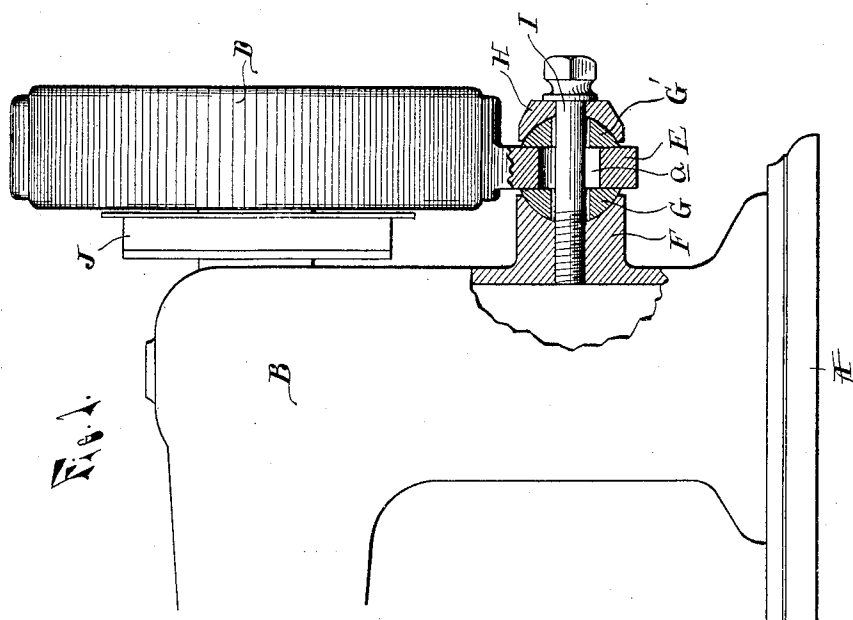
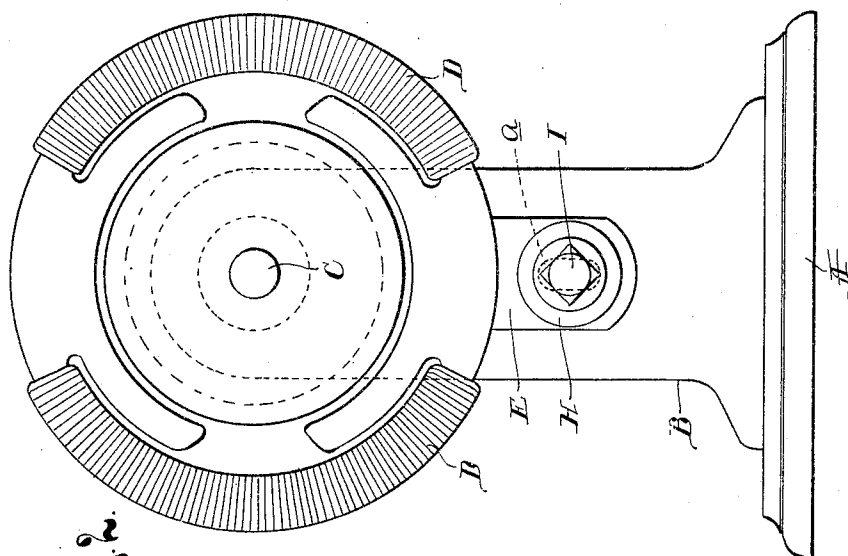


No. 784,680.

PATENTED MAR. 14, 1905.

F. P. HUYCK.
SEWING MACHINE MOTOR ATTACHMENT.

APPLICATION FILED JUNE 4, 1903.



WITNESSES.

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FRANCIS P. HUYCK, OF SWANTON, OHIO.

SEWING-MACHINE MOTOR ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 784,680, dated March 14, 1905.

Application filed June 4, 1903. Serial No. 160,013.

To all whom it may concern:

Be it known that I, FRANCIS P. HUYCK, a citizen of the United States of America, residing at Swanton, in the county of Fulton and State of Ohio, have invented certain new and useful Improvements in Sewing-Machine Motor Attachments, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to that type of sewing-machine motor attachment in which the electric motor takes the place of the usual balance-wheel pulley on the projecting end of the shaft on the arm of the sewing-machine; and my invention has special reference to certain improvements in the means for attaching the field or stationary part of the motor to the arm of the sewing-machine, all as more fully hereinafter described and shown in the accompanying drawings, in which—

Figure 1 represents an elevation of the arm of the sewing-machine with the motor attached to it and showing, particularly in vertical section, the means for adjustably securing the field-magnet of the motor in position thereon. Fig. 2 is an end elevation of Fig. 1, omitting the armature.

In the drawings, A represents the table, B the arm, and C the drive-shaft of a sewing-machine of usual construction. In lieu of the balance-wheel pulley upon the projecting end of this shaft I provide an electric motor of suitable description and secure the armature or rotary part thereof directly upon the projecting end of the shaft. I have shown and described in a previous Letters Patent, No. 657,165, September 4, 1900, preferred means for securing this armature detachably and in such manner that by the operation of a clutch it may be fast or loose on the shaft for the purpose of either operating the sewing-machine or for actuating a bobbin-winding device independently thereof. As my present invention does not involve any of these features, I have omitted the same from the drawings, it being understood that the armature is secured to the shaft in the usual relation to the field-magnet D and that the brake-wheel J is attached to the armature.

The field-magnet core is provided with a downwardly-projecting lug E, and the arm B is correspondingly provided with an outwardly-projecting boss or lug F, which is preferably integrally cast with the arm B. This lug is spherically cupped upon its outer end and forms a seat for a washer G, which upon the adjacent side is of corresponding spherical shape, while the other side is flat. The lug E of the field-magnet is placed between this washer and a similar washer G', the spherical side of which is turned outward and forms a seat for a spherically-cupped cap H. A clamping-bolt I passes through the cap, washers, and lug E and is tapped into the lug F in such manner as to clamp the parts firmly together and to the arm B of the sewing-machine. The slot *a* in the lug E is larger than the diameter of the clamping-bolt. The field-magnet can therefore be adjusted laterally as well as vertically, and as the two washers G G' form, in connection with the lug E, complementary parts of a ball it permits of an angular adjustment in any direction as well. The position of the armature being fixed by its location upon the shaft, except as to its longitudinal adjustment thereon, the universal adjustment thus provided for the field-magnet permits of mounting the motor with the field and armature in perfect relation to each other. In practice a simple way of mounting the motor would then be to first wrap around the armature a strip of paper sufficient to center and hold it within the field, thence slip it upon the shaft, and finally secure the armature and field in place. The operation is so simple that it can be performed by any person of ordinary skill, and thus if occasion should require the sewing-machine may be readily adapted to be driven by a motor or by the usual foot-power. By casting the arm with the lug F the manufacturer can thus adapt his machine for being readily provided with an electric motor if it should be desired.

Having thus fully described my invention, what I claim is—

1. In an electric motor attachment for sewing-machines, the combination with an electric

motor having its revolving part carried by the projecting end of the sewing-machine shaft and having its stationary part surrounding it, of a downwardly-projecting lug depending from the under side of said stationary part, a boss on the arm of the sewing-machine adjacent to the aforesaid lug and extending laterally toward it, and means for adjustably clamping said lug to the boss.

2. In an electric motor attachment for sewing-machines in which the armature of the electric motor is carried upon the projecting end of the sewing-machine shaft, a supporting arm or boss for the field of the motor integrally cast upon the arm of the sewing-machine and forming the sole means of support therefor, the field of the motor being secured to said supporting arm or boss in universal adjustable relation to the armature.

3. In an electric motor attachment for sewing-machines, the combination with an electric motor having its revolving part carried by the projecting end of the sewing-machine shaft and having its stationary part surrounding it, of a downwardly-projecting lug depending from the under side of said stationary part, a laterally-projecting boss on the arm of the sewing-machine extending toward said lug, a ball-and-socket connection between said lug and boss, and a clamping-bolt through said connection.

4. In an electric motor attachment for sewing-machines, in which the armature of the motor is carried upon the projecting end of the sewing-machine shaft, a supporting arm or boss for the field of the motor integrally formed with the arm of the sewing-machine, a field-magnet integrally formed with a securing-lug and means for securing said lug to the supporting-arm whereby the field of the mo-

tor is supported in universal adjustable relation to the armature.

5. In an electric motor attachment for sewing-machines in which the armature of the motor is carried upon the projecting end of the sewing-machine shaft, a supporting arm or boss for the field of the motor integrally formed with the arm of the sewing-machine, and means for securing said field to the supporting-arm in universal adjustable relation to the armature, said means involving the use of a single clamping-screw.

6. In an electric motor attachment for sewing-machines in which the armature of the motor is carried upon the projecting end of the sewing-machine shaft, a supporting arm or boss, integrally formed with the arm of the sewing-machine, a depending lug on the field of the motor adapted to said supporting-arm, washers, and a cap forming in connection with the supporting-arm and the depending lug a ball-and-socket joint, and a clamping-screw tapped into the supporting-arm and passing through said cap, washers and depending lug, the aperture in the depending lug being slotted to permit vertical and lateral adjustment of the field-magnet.

7. In an electrically-driven sewing-machine, an electric motor comprising a revolving member and a single stationary member, the former being carried by the shaft and the latter by the frame of the sewing-machine in universal adjustable relation to the other member.

In testimony whereof I affix my signature in presence of two witnesses.

FRANCIS P. HUYCK.

Witnesses:

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ELMER MINNICH.