

No. 649,232.

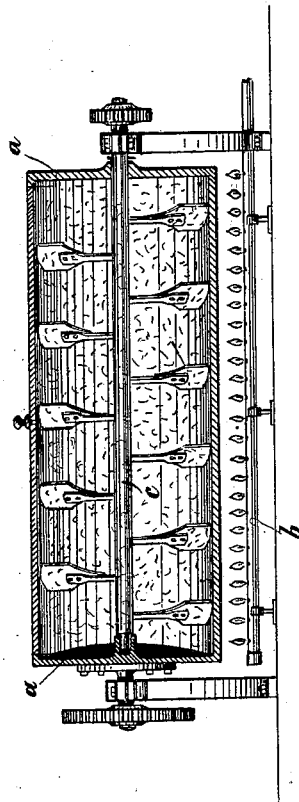
Patented May 8, 1900.

H. BERGER.

PROCESS OF IMPREGNATING DOWN WITH POWDERED ROSIN.

(Application filed Aug. 20, 1898.)

(No Model.)



Witnesses:

Geo. S. Remondy.
Frank S. Ober

Inventor

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Atty.

UNITED STATES PATENT OFFICE.

HUGO BERGER, OF BERLIN, GERMANY.

PROCESS OF IMPREGNATING DOWN WITH POWDERED ROSIN.

SPECIFICATION forming part of Letters Patent No. 649,232, dated May 8, 1900.

Application filed August 20, 1898. Serial No. 689,088. (No specimens.)

To all whom it may concern:

Be it known that I, HUGO BERGER, a subject of the King of Prussia, Emperor of Germany, residing at Berlin, in the Kingdom of Prussia, German Empire, have invented certain new and useful Improvements in Processes of Impregnating Down with Powdered Rosin; (for which I have applied for patents in Austria, dated July 27, 1898; in Hungary, dated July 31, 1898; in Belgium, dated July 29, 1898; in England, dated July 28, 1898, and in Germany, dated January 27, 1898, respectively,) of which the following is a specification.

The ordinary eider and other downs have, as is well known, many defects, owing to which they are useless for filling cases made of particularly-fine material; but the chief defect is that the down passes through the seams, as well as through the material, while it cannot be weighed in open receptacles, as the least draft of air scatters the down about. It has been accordingly necessary to provide better casings for such downs, which, however, did not remedy all the above defects, but caused the feather-beds, eider-down quilts, and the like to be very much more expensive. Furthermore, in fine silky material of light color, and particularly in somewhat-transparent material, the dark color of the down showed through and spoiled in this manner the appearance of the casing. All these defects are remedied by the present impregnating process for ordinary down. By this process the down is rendered as valuable as eider-down while the price is much lower than heretofore. The downs impregnated according to this improved process pass no more through the material, retain their beautiful white color, as well as their elasticity, and are free from dust, while their action is not diminished, but increased by the influence of corporal heat.

In the accompanying drawing is shown, by way of example, a drum which is used in carrying the process into practice.

The impregnation of the down follows in the proportion of ten grams of light powdered rosin (colophony) in a state resembling flour to one hundred grams of down, and the impregnation takes place in a drum *a*, wherein is mounted a shaft *c*, provided with paddles or vanes. The down and the powdered rosin are thoroughly mixed by the vanes or paddles, when the drum is heated from below to a temperature of about 40° centigrade by means of a perforated gas-pipe *b*, this heating taking place while the shaft *c* is being rapidly rotated with its paddles or vanes. It is obvious that the heating may be carried on by the aid of steam.

The impregnation of the down obviates the need for the special linings used for sewed casings, such as had to be used heretofore, and hence the casings will hereafter be much lighter in weight.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. The process of treating down for the purpose described, which consists in mixing powdered rosin with the down and gradually heating the mixture to a temperature of 40° centigrade.

2. The process of treating down for the purpose described, which consists in mixing powdered rosin with the down, applying heat to the mixture and simultaneously agitating it.

In testimony whereof I have hereunto set my hand in the presence of two witnesses.

HUGO BERGER.

Witnesses:

HENRY HASPER,
C. C. ALBRECHT.