No. 803,421. PATENTED OCT. 31, 1905.

C. F. KÜBLER.

PROCESS OF DYEING.

APPLICATION FILED MAR. 3, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

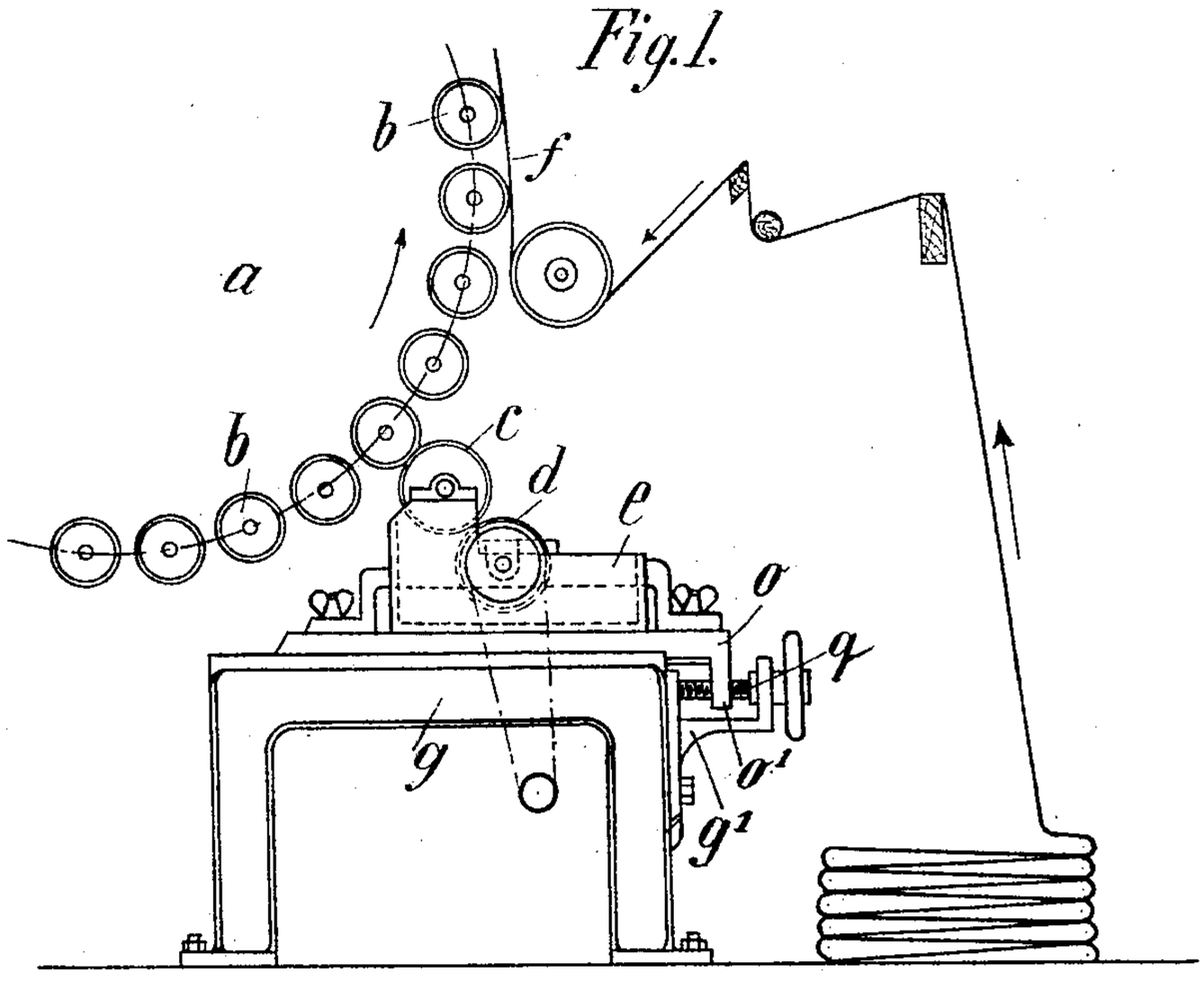
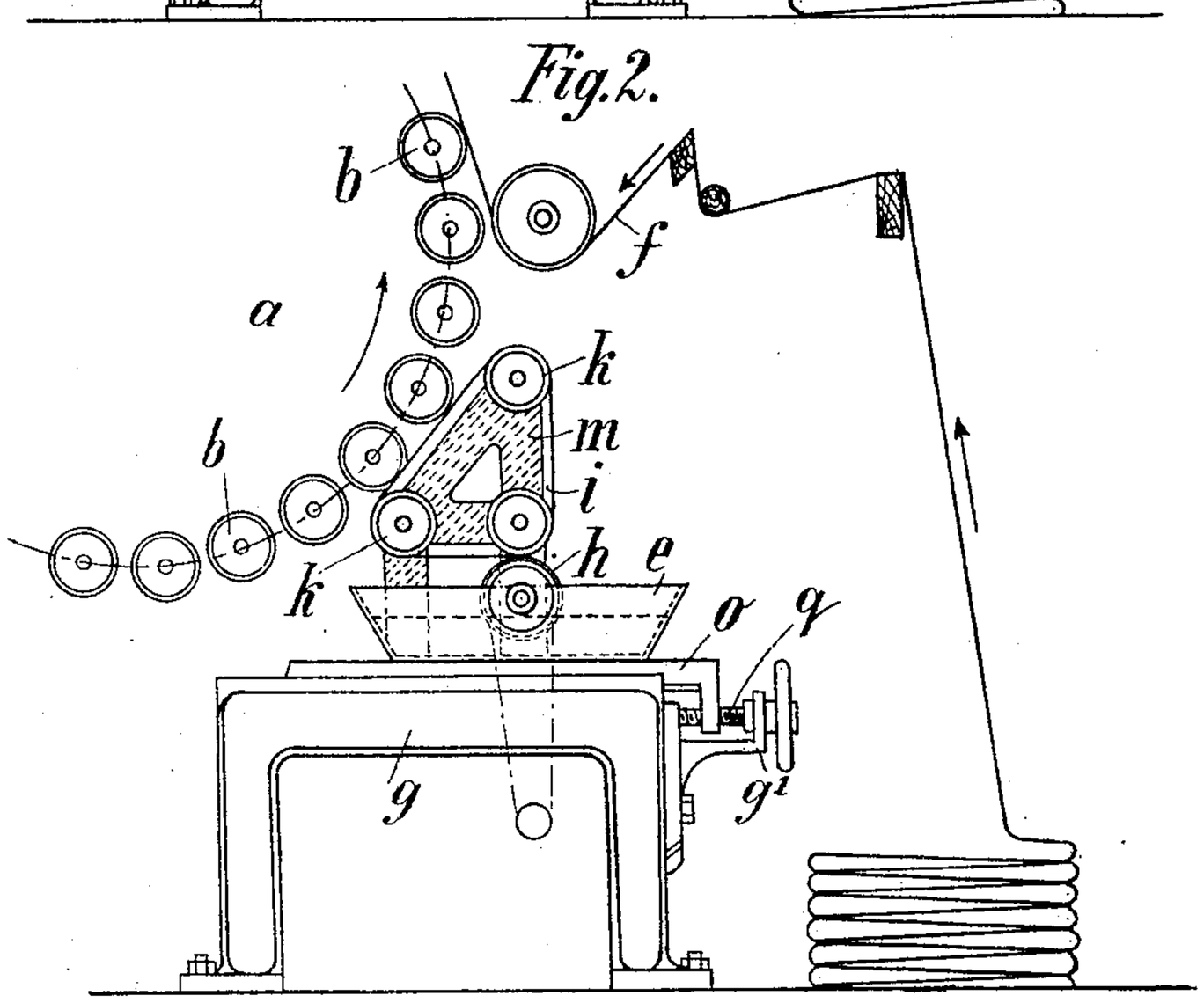


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

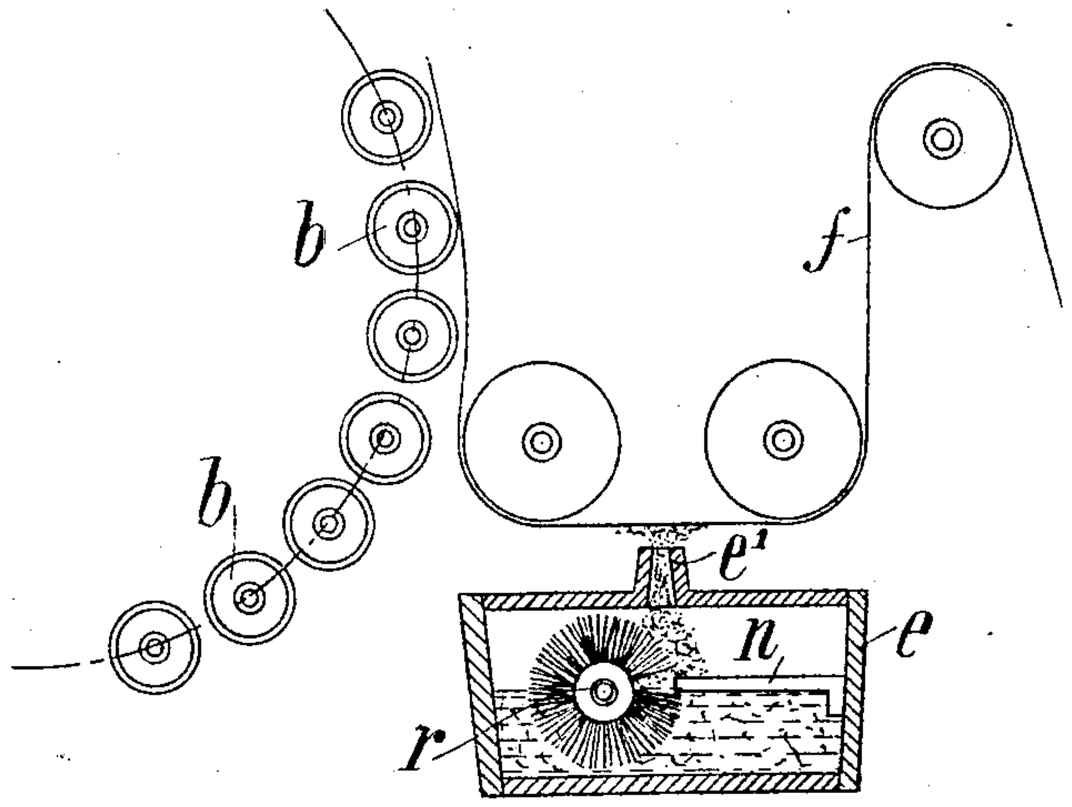
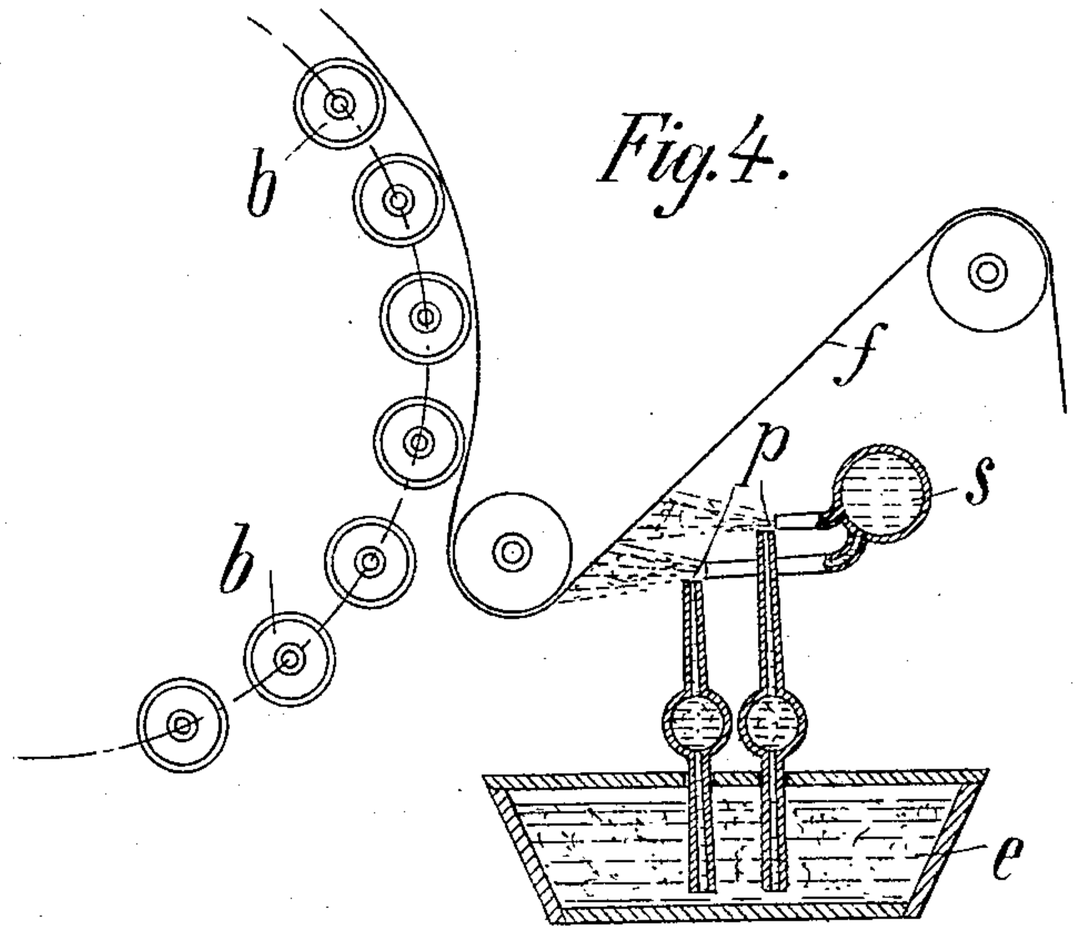


Fig. 4.



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UNITED STATES PATENT OFFICE.

CARL F. KÜBLER, OF ELMSHORN, GERMANY.

PROCESS OF DYEING.

No. 803,421. Specification of Letters Patent. Patented Oct. 31, 1905.

Application filed March 3, 1905. Serial No. 248,338.

To all whom it may concern:

Be it known that I, CARL F. KÜBLER, a subject of the King of Würtemberg, residing at Elmshorn, in the Province of Schleswig-Holstein and Kingdom of Prussia, Germany, have invented a certain new and useful Process of Dyeing, of which the following is a specification.

This invention relates to a method of and apparatus for laying on and spreading over the raised pile or nap of fabrics dyes or mordants in such manner that the pile is dyed, mordanted, or bleached in one or more colors or mordants different from the ground of the fabric, while the ground itself takes little or no dye, the object being to provide glittering color effects, besides imparting to the fabric a full and plush-like appearance.

The improvement resides, mainly, in the feature that teazeling devices or like means spread the dye or mordant over the pile of the fabric, the laying or applying of the dye or mordant being either produced by said means or by separate devices before the spreading operation.

In order that my invention may be more clearly understood, reference is had to the accompanying drawings, in which—

Figure 1 shows an apparatus for transferring the dye or mordant to the card-clothing of a wet gig-machine by means of the dye-spreading rollers, while Fig. 2 represents the same furnished with an endless felt web instead of the dye-spreading rollers. Figs. 3 and 4 illustrate apparatus for transferring the dye or mordant direct onto the pile of the fabric on its way to the teazeling device.

Similar letters refer to similar parts throughout the several views of the drawings.

In the arrangement shown by Fig. 1 the teazeling-rollers *b*, furnished with card-clothing and suitably arranged around the circumference of the drum *a* of a wet gig-machine receive from the dye-rollers *c* and *d* the dye supplied from the trough *e*, which when the drum is rotated is transferred to the fabric *f*. The fabric or material is led in the usual way past the teazeling-rollers. The dye-trough is placed on a frame or stand *g* and is so adjusted to the rollers *b* as to be capable of transferring more or less color, as may be required, to the said rollers. This adjustment may be effected by an adjusting-screw *q*, arranged in a bracket *g'* of the stand *g* and engaging the female thread of a depending lap *o'* of the base plate *o*, to which the trough *e* is clamped by suitable means.

In the construction shown in Fig. 2 for applying the dye to the card-cylinders the dye is transferred first from the trough *e* by means of the cylinder *h* to the endless felt apron *i*, which applies the color to the carding-rollers *b*. The said apron runs over guide-rollers *k*, which are connected with the trough *e* by a frame *m*, so that upon the adjustment of the trough *e* on the stand *g* by an adjusting-screw *n*, as set forth with reference to Fig. 1, the felt *i* is enabled to apply more or less color to the carding-rollers.

In Fig. 3 the trough *e* contains a rotatable brush *r*, near which a striker *n* is so arranged that the bristles of the rotating brush strike against the same, and consequently sprinkle or spray dye or mordant through the nozzle *e'* of the trough against the pile of the fabric *f*, which is led to the teazeling-rollers *b*, which spread the color or mordant over the pile.

Instead of sprinkling or spraying the dye or mordant onto the pile of the fabric by means of a rotating brush *r* an atomizer *p*, Fig. 4, may be employed, which transfers the dye or mordant under the action of steam or compressed air supplied through the main *s* onto the pile of the fabric *f*, in which it is then spread by the teazeling-rollers *b*, as hereinbefore described.

Instead of using one sprinkler or atomizer only several of the same may be used simultaneously.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The method of producing mottled color effects in felted or teazeled fabrics, which consists in applying dyes or mordants to the nap of the fabric, different from the ground color and teazeling the dye or mordant into the fabric, thereby spreading the color without destroying the surface of the fabric, substantially as described.

2. The method of producing mottled color effects in felted or teazeled fabrics, which consists in applying the dye or mordant onto the nap of the fabric in a finely-divided state

and then teazeling it into the fabric, substantially as described.

3. The method of producing mottled color effects in felted or teazeled fabrics, which consists in teazeling a color or mordant into the nap of the fabric different from the ground color of the fabric, thereby producing a mottled effect without destroying the physical character and appearance of the nap of the fabric, substantially as described.

CARL F. KÜBLER.

Witnesses:
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E. H. L. MUMMENHOFF.