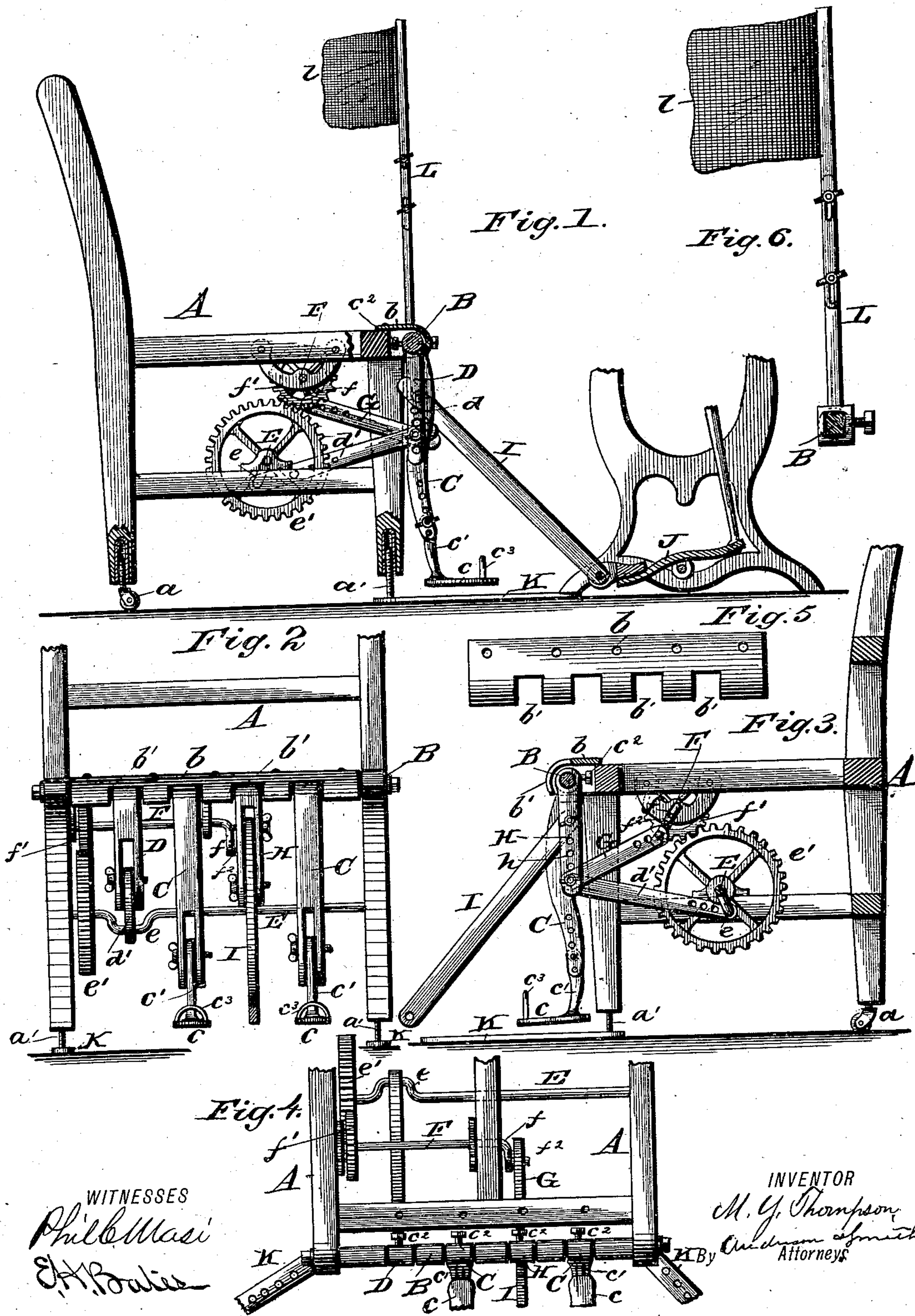


(No Model.)

M. Y. THOMPSON.
MOTOR FOR SEWING MACHINES.

No. 316,850.

Patented Apr. 28, 1885.



WITNESSES
Phil C. Masi
E. H. Bates

INVENTOR
M. Y. Thompson
By *Anderson & Smith*
Attorneys

UNITED STATES PATENT OFFICE.

MELCHSEDECK YOUNG THOMPSON, OF ARKADELPHIA, ARKANSAS.

MOTOR FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 316,850, dated April 28, 1885.

Application filed November 25, 1884. (No model.)

To all whom it may concern:

Be it known that I, MELCHSEDECK Y. THOMPSON, a citizen of the United States, residing at Arkadelphia, in the county of Clark and State of Arkansas, have invented certain new and useful Improvements in Sewing-Machine Motors; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a side view, part sectional, of my motor. Fig. 2 is a front view of the same. Fig. 3 is a vertical sectional view, and Figs. 4, 5, and 6 are detail views.

This invention relates to improvements in motor mechanism for sewing or other machines operated by a treadle; and it consists in the construction and novel arrangement of parts hereinafter fully explained, and pointed out in the appended claims.

Reference being had to the accompanying drawings, and to the letters of reference marked thereon, A represents a chair of strong construction, having on its rear legs the casters *a a*, the stems of which are made longitudinally adjustable in recesses in the ends of the legs to raise or lower the chair to different heights.

a' a' are pins or stems made longitudinally adjustable in recesses in the ends of the front legs for a similar purpose.

B is an oscillating shaft having bearings in the front ends of the side rails of the seat of the chair, and situated below and slightly forward of the front rail of the same. *b* is a hood, of metal or other proper substance, fitting partially over said shaft, with its upper or rear edge fixed to the seat of the chair, and provided on its lower edge with the cut-away portions or recesses *b' b'*, as shown.

C C are levers depending from the shaft B, having their upper ends enlarged, rounded, and hollowed, so as to slip thereon, the said upper end being situated in two of the recesses *b* made for their accommodation. These levers are the actuating-levers for the shaft B, and are intended to be swung back

and forth by the legs of the operator seated in the chair.

c c are foot-rests, the stems *c'* of which pass into longitudinal recesses in the lower ends of the levers C, and are made adjustable longitudinally therein by proper holes and screws, as shown. Each of the levers C may, by means of its rounded head, be turned to any desired angle on the shaft B, and be fixed at that angle by a set-screw, *c²*, passing through the rear part of said head and binding on the shaft. The forward ends of the foot-rests are provided with straps *c³* to pass over the toes and aid in keeping the feet in place.

D is a hanging rod, having its upper end similar to those of the levers C, and fitting over the shaft B in one of the recesses *b'*, near one side of the chair. The lower end of the rod D is slotted longitudinally from front to rear, and provided with the holes *d*.

d' is a pitman, the front end of which passes through the slot in the rod D, and is made vertically adjustable therein by means of the holes *d* and a proper screw, as shown. The rear end of the rod *d'* is connected with the crank *e* of the transverse shaft E, which has proper bearings in the side rounds connecting the chair-legs, and has fixed upon it, outside of the crank, the gear-wheel *e'*.

f' is a gear-wheel, about one-third of the diameter of the gear-wheel *e'*, with which it meshes, and fixed upon the shaft F, which has bearings at one end in a bracket depending from the side of the seat, and at the other in a bracket depending from a rail fixed across the center of the seat from front to rear.

f is a crank-arm secured to the inner end of the shaft F, inside of the bearing, and provided longitudinally with the holes *f²*.

G is a connecting-rod or pitman, the rear end of which is connected with and made vertically adjustable on the end of the crank-arm *f* by means of the holes *f²* and a proper screw.

Both the pitmen *d'* and G may be shortened on their respective cranks by the aid of perforations formed in their length, or in other usual manner. The front end of the pitman G is connected to the lower end of the hanging rod H, which is in all respects similar to the rod D, being provided at its lower end

with a similar slot, and having perforations *h*, similar to *d*, by means of which and a suitable screw the end of the pitman *G* is made vertically adjustable in the slot of the rod *H*, the upper end of which is attached to the shaft *B* by a set-screw in a similar manner to the rod *D*.

I is a connecting-rod having its upper end pivoted upon the lower end of the rod *H*, and its lower end pivoted in the fork of a bracket firmly secured to the edge of the treadle *J*, as shown. The treadle *J* is connected in the ordinary manner to any machine which it is desired to operate.

K K are metal straps provided with holes *k*, in which the pins *a'* and the front lower ends of the brackets which form the bearings of the treadle *J* are inserted to keep the chair and machine at the required distance apart. The straps may, if desired, be hinged to the lower ends of the pins *a'* and be turned up and secured against the legs of the chair when not in use. When the levers *C* are oscillated by the feet of the operator, the motion is conveyed by the swinging arm *D*, pitman *d'*, and crank *e* to the gear-wheel *e'*, which imparts it to the gear-wheel *f'*, and thence by the crank-arm *f*, pitman *G*, rod *H*, and connecting-rod *I* to the treadle *J*, the end of the rod *I* being adjusted higher or lower on the rod *H* to give the treadle a greater or less swing. Increased rapidity of motion of the treadle over that of the levers *C* is obtained by means of the gear-wheels *e'* and *f'*. The levers *C* are in practice made to conform to the bend of the rear of the legs for comfort and convenience, and the foot-rests are adjusted thereon to suit the length of the legs; also, the said levers are adjusted at a convenient angle on the shaft *B* by their set-screws.

When it is not desired to use the gearing, the lever *d'* is detached from the rod *D* and the crank *e*, and the lever *G* from the rod *H* and crank-arm *f*. The treadle then swings in unison with the levers *C*, and greater or less swing is obtained by adjusting the rod *I*, by means of perforations made for that purpose and a proper set-screw, higher or lower upon the rod *H*.

In using the gearing the inner or upper end of the rod *I* may be attached directly to the crank-arm *f*, the pitman *G* being detached. The rod *G* then remains idle. The hood *b* prevents the shaft *B* from rubbing against the person of the operator when it oscillates, thereby causing friction.

L is a rod having its lower end squared, and fitting by a proper opening over either end of

the shaft *B*, outside of the bearing of the same, the said end being squared for its reception. *l* is a fan attached to the upper end of said rod, and made vertically adjustable thereon by any proper means. As the shaft *B* oscillates, the rod *L* will vibrate and fan the operator.

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

1. In the motor of a machine operated by a treadle, the combination, with a chair, *A*, for the operator, provided at its front with an oscillating transverse shaft having bearings in the chair, and having attached the levers *C*, provided with the adjustable foot-rests *c*, of the swinging rod *D*, connected by the pitman *d'* to the crank *e* of the shaft *E*, the gear-wheels *e'* and *f'*, the shaft *F*, provided with the crank-arm *f*, and the connecting-rod *I*, pivoted to said crank-arm and to the treadle *J*, substantially as specified.

2. In a motor of a machine operated by a treadle, the combination, with the chair *A*, oscillating shaft *B*, and levers *C*, provided with the foot-rests *c*, of the swinging rod *H*, connecting-rod *I*, and treadle *J*, substantially as specified.

3. In a motor-machine operated by a treadle, the combination, with the chair *A*, shaft *B*, levers *C*, provided with the foot-rests *c*, and swinging rods *D* and *H*, of the pitmen *d'* and *G*, shafts *E* and *F*, gear-wheels *e'* and *f'*, crank-arm *f*, connecting-rod *I*, and treadle *J*, substantially as specified.

4. In a motor mechanism for a machine, the combination, with the chair *A*, oscillating shaft *B*, and vibrating levers *C*, of the fanning device composed of the rod *L* and fan *l*, and adapted to be attached to either end of and vibrated by the shaft *B*, substantially as specified.

5. In a motor for a machine, the combination, with the chair *A*, provided with the pins *a*, of the metal straps *K*, provided with the holes *k*, adapted to receive the said pins and the front lower corners of the brackets upon which the bearings of the treadle are formed, so that the chair and treadle may be set and held at the desired distance apart, substantially as specified.

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

MELCHESEDECK YOUNG THOMPSON.

Witnesses:

W. W. HEARD,
W. E. BARKMAN.