

T. B. CARR.  
Motor for Sewing-Machine and Other Machinery.  
No. 215,095. Patented May 6, 1879.

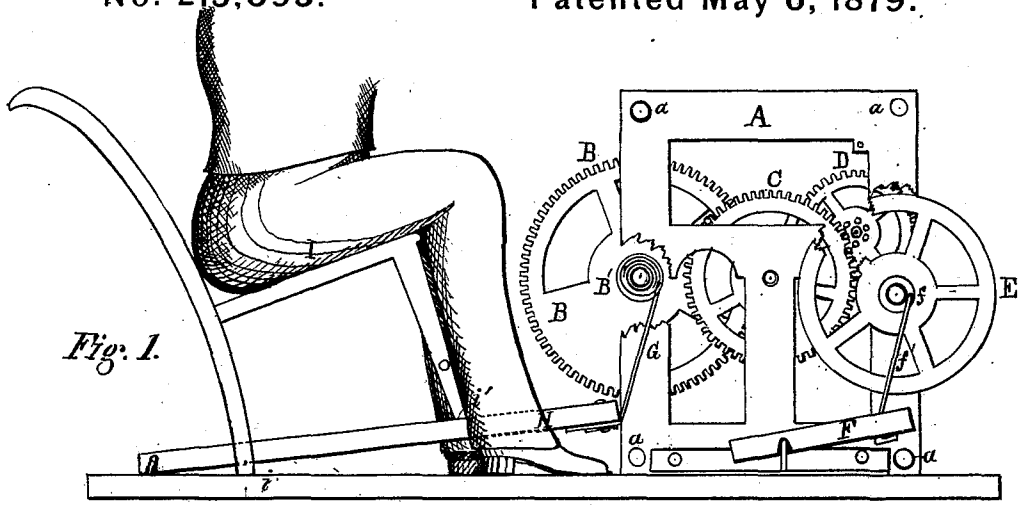


Fig. 1.

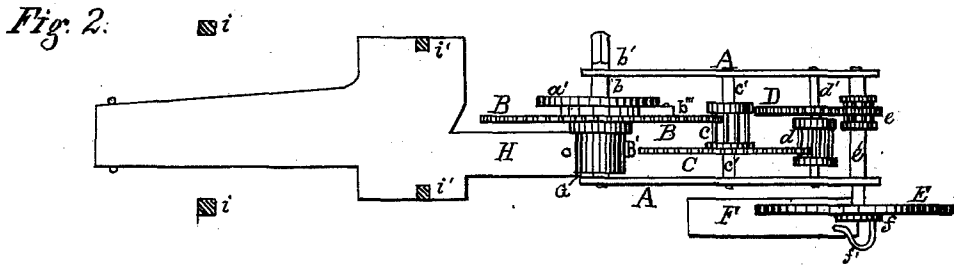


Fig. 2.

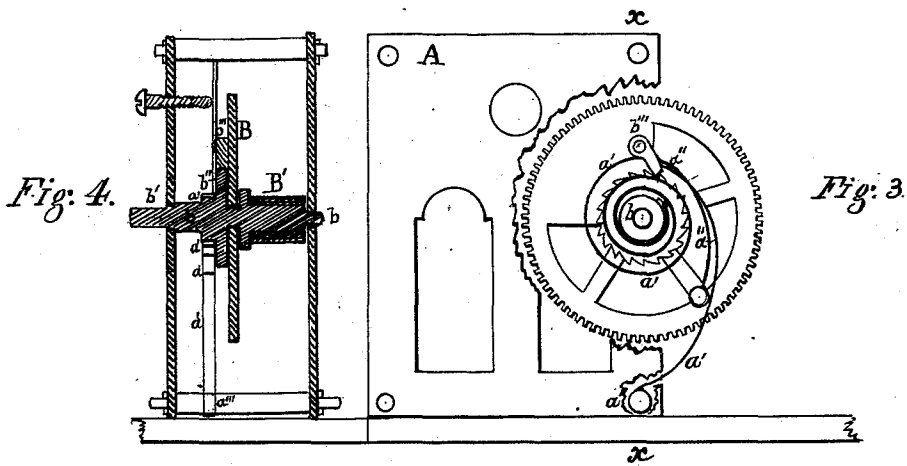


Fig. 4.

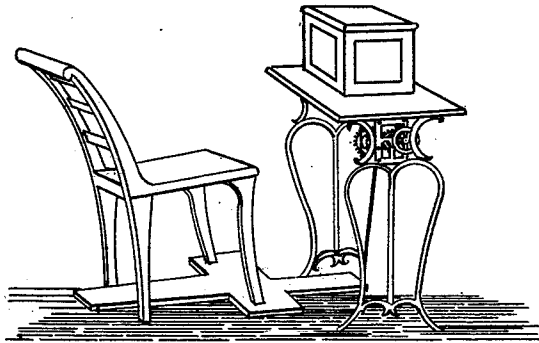
Fig. 3.

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*Fig. 5.*



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# UNITED STATES PATENT OFFICE.

THOMAS B. CARR, OF WILMINGTON, NORTH CAROLINA.

IMPROVEMENT IN MOTORS FOR SEWING-MACHINES AND OTHER MACHINERY.

Specification forming part of Letters Patent No. **215,095**, dated May 6, 1879; application filed March 8, 1879.

*To all whom it may concern:*

Be it known that I, THOMAS B. CARR, of Wilmington, in the county of New Hanover and State of North Carolina, have invented certain Improvements in Motors for Sewing-Machines and other Machinery, of which the following is a specification.

This invention relates to motors for operating sewing-machines and other light and fast running machinery where the weight of the operator is utilized by placing a part of the chair (on which the person sits to manipulate the work) upon a treadle, to which is attached a strap connected to the main driving-shaft, around which it is wound, and which shaft has on it the master-wheel of a series or train of gear and pinion wheels, from which motion is multiplied and conveyed to a driving-shaft and fly-wheel, with crank-axle connected by pitman or otherwise to the machine for operation. The strap can be immediately connected to the chair by the front round, or otherwise, as may be found most convenient, and the treadle be dispensed with, all of which will be hereinafter more fully described.

Figure 1 is a side elevation of the machine, showing the train of gear-wheels, the treadle, and position of the operator and the chair. Fig. 2 is a plan view of Fig. 1. Fig. 3 is a partial view on the side reverse of Fig. 1, showing the main driving-wheel and the ratchet-wheel and spring whereby the strap is wound up. Fig. 4 is a section on *xx* of Fig. 3. Fig. 5 is a perspective view of the machine and treadle and chair.

A A represent an ordinary frame supported by the corner pedestals *a a a*. Within this frame is arranged a train of gear and pinion wheels, like clock-movements, whereby speed is obtained on the last shaft. B is the master or main driving-wheel on shaft *b*, and which wheel B meshes with a pinion, *c*, on the shaft *c'*, having on it a spur-gear, C, which meshes with a pinion, *d*, on shaft *e'*. On shaft *d'* is a spur-gear, D, which meshes with a pinion, *e*, on shaft *e'*. On the outer end of shaft *e'* is a fly-wheel, E, to which is attached a crank, *f*, and a pitman-rod, *f'*, connected to a pivoted lever, F, or to any other device whereby the motion may be communicated to the machinery to be driven.

Thus increased velocity is given to the shaft *e'* from the master-wheel B, according to the graduation of the number of cogs in due proportion from spur to pinion on each of the several shafts *b c' d' e'*. On the main shaft *b*, and on one side of wheel B, is a boss, B', or enlargement of shaft *b*, on which is wound a strap, G, which is fastened to it, so that by pulling on the strap the shaft can be rotated. The other end of the strap can be attached to a treadle-lever, H, as shown in Figs. 1 and 2, or the strap may be fastened directly to the front round of the chair. On the opposite side of wheel B is a ratchet-wheel, *b''*, fastened to shaft *b*, and the pawl *b'''* is attached to wheel B, and kept in place by a spring, *a'*. Another spring, *a'*, is coiled around a boss on, or enlargement of, shaft *b*, which boss is connected to the ratchet-wheel *b''*, and the other end of the spring is fastened to the frame A on one of the standards *a*, as shown in Fig. 3. The boss B' on which the strap G is coiled, is wound up by the uncoiling of the spring *a'* whenever the said boss B' is released by the weight or force upon the strap being removed, as will be hereinafter explained. The outer end of shaft *b* is squared at *b'* for the pipe of a winding-key, so that the tension of the spring *a'* may be regulated.

I is a chair for the operator to sit in. The hind legs are placed at *i* on the floor. The fore legs, *i'*, are to be placed on the treadle, or the strap may be attached by a hook to the round or front of the chair, and the treadle be dispensed with. The operator when seated will have most of his weight bearing down upon the chair and strap, or he may have a stirrup to the strap, and by placing the foot in the stirrup employ his weight in that manner, either of which will cause the unwinding from shaft *b*. The pawl *b'''* catching in the ratchet *b''* will cause wheel B to revolve, and consequently move all the other wheels and operate the lever F, or any other connection. When the treadle or chain has reached the floor, thereby lifting the front legs from the treadle or floor, as the case may require, the spring *a'* will cause the boss B' to recoil, and instantly wind up the strap G ready for the application of the weight again. The fly-wheel E will

keep up the movement of the wheels by its momentum during the winding up of the strap until the power or weight is again applied.

The movement of the wheel B and shaft *b'* winds up the coiled spring *a'* until the boss B' is again released by removal of the weight from the treadle and strap G.

The operator shown in Fig. 1 has his feet on the floor, ready to lift the front of the chair. The treadle will follow it upward, and be instantly borne down by the weight when applied.

I claim—

The combination of the chair with the treadle and strap of a motor, the axle and master-wheel of a train of gearing, whereby the train is set in motion by the weight of the operator, and the strap rewound on the axle by relieving the treadle of the said weight, substantially as and for the purpose described.

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