

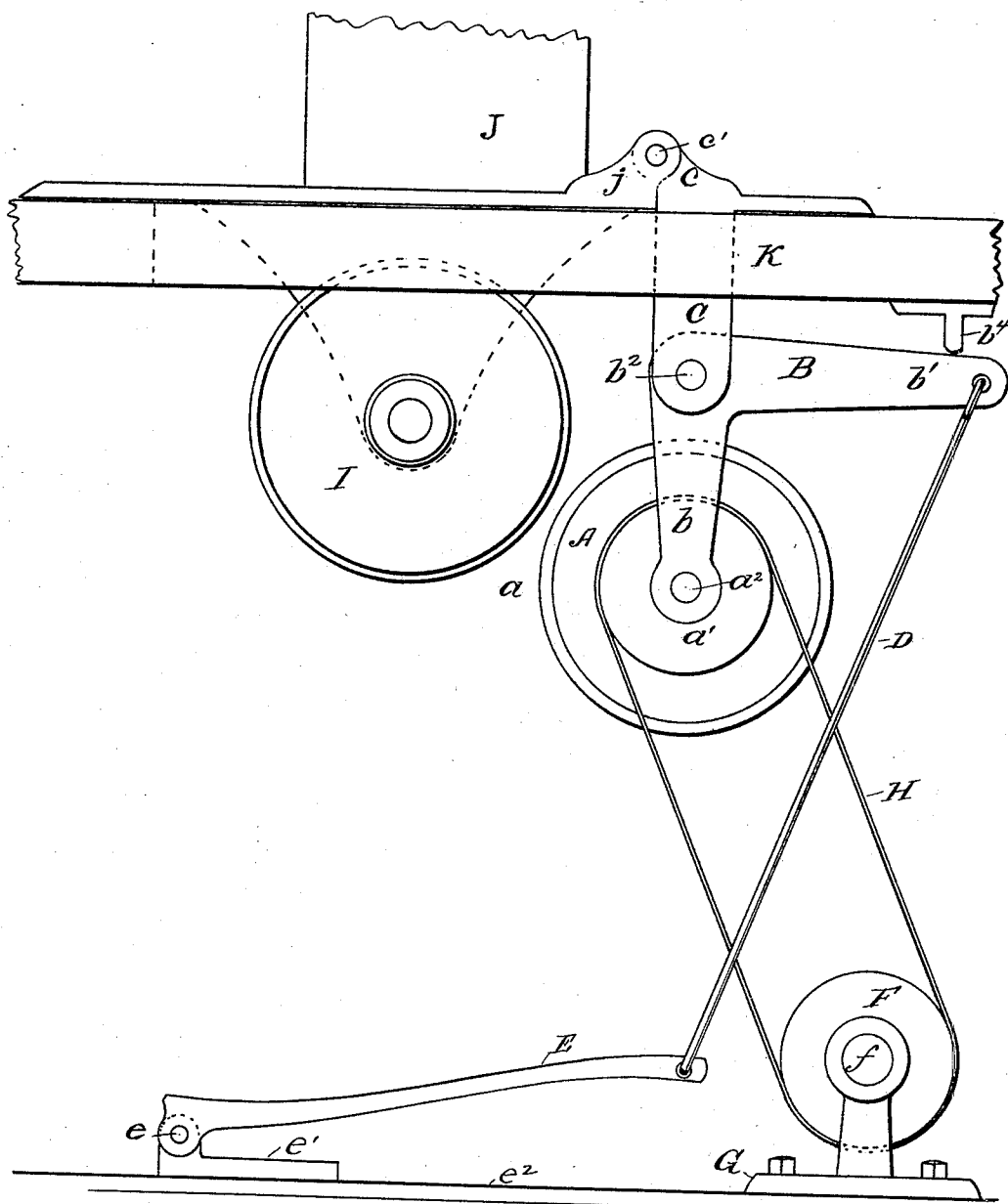
(No Model.)

J. M. MERROW.

FRICTIONAL DRIVING MECHANISM.

No. 392,818.

Patented Nov. 13, 1888.



WITNESSES:

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JOSEPH M. MERROW, OF MERROW, CONNECTICUT.

FRICTIONAL DRIVING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 392,818, dated November 13, 1888.

Original application filed January 18, 1886, Serial No. 188,912. Divided and this application filed January 30, 1888. Serial No. 392,352. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH M. MERROW, of Merrow, in the county of Tolland and State of Connecticut, have invented certain new and
5 useful Improvements in Friction Driving Mechanism for Sewing-Machines, of which the following is a specification.

It is the object of my invention to attain means whereby sewing and similar light machines may be easily started and stopped. As
10 is well known, it is necessary in the operation of many light machines, particularly some classes of sewing-machines, from the nature of the work being performed thereon, that the machine should be frequently stopped and
15 started, that the starting should be easy or gradual, and that the machine should often be run very slowly. To this class of machines, or machines employed to perform the kind of
20 work mentioned, my improvements have particular applicability.

It is also the object of my invention to provide improvements whereby the driving means may be supported and operated entirely independent of the machine, so that the latter may
25 be hinged to its support and swung upon its hinges, as is frequently necessary in the use of sewing-machines, without interfering with or disconnecting it from the driving means.

The annexed drawing, forming a part of this specification, is a side view showing the driving mechanism and also a portion of the machine, both attached to the table.

A is a pulley, provided on its face with leather or frictional covering *a*, and having
35 the grade *a'* of smaller diameter, said pulley being adapted to rotate upon the small journal shaft or axis *a''*.

B is an angle-lever having the arms *b* and *b'*, which lever is fulcrumed upon the rod or shaft
40 *b''*, which rod *b''* is connected with the hanger C. The rod D connects arm *b'* of the angle-lever B with the treadle E.

The treadle is pivoted at *e* to the piece *e'*
45 screwed to the floor *e''*.

F is a pulley mounted on the shaft *f*, which shaft runs in the upper end of the bearing G, said bearing G being screwed to the floor *e''*.

Upon the pulley F is the belt H, which runs
50 also upon the grade *a'* of the pulley A, by

means of which belt H said pulley A is driven continuously.

I is the main operating-pulley of the machine J, a mere fractional part only of which machine is shown in the drawing. The machine J is provided at its rear with an ear or
55 projection, *j*. The hanger C above mentioned is screwed to the table K, and is provided with the ear or projection *c*, through which projection *c* and the corresponding projection, *j*,
60 upon the machine J, passes the rod *c'*, thus forming a hinge at this point upon which the machine J may be swung. Under the table K is placed a small stop, *b''*, to limit the length of motion in one direction of the lever B. 65

The operation of my invention is as follows, namely: The pulley F is driven by any suitable means, and motion is communicated to the pulley A from said pulley F by means of the belt H. When the swinging end of the
70 treadle E is pressed downward toward the floor *e''*, the angle-lever B is swung upon its pivot *b''*, and the leather-covered periphery *a* of the pulley A is carried into contact with the periphery of the main driven pulley I of
75 the machine, which causes said pulley to rotate and thus operate other parts of the machine J. The belt H may be run quite loosely when the machine is not in operation, as the swinging motion of the pulley A has a tendency to tighten said belt H when the latter is
80 placed at an angle, and is somewhat backward from the vertical line, either above or below the axis *b''*, upon which the angle-lever B swings. The tension or elasticity of the belt H when
85 in the position shown will carry the driving-pulley A away from the driven pulley I when the foot is removed from the swinging end of the treadle E.

With the improvements described it will be
90 seen that the driving means is, to all intents and purposes, pivoted or fulcrumed to its support, independent of the machine or driven devices, so that the latter can be moved on its
95 hinge without disturbing the former or disconnecting any of its parts therefrom, and that the machine may be started or stopped, without jar or shock, with the utmost readiness.

It is obvious that the machine may be pivoted directly to the table K, instead of to the 100

support for angle-lever B, the construction in this regard shown being adopted for the sake of convenience and economy.

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

10 A driving mechanism comprising a bell-crank lever with a friction and a driven belt-pulley hung upon the lower arm thereof, a treadle and connection between said treadle and the upper arm of said bell-crank lever, a driving-belt pulley, and an elastic belt between

the two belt-pulleys, the said friction-pulley being adapted to be brought into contact with the driving-pulley of a machine by depressing the treadle and to be released from contact therewith by releasing said treadle, substantially as set forth. 15

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Witnesses:

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