

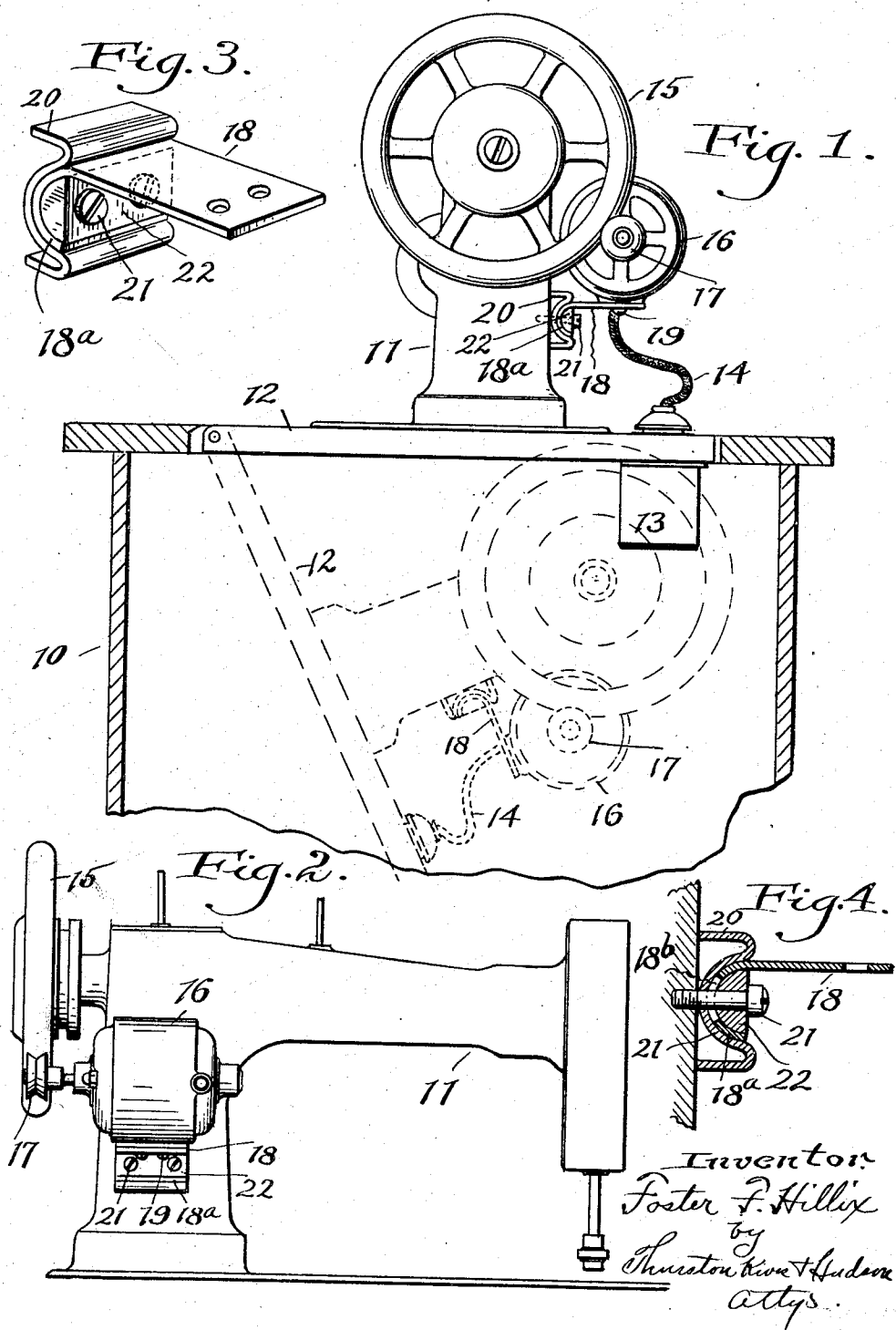
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MOTOR ATTACHMENT FOR SEWING MACHINES

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UNITED STATES PATENT OFFICE.

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MOTOR ATTACHMENT FOR SEWING MACHINES.

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To all whom it may concern:

Be it known that I, FOSTER F. HILLIX, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Motor Attachments for Sewing Machines, of which the following is a full, clear, and exact description.

This invention relates to a motor attachment for sewing machines, and is an improvement over the construction constituting the subject matter of my prior application, Serial No. 500,008, filed September 12, 1921.

The principal object of the invention is to provide a motor attachment with provision for supporting the motor from the head in a very efficient but simple manner, and in such a way as to obtain the greatest possible economy in space occupied by the attachment. Although the invention is not necessarily confined in its utility to sewing machines of the drop-head type, it is particularly useful when employed in machines of this type, as it insures the lowering of the head into the cabinet without the liability of interference between the motor and cabinet, and without requiring any adjustment or change in the mounting to permit the lowering.

Further the invention aims to provide a motor attachment utilizing in a very practical and efficient manner an elastic or spring bracket for supporting the motor and for holding a friction drive wheel in frictional driving engagement with the hand wheel of the head.

In the accompanying sheet of drawings, Fig. 1 is a transverse sectional view through a cabinet of a sewing machine, the head of which is equipped with my improved motor attachment; Fig. 2 is a side view of the head showing the motor attachment; Fig. 3 is a perspective view of the motor supporting strap or bracket with the means for securing it to the head; and Fig. 4 is a sectional view of the same.

Referring now to the drawings, 10 represents a cabinet which may be of any suitable design and construction, and 11 represents the head of the machine, which in this instance is mounted on a swinging platform 12 which is designed to be lowered into the cabinet when the machine is not in

use, the machine here shown being of the well-known drop-head type. On the lower side of the platform is shown conventionally a rheostat 13, which in this instance is connected to the motor by conductors 14, although it is not essential that the rheostat be mounted at the point herein illustrated, or, in fact, that a rheostat method of control be utilized.

In this application as in my prior application, a friction drive is contemplated between the motor and the hand wheel 15 of the head, and in this application, as in my prior application the motor is supported by a flat strap or bracket which in addition to supporting the motor holds the drive wheel of the motor in frictional driving engagement with the hand wheel.

Although the arrangements shown in my prior application are very effective for the purposes stated, in accordance with the present invention the strap or bracket is so mounted on the arm and so connected to the motor that it permits a greater economy of space than in my prior application inasmuch as the bracket does not extend up between the motor and the arm of the head.

Referring again to the drawings, the driving motor is shown at 16, this motor being arranged with its axis horizontal, and being provided with a friction drive wheel 17 designed to be held yieldingly against the peripheral part of the hand wheel 15.

For the purpose of supporting the motor and for causing the friction drive wheel 17 to be yieldingly held against the hand wheel 15, an elastic strap or bracket 18 is utilized. In this instance, this strap or bracket is mounted on the rear side of the upright portion of the arm of the head and projects rearwardly beneath the motor where it is secured thereto, in this instance by screws 19. It will be seen that the strap or bracket does not limit in any way the available space between the motor and arm of the head, or prevent its being brought close to the latter.

The strap or bracket 18 may be secured in various ways to the head, but preferably it is provided with a rounded inner portion 18^a which is firmly but adjustably secured in a correspondingly shaped seat on the rear side of the upright portion of the arm of the head. The seat may be cast integral with the arm, but preferably is in the form of a

pad 20 having a portion shaped to correspond to the rounded end 18^a of the strap or bracket. The strap or bracket is secured to the seat, and in this instance the seat or
 5 pad is secured to the arm by a pair of screws 21, and in order that the heads of the screws may have a flat surface to bear against, a filler piece 22 is inserted in the half round recessed portion 18^a of the strap or bracket,
 10 and the heads of the screws bear against the outer face of this piece. When the screws are tightened the inner end of the bracket and the pad are secured rigidly to the head, but in order that the position of the bracket
 15 may be adjusted, the openings 18^b provided in the rounded portion 18^a of the strap or bracket to accommodate the screws 21 are elongated.

Thus when the motor attachment is properly applied to the head of the sewing machine by tightening the screws 21, the motor is supported by the head, with its friction drive wheel pressed yieldingly against the hand wheel of the head, the mounting being
 20 such that the elasticity of the bracket will enable such slight giving or yielding as may be necessary to keep the drive wheel at all times in proper engagement with the hand wheel, allowing it to accommodate itself to
 25 any irregularities that may be formed on the drive wheel without hammering or chattering.

Should sufficient wear occur as to render advisable the adjustment of the bracket to
 35 cause the friction wheel to bear more firmly against the hand wheel, it is only necessary to loosen the screws and turn the rounded part of the bracket slightly in its curved seat and again tighten the screws. Furthermore, since the motor can be brought
 40 up very close to the arm of the head, the motor will not interfere with the lowering of the head into the cabinet.

Having described my invention, I claim:

45 1. In combination with the head of a sewing machine having an arm with an upright portion and a substantially horizontal por-

tion extending from the upper end of the upright portion, a motor mounting comprising a motor and a flexible strap or bracket
 50 secured to the upright portion of the arm of the head and projecting rearwardly therefrom beneath the motor and directly secured to the base thereof and located wholly below the horizontal portion of the
 55 arm of the head.

2. In combination with the head of a sewing machine having an arm with an upright portion and a substantially horizontal portion extending from the upper end of the
 60 upright portion, a motor attachment comprising a motor and a flexible strap or bracket for supporting the motor, said strap or bracket having its inner portion adjustably secured to the upright portion of the
 65 arm of the head and projecting rearwardly therefrom beneath the motor and secured thereto and located wholly below the horizontal portion of the arm of the head.

3. In combination with a sewing machine
 70 head having a hand wheel, and an arm carrying the hand wheel comprising an upright portion and a horizontal portion, a motor attachment comprising a motor having a friction drive wheel and a strap or bracket for
 75 supporting the motor and holding the drive wheel yieldingly in engagement with the hand wheel, said strap or bracket being secured to the upright portion of the arm of the head so as to project rearwardly there-
 80 from beneath the motor and directly to the base thereof, and located wholly below the horizontal portion of the arm of the head.

4. In combination with the head of a sewing machine, a motor attachment comprising
 85 a motor and a strap or bracket for supporting the same, the arm of the head having a seat with a rounded portion and the bracket having a rounded portion secured in said seat and projecting rearwardly from the
 90 arm beneath the motor and attached thereto.

In testimony whereof, I hereunto affix my signature.

FOSTER F. HILLIX.