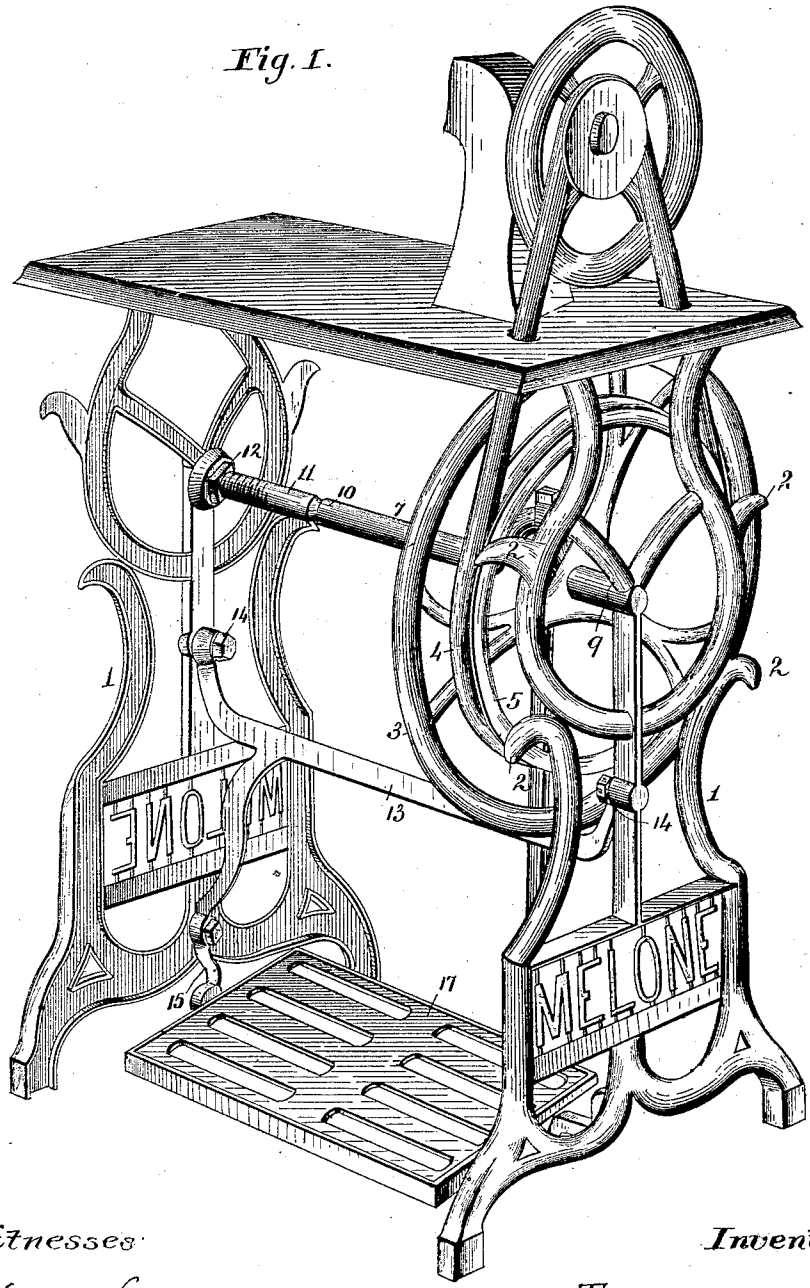
(No Model.) 2 Sheets—Sheet 1.

T. L. MELONE.

SEWING MACHINE STAND.

No. 310,455. Patented Jan. 6, 1885.

Fig. 1.



Witnesses:

J. Henry Kaiser.

Geo. T. Smallwood.

Inventor:

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by Knight Bros.

Attys.

(No Model.) 2 Sheets—Sheet 2.

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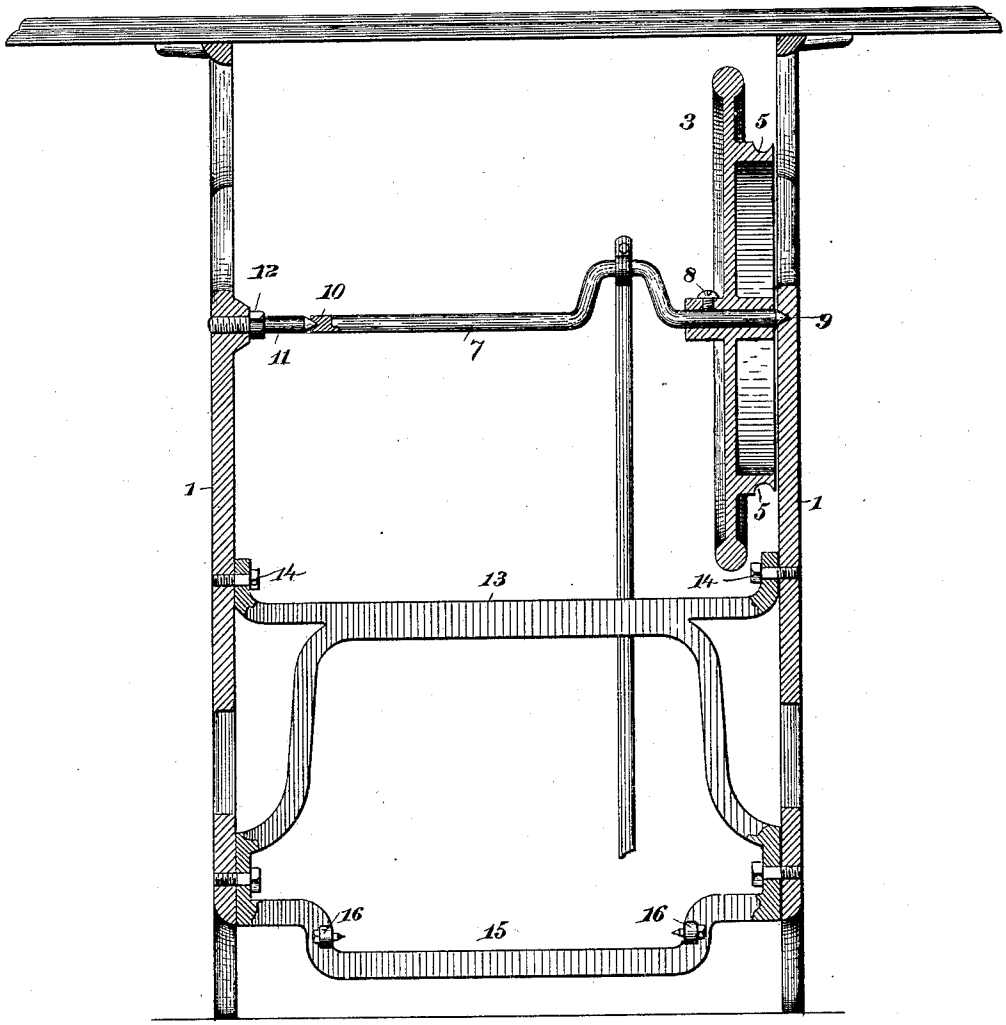
Fig. 2.



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Inventor:
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UNITED STATES PATENT OFFICE.

THOMAS L. MELONE, OF CHILLICOTHE, OHIO.

SEWING-MACHINE STAND.

SPECIFICATION forming part of Letters Patent No. 310,455, dated January 6, 1885.

Application filed August 13, 1883. Renewed June 24, 1884. (No model.)

To all whom it may concern:

Be it known that I, THOMAS L. MELONE, a citizen of the United States, residing at Chillicothe, in the county of Ross and State of Ohio, have invented certain new and useful Improvements in Sewing-Machine Stands, of which the following is a specification.

The object of my invention is to provide a sewing-machine stand applicable to any sort of sewing-machine, whether light or heavy running, and relates to means for the support of the crank-wheel, the guiding of the driving-belt, and the balancing of the crank.

In my improved stand, the driving-belt runs in a groove cut in a flange on the outer side of the balance or driven wheel, located above the table, said balance-wheel being arranged directly over the groove in the crank or driving wheel in such manner that the belt is led naturally to the groove in the crank-wheel, and is further assisted and directed in its course by the rim of the crank-wheel on one side and the leg or side of the stand on the other. The crank-wheel is held snugly up to one side of the frame by means hereinafter more fully set forth, to provide between the wheel and the side of the frame a narrow path for the traverse of the belt, so that the belt will be confined to the plane of the the band-wheel, especially at or near the points where it leaves the groove in said wheel to and from the balance-wheel, and when removed from the driven wheel will drop down into the space between the rim of the band-wheel and the side of the frame, in position for replacement on the band-wheel on the lifting of the belt above the top of the stand. Ornamental lugs on the side of the frame, placed at or near the points where the belt strikes and leaves the crank-wheel and around the path of the belt, and especially at the points where the belt leaves the groove in the driving-wheel to and from the balance-wheel, assist the retention of the same in the plane of the band-wheel. A bolt used to fasten the cross-brace to the side of the frame, or any other projection at such point, is employed to prevent the belt from dropping beyond the rim of the crank-wheel. The ends of the crank-shaft are coned out or provided with conical ends to adapt them to engage and be adjustable one in the side of the frame and the other on an adjustable bearing in the other side of the frame, and provided with a jam-nut for locking it in any desired position. Such adjustable bearing can be made to project for some distance within the frame, the crank-shaft being shortened and lightened accordingly. The cross-brace of the frame is cast in one piece with the treadle-support, said support being provided with adjustable conical-ended trunnions for the support of the treadles. The heel of the treadle is weighted to balance the toe and to aid the crank-wheel in balancing the crank, so that the machine will remain stationary at whatever point it may be stopped—a result not possible with the driving mechanism of the ordinary light-running machines, it being necessary with such machines to keep the foot on the treadle to hold the needle at the top of the stroke on placing the goods under the presser-foot, by this means preventing the weight of the crank and the toe of the treadle from depressing the needle-bar, when the crank is not stopped on one or the other of its dead-centers.

In the accompanying drawings, Figure 1 is a perspective, and Fig. 2 a vertical sectional view, of my improved sewing-machine stand.

The sides 1 of the frame are constructed in the ordinary manner, having, however, projecting ornamental knobs 2, especially at or near the points where the band leaves the groove in the band-wheel on its way to and from the balance or driven wheel, which serve, in connection with the leg itself and the rim of the balance-wheel 3, to retain the belt 4 within the plane of the grooved portion 5 of such wheel, so that when it is desired to replace the belt it is necessary merely to lift it upon the driven wheel 6 above the stand, it being directed to its seat on the band-wheel 5 by means of the leg provided with such projecting knobs on the frame and the crank-wheel. It will be seen, therefore, that the operator manipulates the belt entirely above the table. The wheel 3 5 is adapted to be fixed to the desired point upon the crank-shaft 7 immediately beneath the driven wheel 6 by means of set-screw 8. The end 9 of the crank-shaft is coned to occupy the conical socket in the side of the frame, the other end, 10, of the shaft being coned out to receive the conical end of the screw-threaded bearing 11, fixed in

the opposite side of the frame and adapted to be locked at any position by means of jam-nut 12. When the crank-shaft becomes loose by reason of the wear, the bearing 11 is forced inward, the jam-nut 12 tightened, and the crank-wheel 3 shifted to again occupy a position immediately beneath the driving-wheel 6. A cross-brace, 13, is fixed between the sides of the frame by two bolts, 14, one of said bolts being so arranged as to almost touch the rim 3 of the crank-wheel, and form with said crank-wheel and the side of the frame a closed passage, from which the belt is not allowed to escape. The treadle-support 15 may be cast in one with the cross-brace 13, and is provided with cone-ended trunnions 16, adjustable in the treadle-support and adapted to enter the ends of the treadle-shaft. The treadle 17 is constructed with its heel of thicker metal than the toe-piece, to balance said toe-piece and the crank on shaft 7, thus avoiding all tendency of the machine to stop on dead-center. It is obvious that the lugs 2 may be dispensed with and the leg of the machine made of sufficient width to overlap the grooved flange of the wheel at the points occupied by said lugs without departing from my invention.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. In combination with the side or leg of a sewing-machine frame, the crank-wheel having grooved or faced portion to receive the belt, located between the rim of the wheel and the side of the frame, substantially as and for the purposes set forth.

2. In combination with the side or leg of a sewing-machine stand, having projecting lugs 2 around the path of the belt, the crank-wheel having rim 3, and the grooved or faced portion 5 in close proximity to the side of the stand, substantially as set forth.

3. The combination, with the side or leg 1 and crank-wheel 3, having grooved or faced portion 5, of the screw-bolt or other projection, 14, adapted to span or nearly span the space between the rim of the crank-wheel and the side of the frame, substantially as and for the purposes set forth.

4. The crank-shaft having conical bearings, as shown, in combination with the inwardly-projecting adjustable bearing 11, forming a continuation of the crank-shaft, and having jam-nut 12, substantially as described.

5. The combination, with the crank-shaft having means for taking up wear, substantially as described, of the crank-wheel and attached band-wheel having means for longitudinal adjustment on said shaft, for the purpose set forth.

6. The combination of crank-shaft 7, carrying wheel 3 5, and the treadle 17, weighted at heel to balance the weight of the crank, substantially as set forth.

THOS. L. MELONE.

Witnesses:
H. W. WOODROW,
JOHN T. RAPER.