

No. 743,912.

PATENTED NOV. 10, 1903.

E. MUNDORF.

PROCESS OF PREPARING SPINNING MATERIAL.

APPLICATION FILED MAY 7, 1901.

NO MODEL.

Fig. 1.

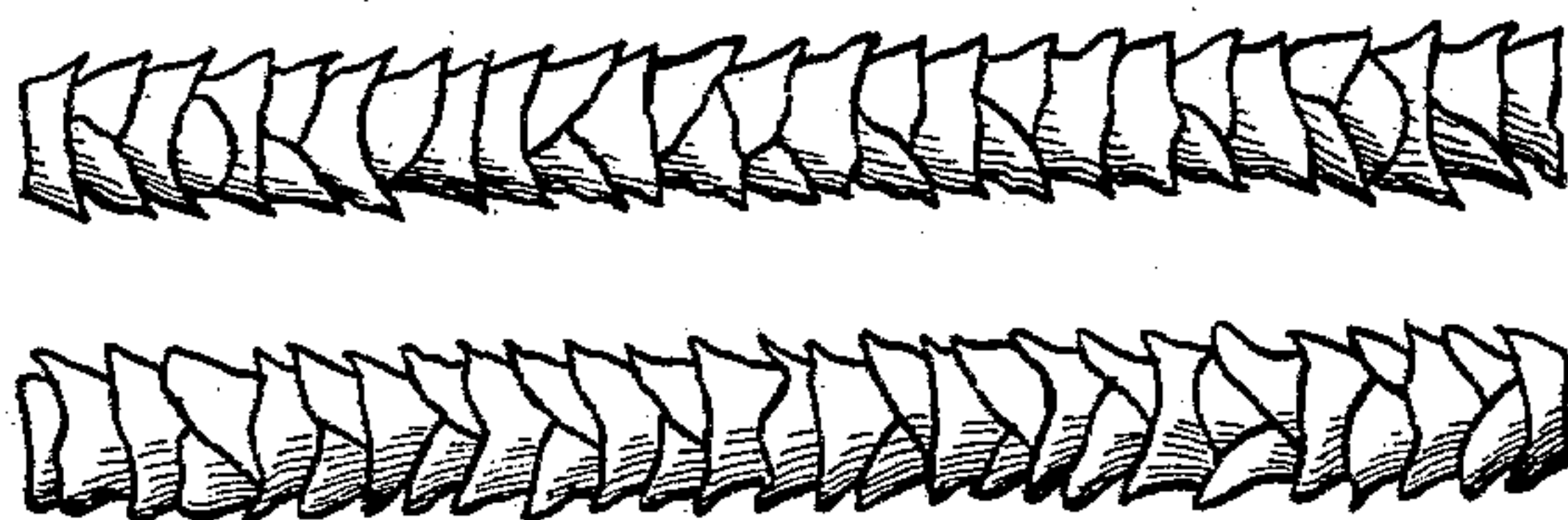
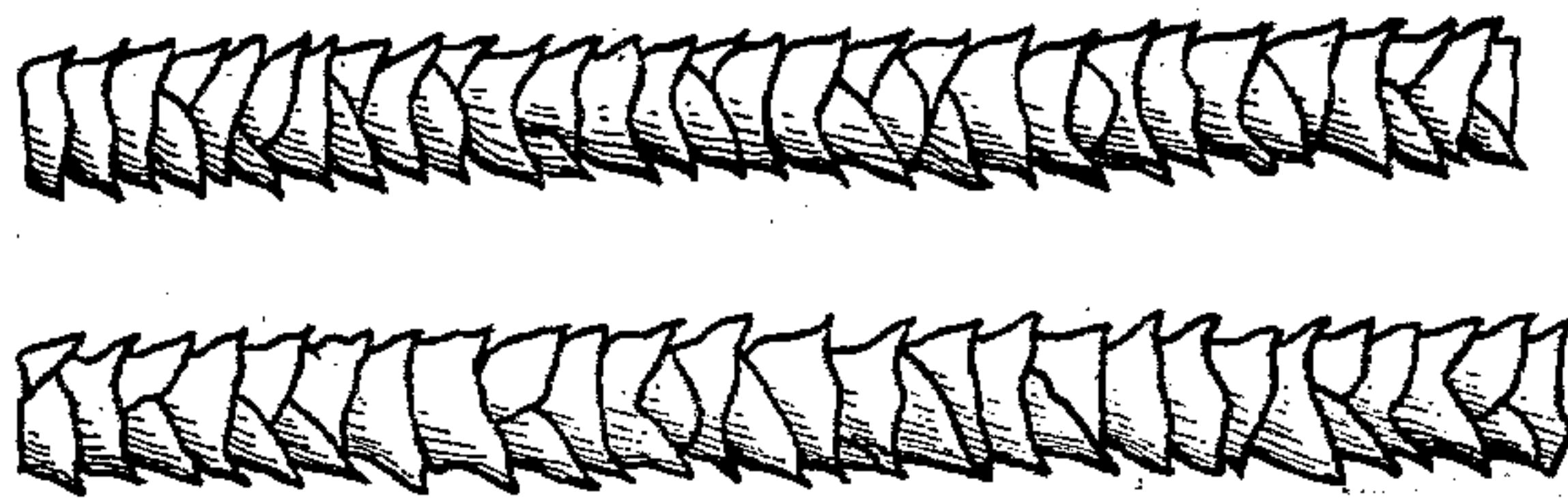


Fig. 2.



*Witnesses.*

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## UNITED STATES PATENT OFFICE.

EMIL MUNDORF, OF AIX-LA-CHAPELLE, GERMANY.

## PROCESS OF PREPARING SPINNING MATERIAL.

SPECIFICATION forming part of Letters Patent No. 743,912, dated November 10, 1903.

Application filed May 7, 1901. Serial No. 59,183. (No specimens.)

*To all whom it may concern:*

Be it known that I, EMIL MUNDORF, director of the spinning and finishing departments of the Royal Weaving-School at Aix-la-Chapelle, a subject of the King of Prussia, German Emperor, residing at 126 Boxgraben, Aix-la-Chapelle, in the Kingdom of Prussia, Empire of Germany, have invented certain new and useful Improvements in Processes of Preparing Spinning Material; 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.

My present invention relates to a process for preparing woolen and other animalic fibers for the spinning operation, and the object in view is to obtain finished goods which will not felt or shrink.

In the accompanying drawings, Figure 1 is an enlarged view of the fibers as commonly arranged, and Fig. 2 is similar view of the fibers arranged according to my invention.

It is well known that woolen goods shrink or felt when being washed, a fact which may be observed on all underclothing, socks, &c. The detrimental process of felting in woolen goods is based upon the displacement of the woolen fibers in reference to each other and caused by the peculiar scaly surface of the fibers and the position of the fibers. The surface of the woolen fiber is formed by innumerable little scales whose edges point to the end of the fiber, and by reason of this arrangement of the scales the woolen fiber will resist any pull when placed as shown in Fig. 1, but will freely move in the opposite direction. In order to enable the fibers to move independent of each other, it is necessary to arrange them as shown in Fig. 2—i. e., have their ends point in one direction and their roots in the opposite direction—as otherwise the independent action of each fiber is impossible. For this reason it is an absolute necessity to retain the fibers in their natural disposition as they grow upon the animal's

body up to the moment when they are transformed into threads in the spinnery, as otherwise a finished article free from all the well-known imperfections cannot be produced. It is clear that to gain this end in view the material must be washed in a different manner as hitherto practiced, and likewise the carding process must be omitted in order to gain this end. The thorough washing of the fibers may either take place when still upon the animal's body or when still upon the hide or when the fleece is already cropped, but care should be taken not to disarrange the fibers.

In this new process the material is not as hitherto carded according to well-known processes, but the whole fleece is fed by hand to the drawing-frame, which, similarly to a carding-machine, opens the fleece and draws the fibers out, during which operation the latter retain their original relation to each other in so far as their scales point in one direction only throughout the whole band formed by the drawing-frame. After this stage of the process all the remaining manipulations are executed as heretofore in the worsted-spinning process after the carding operation.

I claim—

The process for preparing woolen and other animalic fibers for the spinning operation, consisting in washing the fibers without deranging their natural lay and then feeding the uncarded fleece successively into the drawing-frame without permitting the fibers to change their natural position, to have the scales of all the fibers forming the produced band point in the same direction.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

EMIL MUNDORF.

Witnesses:

C. E. BRUNDAGE,  
H. QUADFLIEG.