

No. 720,146.

PATENTED FEB. 10, 1903.

L. HOFFMANN.
STARCHING MACHINE.
APPLICATION FILED JUNE 7, 1901.

NO MODEL.

Fig. 1.

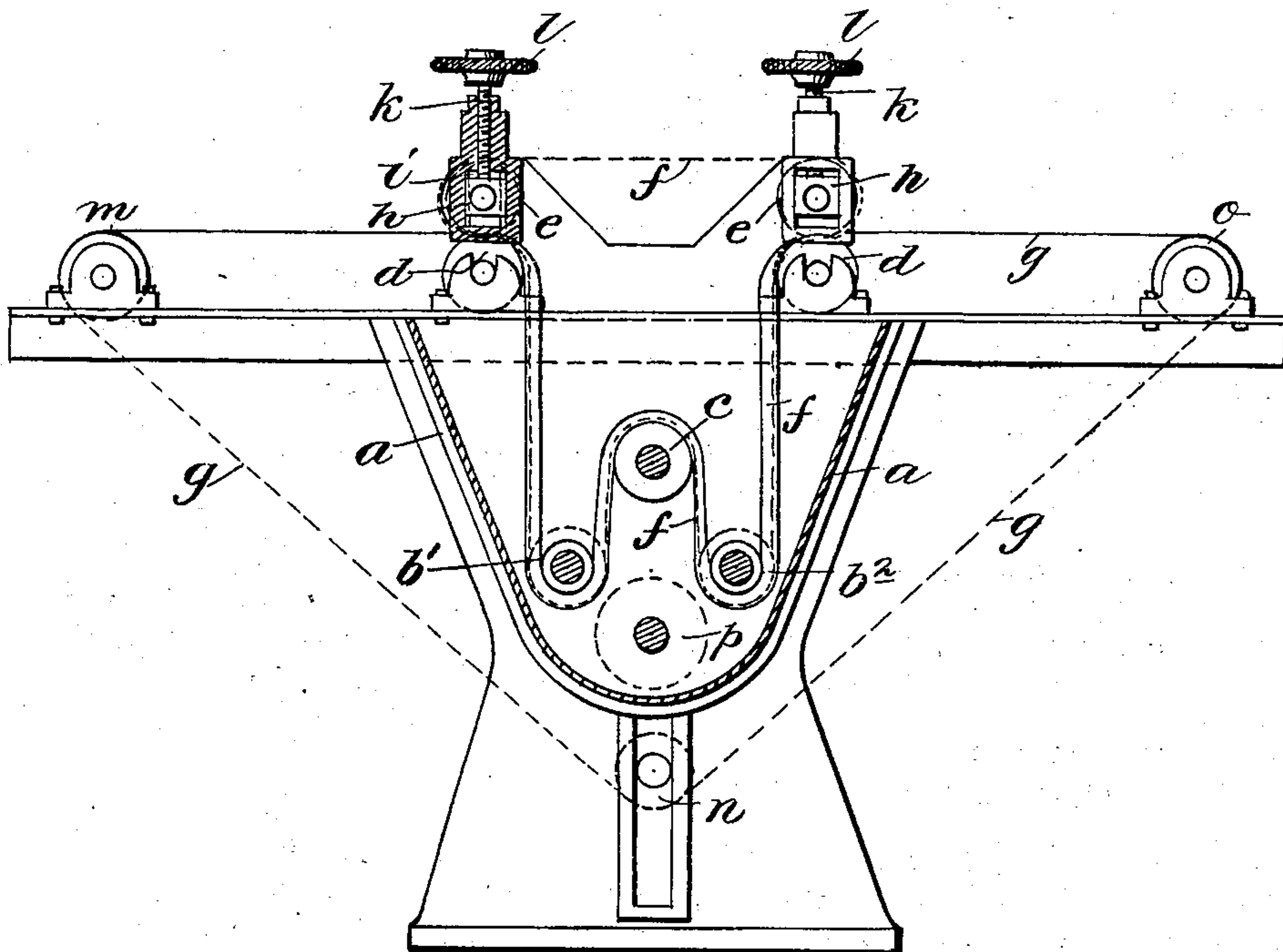
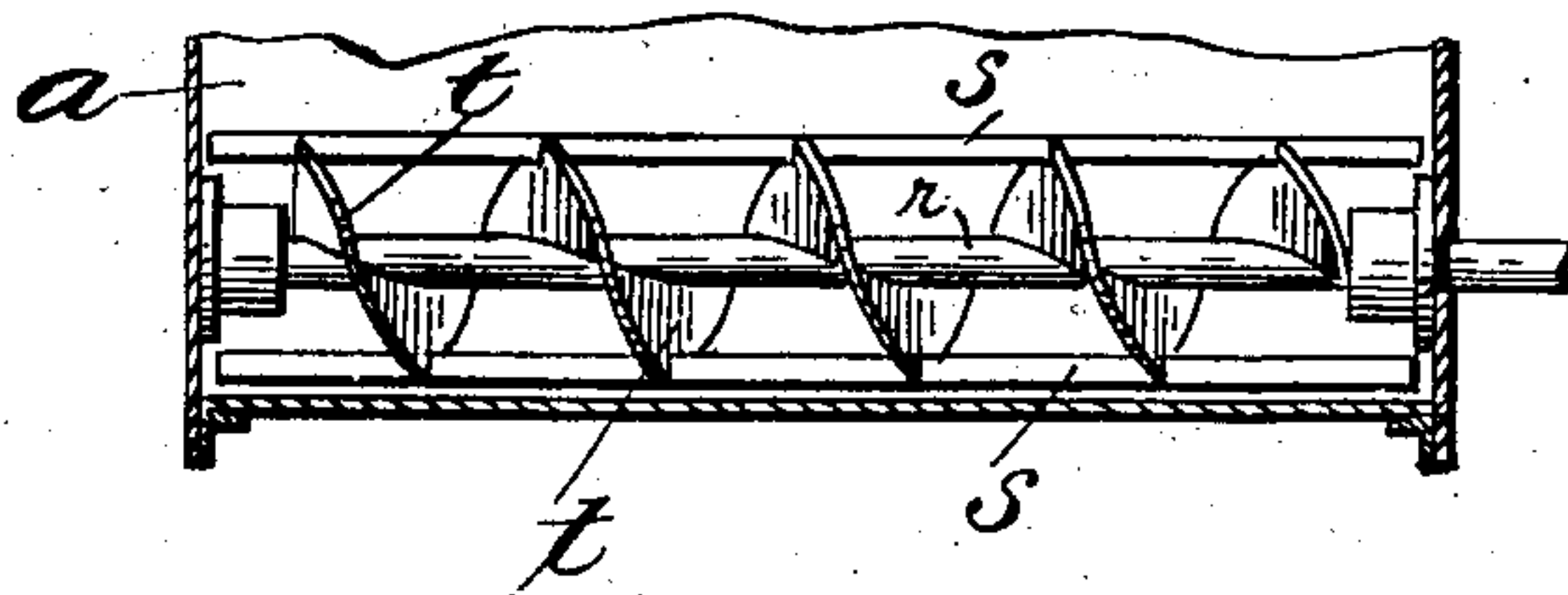


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

LEBERECHT HOFFMANN, OF SALZUFLEN, GERMANY.

STARCHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 720,146, dated February 10, 1903.

Application filed June 7, 1901. Serial No. 63,630. (No model.)

To all whom it may concern:

Be it known that I, LEBERECHT HOFFMANN, manufacturer, a subject of the Prince of Lippe, and a resident of Salzuflen, in the Principality of Lippe, Kingdom of Prussia, German Empire, have invented certain new and useful Improvements in Starching-Machines, of which the following is an exact specification.

My invention relates to improvements in machines for starching washing, linen, and the like and has especially in view to construct a machine in which raw uncooked starch can be used.

In order to make my invention more clear, I refer to the accompanying drawings, in which—

Figure 1 is a vertical section of the machine. Fig. 2 shows the construction of the stirring device provided at the bottom of the starch-trough.

In the lower part of the trough *a* for taking up the starch two guide-rollers *b'* and *b²* are provided. Above these rollers a third roller *c* is journaled. Above the trough *a* guide-rollers *d* are situated, upon which guide-rollers squeezing-rollers *e* are arranged. These squeezing-rollers *e* are journaled in guide-pieces *h*, sliding in guides *i* and movable by screws *k*. These screws *k* can be turned by means of the hand-wheels *l*. It is herewith attained that the pressure of the squeezing-rollers can be regulated at will by adjusting the positions of the bearings *h* of the same.

In order to be able to lead the washed clothes through the starch, two endless aprons *f* and *g* are provided. One of the same, *f*, is led over the rollers *e*, *d*, *b'*, *c*, *b²*, *d*, and *e*, while the other is led over the rollers *d*, *b'*, *c*, *b²*, *d*, whereafter it is led over the roller *m*, situated to one side of one roller *d*, and the roller *n*, situated underneath the trough, over the roller *o*, situated to one side of the other roller *d*. The washed clothes to be starched are laid upon the endless apron *g* and pass between the aprons *g* and *f* through the trough. After leaving the trough they will be situated again upon the apron *g* and can easily be taken off. At the bottom of the trough *a*, which bottom, as may be seen from Fig. 1, has a curved form, a stirring device *p* is provided, which stirring device is situated be-

tween the rollers *b'* and *b²* and may consist of an axle provided with stirring-wings or the like.

As will be seen from the drawings, the starch contained in the water in sinking down will always on account of the curved form of the bottom come in contact with the stirring device *p* and will by the wings of this stirring device always be thrown against the apron *g*, so that the starch can penetrate through this apron and come to the clothes to be starched. The settling to the bottom of the starch is therefore perfectly avoided, and it is therefore possible that raw uncooked starch can be employed.

Fig. 2 shows an example of a construction of the stirring device. In this construction the stirring device consists of a spiral-formed plate *t*, situated around the axle *r*. The several windings of this plate are connected to each other on the outer side by means of connecting-strips *s*. These strips *s* effect, especially, the throwing of the starch against the apron *g*, while the spiral-formed plate *t* effects a circulation of the entire body of starch.

It will be understood that the illustrated construction of the stirring device is only an example and that any kind of stirring device by means of which the starch can be thrown against the endless apron may be used.

Having thus fully described the nature of this invention, what I desire to secure by Letters Patent of the United States is—

1. In a starching-machine, the combination of a starching-trough, and endless aprons passing through this trough, with a stirring device provided at the bottom of the trough, said stirring device being provided with means for throwing the starch against the endless aprons, substantially as described and for the purpose set forth.

2. In a starching-machine, the combination of a starching-trough, with guide-rollers provided within the same, endless aprons passing around these guide-rollers, and a stirring device provided at the bottom of the trough, said stirring device being provided with means for throwing the settling starch against the aprons, substantially as described and for the purpose set forth.

3. In a starching-machine, the combination

of a starching-trough, with guide-rollers provided within the same, endless aprons passing around these guide-rollers, a stirring device provided at the bottom of the trough and
5 consisting of a spiral-formed plate wound around an axle and junction-strips connecting the windings of this plate, substantially as described and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LEBERECHT HOFFMANN.

Witnesses:

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