E. E. BLAKE.

BOBBIN GEAR.

APPLICATION FILED MAY 27, 1914.

1,119,229. Patented Dec. 1, 1914.

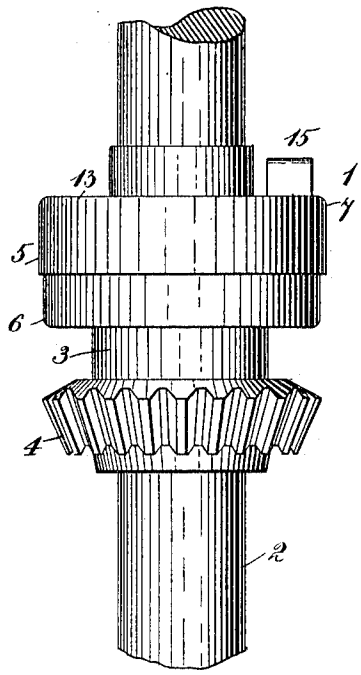


Fig. 1.

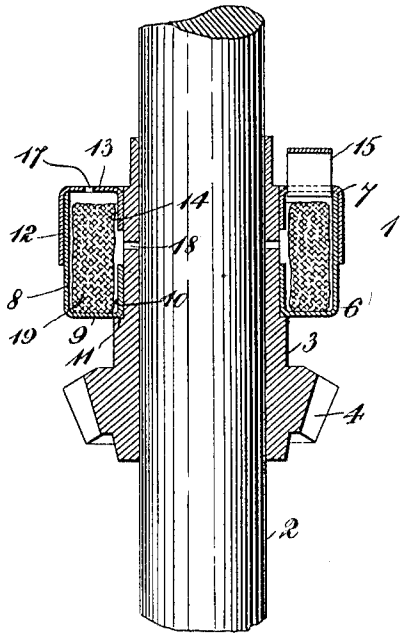


Fig. 2.

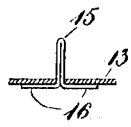


Fig. 3.

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THE NORRIS PETERS CO., PHOTO LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

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BOBBIN-GEAR.

1,119,229. Specification of Letters Patent. Patented Dec. 1, 1914.

Application filed May 27, 1914. Serial No. 841,363.

To all whom it may concern:

Be it known that I, EDMUND E. BLAKE, of Saco, in the county of York and State of Maine, a citizen of the United States, have invented a new and useful Improvement in Bobbin-Gears, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature.

The present invention relates to an improvement in bobbin gears used especially in connection with fly frames.

The object of the invention is to provide a gear that can be easily and economically manufactured; that will possess lightness in running and which will provide both a support and driving means for the bobbin and a very satisfactory oil chamber.

Figure 1 is a side elevation of a bobbin gear embodying my invention and is shown extends and which carries a gear 4 by which is shown. Fig. 2 is the same as Fig. 1 excepting that the gear is shown in section. Fig. 3 is a view mainly in side elevation but partly in section of a detail of construction to which reference will hereinafter be made.

1 represents the bobbin gear, 2 the bolster upon which the gear is mounted to rotate thereon in the usual manner.

The bobbin gear 1 comprises a cylindrical body or sleeve 3 through which the bolster extends and which carries a gear 4 by which it may be rotated, both sleeve and gear being preferably integral parts.

Mounted upon the sleeve above the gear 4 is a hollow annular casing 5 which provides both a support for the bobbin and an oil chamber from which oil is directed into the joint between the interior surface of the sleeve and the bolster.

The casing 5 comprises a boxlike structure or receptacle consisting of flanged parts 6 and 7, respectively, which are made of thin metal bent or otherwise formed to cooperate with one another and the sleeve as follows: The under part 6 forming the lower portion of the casing has an outer edge or rim 8, a bottom 9 and an interior flange-forming collar 10 which fits snugly around the sleeve forming a tight joint and thereby assisting in the support of the entire member. The part or member 6 is otherwise supported upon the sleeve by resting against a shoulder 11 formed thereon, the sleeve being reduced in diameter in that part encircled by the casing in order to form this shoulder. The upper part or member 7 of the casing forms practically a cover to the part 6 and consists of an outer edge or rim 12 which laps over the edge 8 of the part 6. The part or member 7 consists further of a portion 13 forming the top of the casing and a flange-forming collar 14 which fits snugly around the sleeve forming a tight joint.

The bobbin rests upon the top of the casing thus formed, the casing being provided with a projection 15 which extends upwardly from the top thereof to fit into any one of the slots with which the bobbin is provided. This projection 15 consists of a piece of sheet metal bent back upon itself and passed through the top portion 13 of the casing, the ends 16 of the piece thence being bent outwardly and secured in any suitable manner to the interior side of the said portion 13 of the casing as shown in Fig. 3.

The chamber of the casing forms a receptacle for containing oil, entrance being had thereto by an opening 17 formed in the top portion 13 of the casing. Oil is admitted from the chamber of the casing to the bearing between the interior surface of the sleeve and the side of the bolster by an opening 18 in the sleeve and which extends from the chamber of the casing at a point between the flanged collars 10 and 14, respectively, which embrace the sleeve as aforesaid. It is preferred that the chamber of the casing be packed with some filling or absorbent material 19 which may be kept saturated with oil and thereby prevent an undue amount of oil being supplied to the bearing but just such an amount as will keep the bearing properly lubricated.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States:—

1. A bobbin gear comprising a sleeve having a gear thereon, and a hollow casing mounted upon said sleeve above said gear, the top of which casing presents a bearing for the bobbin and the interior of said casing an oil chamber.

2. A bobbin gear comprising a sleeve having a gear thereon, and a hollow casing mounted upon said sleeve above said gear, said casing consisting of a boxlike structure

presenting a top bearing surface for the bobbin and the interior thereof an oil chamber, said casing having an opening therein to form an inlet through which oil may be introduced into said chamber, and said sleeve having an opening therethrough and connecting with said chamber of the casing to form an outlet therefrom.

3. A bobbin gear comprising a sleeve having a gear thereon, a casing consisting of overlapping flanged members coöperating with one another and with said sleeve to form a closed annular chamber around said sleeve above said gear, said casing presenting a top surface forming a bearing for the bobbin, said casing having also an opening therein through which oil may be introduced into the chamber thereof and said sleeve having an opening through the same out of said chamber.

EDMUND E. BLAKE.

Witnesses:
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."