No. 892,881. PATENTED JULY 7, 1908.

E. E. ORRELL.

LOOM SHUTTLE.

APPLICATION FILED JAN. 25, 1908.

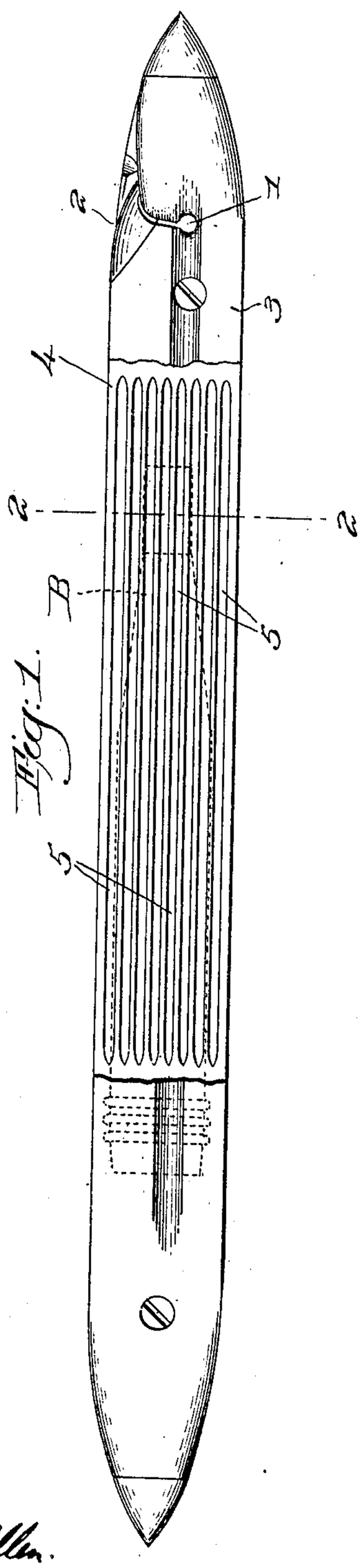

Fig. 1.

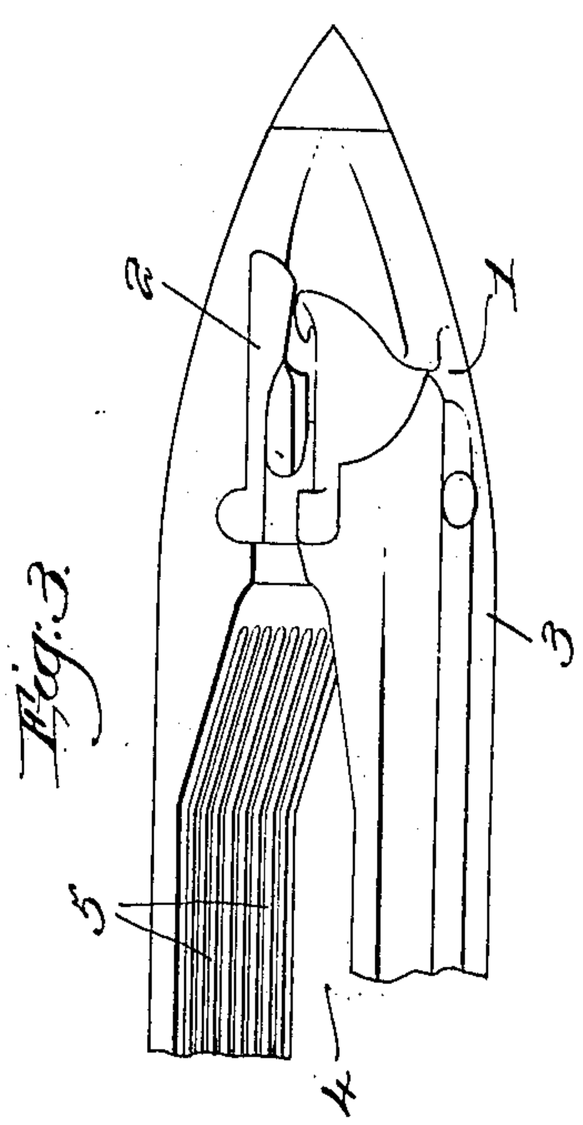

Fig. 3.

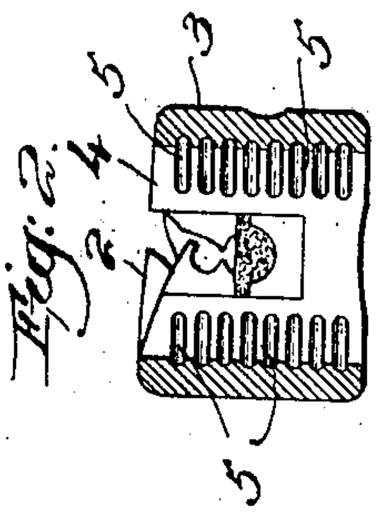

Fig. 2.

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UNITED STATES PATENT OFFICE.

EPHRAIM E. ORRELL, OF WARE, MASSACHUSETTS, ASSIGNOR TO DRAPER COMPANY, OF HOPEDALE, MASSACHUSETTS, A CORPORATION OF MAINE.

LOOM-SHUTTLE.

No. 892,381. Specification of Letters Patent. Patented July 7, 1908.

Application filed January 25, 1908. Serial No. 412,575.

To all whom it may concern:

Be it known that I, EPHRAIM E. ORRELL, a citizen of the United States, and resident of Ware, county of Hampshire, State of Massachusetts, have invented an Improvement in Loom-Shuttles, of which the following description, in connection with the accompanying drawing, is a specification, like letters on the drawing representing like parts.

This invention relates to loom-shuttles, and it has for its object the production of novel and efficient means to impart the requisite friction or drag on the filling as it is drawn off the bobbin. With heavy filling it is necessary to supply friction in the shuttle, and this has been at times effected by means of bristles inserted through the side of the shuttle, but such bristles only operate when the filling is wound on the bobbin in one way. It sometimes happens that filling is wound either way, so that while the bristles may act for one wind they will not exert the proper friction for the other wind, producing varied effects in the cloth.

In my present invention the friction producing means is adapted for either wind of filling, without requiring any change or adjustment, and it of course is equally efficient if the filling is always wound one way.

The various novel features of my invention will be fully described in the subjoined specification and particularly pointed out in the following claims.

Figure 1 is a front side elevation of a loom shuttle having one embodiment of my invention applied thereto, the front wall of the shuttle being broken out for the greater part of its length; Fig. 2 is a transverse section of the shuttle on the line 2—2, Fig. 1, looking toward the right; Fig. 3 is a perspective detail of the front end of the shuttle, to more clearly show the friction producing means.

I have for convenience herein shown my invention as embodied in an automatically self-threading shuttle, having a side delivery-eye 1 and a threading device 2 to automatically direct the filling thereto while the loom continues in operation, the shuttle body 3 having an elongated opening 4 for the filling-carrier or bobbin B, indicated by dotted lines Fig. 1. My invention, however, is not restricted to this particular form or type of shuttle.

In accordance with my invention I longitudinally groove the inner sides of the shuttle walls, as at 5, the grooves extending from at or near the front end of the opening 4 preferably nearly to its other end. Preferably the series of grooves extend from near the top to near the bottom of the side walls, as shown, thereby presenting opposite corrugated or ribbed surfaces over which the filling must pass as it whirls around when drawn off the bobbin by the movement of the shuttle. The corrugated or ribbed surfaces act as a drag upon the whirling filling, exerting sufficient friction thereon to produce the requisite drag or tension, it being immaterial which way the filling is wound upon the bobbin, as will be manifest.

Having described my invention what I claim as new and desire to secure by Letters Patent is:—

1. In a loom shuttle having a bobbin-receiving opening, a series of longitudinal grooves on the inner faces of the side walls of such opening, to act upon the filling as it is drawn off the bobbin and exert friction thereupon.

2. In a loom shuttle having an opening to receive the bobbin, a longitudinally corrugated or ribbed surface to frictionally engage and exert tension upon the filling as it is drawn off the bobbin.

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

EPHRAIM E. ORRELL.

Witnesses:
HARRY C. INIS,
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