until the obstruction was removed.

The table A is revolved by means of any suitable mechanism—as, for instance, by friction-gear—the pump being operated by an eccentric on the driving-shaft, as shown.

Having described my invention, what I claim is—

1. In a machine for dyeing hides, the combination, with a vertical revoluble spindle and a horizontal table of glass or porcelain secured thereto, of a reservoir for the dye-liquor, and a supply-pipe extending from the periphery to the axis of the table and being provided with perforations for the purpose of supplying the dye-liquor to the table on a line radiating from the axis to the periphery thereof, substantially as and for the purpose set forth.

2. In a machine for dyeing hides, the combination, with a table for the support of the hide or skin, adapted to revolve in a horizontal plane, a supply-pipe arranged to supply the dye-liquor to the table, a reservoir to which said pipe is connected, a receptacle or vessel encompassing the table for collecting the excess of dye-liquor, and a pump for returning the dye-liquor to the reservoir, of a filter interposed in the connection between the pump and the collecting-vessel, substantially as and for the purposes set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEF KRISTEN.

Witnesses:
NETTIE S. HARRIS,
W. B. MURPHY.