

UNITED STATES PATENT OFFICE.

JEFFERSON CHASE, OF PORTLAND, MAINE.

PROCESS OF MAKING ARTIFICIAL LEATHER.

SPECIFICATION forming part of Letters Patent No. 507,213, dated October 24, 1893.

Application filed September 7, 1891. Serial No. 405,011. (No specimens.)

To all whom it may concern:

Be it known that I, JEFFERSON CHASE, of Portland, in the county of Cumberland and State of Maine, have invented certain new and
5 useful Improvements in Processes of Making Artificial Leather; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable
10 others skilled in the art to which it appertains to make and use the same.

My invention relates to an improved process for treating animal material for the production of artificial leather to be used in the construction of gears, pulleys, mallets, &c.

15 The process is equally applicable to leather that has been tanned or to raw hides.

It consists in disintegrating animal material into its constituent fibers and gelatinous elements by mechanical means in the pres-
20 ence of water in such manner that the fibers are torn apart but not cut or reduced to a fine powder, the disintegrated fibers and gelatinous elements being reunited by expelling the water from the semi-fluid mass under
25 pressure. This mass is then drawn into a suitable press and the water thoroughly expelled under pressure and the fibers compacted closely together so as to form a homogeneous mass which will be exceedingly hard
30 and tenacious.

The special object of my invention is to convert scraps of leather, waste material, and inferior grades of leather into a homogeneous mass, hard, inflexible and tenacious, and
35 suitable for pulleys, mallets, gears, buffing wheels, &c.

To this end I first disintegrate the material

by mechanical separation in the presence of water between surfaces which tear the fibers apart but do not cut or reduce them to a
40 powder, but preserve the integrity of the individual fiber in its natural state. The fibers and gelatinous elements thus separated and mixed with sufficient water to reduce them to a semi-fluid mass so that they may arrange
45 themselves freely with respect to each other, are then drawn into a suitable press and subjected to pressure until the water is expelled and the fibers firmly compacted together. The result is a mass of homogeneous leather,
50 inflexible, hard and tenacious, because the fibers while in a semi-fluid condition interlocked each other and being subjected to pressure while thus interlocked are firmly
55 bound together.

Having thus described my invention and its use, what I claim, and desire to secure by Letters Patent of the United States, is—

The herein described process of manufacturing homogeneous artificial leather which
60 consists in disintegrating animal material by mechanically separating said material into its constituent fibers and gelatinous elements in the presence of water and recombining
65 said fibers and gelatinous elements by expelling the water under pressure, as and for the purposes set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JEFFERSON CHASE.

Witnesses:

ELGIN C. VERRILL,
ARTHUR C. LIBBY.