

No. 611,956.

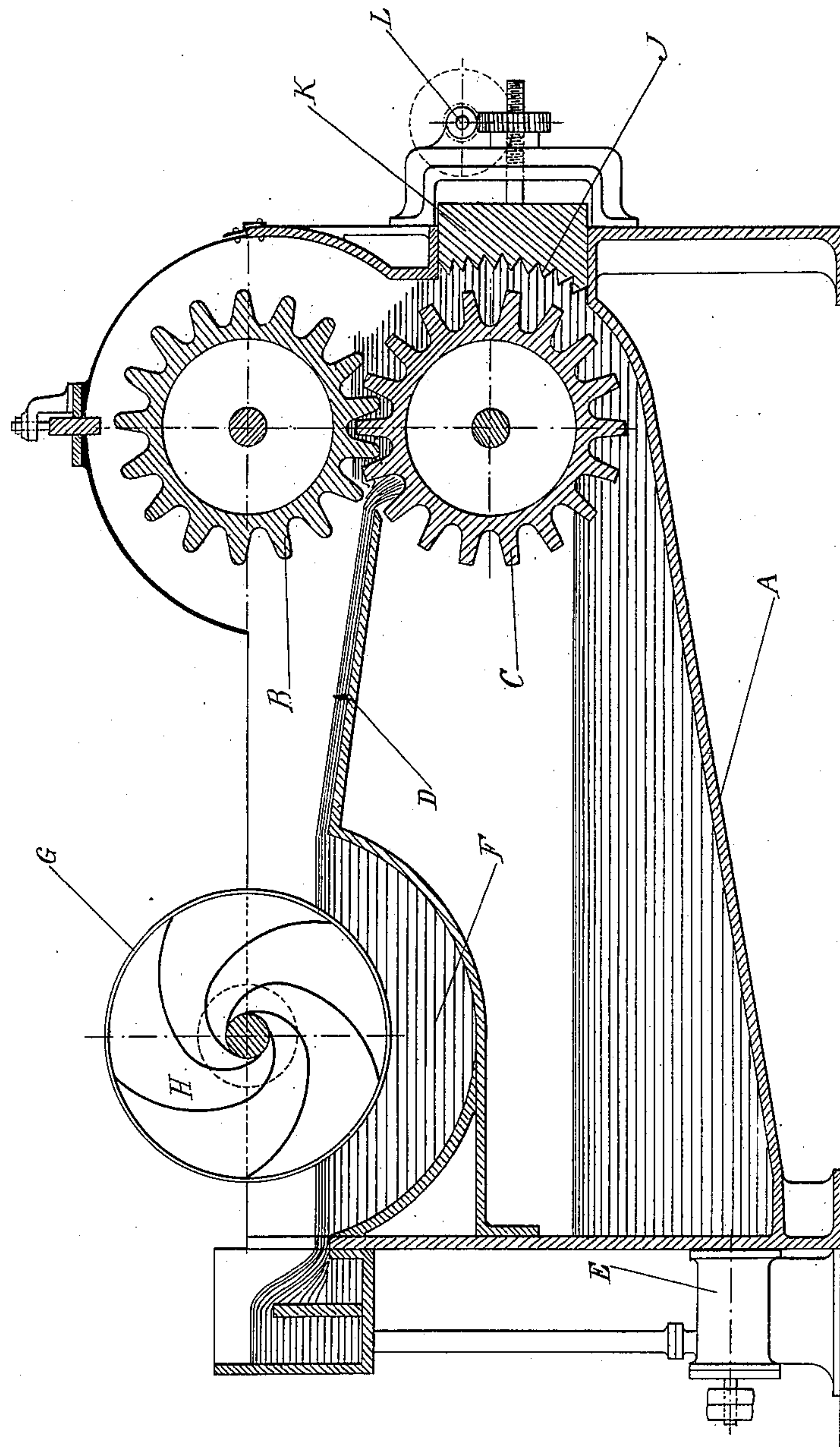
Patented Oct. 4, 1898.

G. BRIGALANT.

MACHINE FOR PREPARING AND REDUCING LEATHER OFFAL.

(Application filed Nov. 6, 1897.)

(No Model.)



Witnesses:  
 *Jas. A. Richmond.  
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# UNITED STATES PATENT OFFICE.

GASTON BRIGALANT, OF BARENTIN, FRANCE.

## MACHINE FOR PREPARING AND REDUCING LEATHER OFFAL.

SPECIFICATION forming part of Letters Patent No. 611,956, dated October 4, 1898.

Application filed November 6, 1897. Serial No. 657,691. (No model.) Patented in England June 28, 1897, No. 15,404.

*To all whom it may concern:*

Be it known that I, GASTON BRIGALANT, a citizen of the French Republic, residing at Barentin, (Seine-Inférieure,) France, have invented certain new and useful Improvements in Machines for Preparing and Reducing Leather Offal, (for which I have received a patent in Great Britain, No. 15,404, dated June 28, 1897;) 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.

Leather is fibrous in itself, but these fibers cannot be detached chemically or mechanically. The leather fibers are lost in the sticky or pasty matter and it would not be easy to remove the fibers individually.

The subject-matter of the present invention is a process for the preparation of leather offal by soaking, washing, drawing, fulling, and reducing the same in order to form a paste or short stuff. By this process the texture of the leather is completely transformed and the leather is softened and worked in such a manner that the sticky material inclosing the natural fibers is removed in the form of artificial fibers and then reduced to paste, which may be mixed with a certain quantity of textile fibers without any addition of paste; but colophony may be added to increase the impermeability of the stuff, and then the material may be subjected to a series of known processes to transform it into sheets of different thicknesses and sizes.

I have given to the product the name of "fibroleum" on account of its fibrous nature.

In the accompanying drawing a machine is represented as an example used in the treatment of leather scraps. After soaking the same in warm water for about two weeks they are submitted in the machine shown in the accompanying drawing in longitudinal section to be washed, drawn, fulling, and finally reduced to paste.

The cast-iron tank A incloses two steel rollers B and C, placed one above the other and meshing with each other by means of long teeth, which leave between themselves considerable play. The edges of the teeth of the upper roller are rounded, while those of the

lower roller are sharp and cutting. These two rollers are moved by gear-wheels outside of the tank, so that the position of the tank inside remains always unchanged relatively to each other. The leather chips are led between the rollers by means of a partition D, upon which they are brought from the lower part of the tank by a pump E, lifting them into an upper compartment F, which is provided with a drum G, formed of wire-gauze. In this compartment the washing operation is effected. The dirty water passes through the wire-gauze and escapes from a central opening H, to which the water is elevated by means of spirals, as shown. Fresh and clean water is introduced into the chamber F by any suitable means.

The leather passing into the spaces between the teeth of the rollers B and C is not cut, but is simply drawn, fulling, and compressed. This operation is kept up from six to twelve hours or more, according to the nature and toughness of the leather. The leather chips are worked between said rollers in such a way that they become fibrous and the leather particles become unraveled under the repeated action and the fulling between the teeth of the rollers. After leaving the rollers the leather chips are opened by means of cutting edges J in a block K of hard bronze. This block is placed in the side wall of the tank and can be advanced toward the teeth of the lower roller C when the reduction of the chips should be increased. The forward motion of the block is obtained by means of a worm L and a corresponding worm-wheel.

Having thus described my invention, I claim—

1. A machine for making leather paste comprising a tank provided with suitable means for the ingress and egress of water, adapted to receive a mixture of leather chips and water, a spoon-shaped inclined partition dividing said tank into an upper and a lower compartment, rollers mounted at one end of said tank in line with said partition, said rollers having their surfaces provided with gear-teeth and adapted to mesh with one another, a drum mounted in said upper compartment provided with a central eduction-pipe, a suitable pump for transferring the mixture from



the lower to the upper compartment from whence it is adapted to flow down the inclined partition and between said rollers, and a block provided with teeth adapted to be advanced  
5 toward and to recede from said lower roller, all of said parts being combined substantially as set forth.

2. A machine for making leather paste comprising a tank provided with suitable  
10 means for the ingress and egress of water, adapted to receive a mixture of leather chips and water, a spoon-shaped inclined partition dividing said tank into an upper and a lower  
15 compartment, two rollers mounted at one end of said tank superposed one above the other in line with said partition, the upper roller having its surface provided with rounded teeth and the lower roller being likewise provided with flattened teeth, whereby the roll-  
20 ers are adapted to mesh with one another, a

washing-drum mounted in said upper compartment, provided with spirals and with a central eduction-tube, a suitable pump for transferring the mixture from the lower to the upper compartment from whence it is  
25 adapted to flow down the inclined partition and between said rollers to be acted upon as described, and a metal block provided with teeth adapted to be advanced toward and to recede from said lower roller, by means of a  
30 suitable worm-gear, said rollers and drum having a revolving motion, substantially as set forth.

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

GASTON BRIGALANT.

Witnesses:

MISLÉGENNER,

EUGENE BOULANGER.