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M. TAIGMAN

POWER TABLE FRAME

Filed April 11, 1923

Fig. 1.

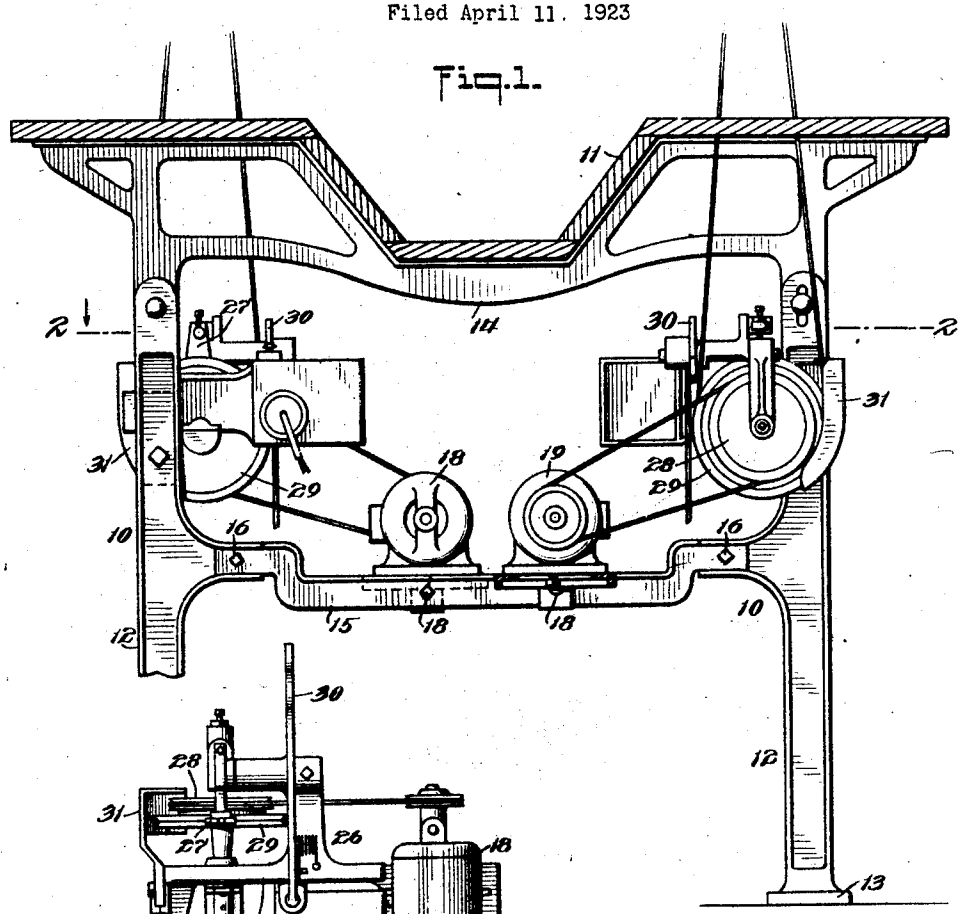


Fig. 2.

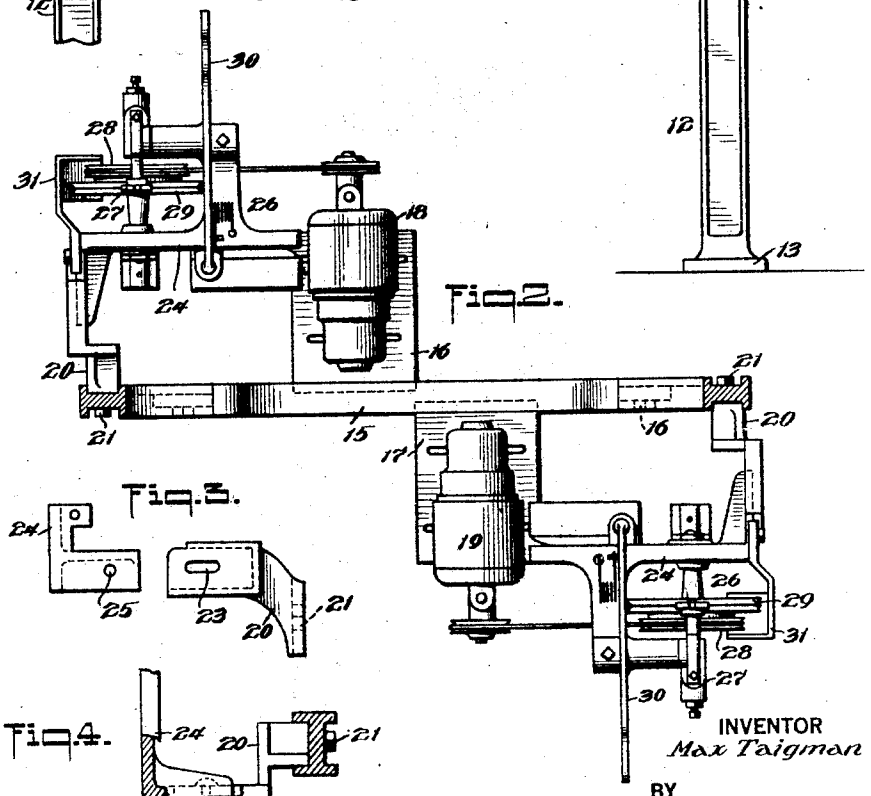


Fig. 3.

Fig. 4.

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POWER TABLE FRAME.

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The invention relates in general to an improved form of power table for supporting a plurality of machines such as sewing-machines and the like, and the invention specifically relates to an improved form of table top supporting frame constituting part of such table, and designed for the additional purpose of supporting the power plant or rather power plants necessary to drive a pair of sewing machines disposed on top of the table and adjacent the frame.

It is a usual construction in power tables of the type under discussion, to support a long top on transversely disposed supporting frames usually made of I-beams and castings, and which usually includes a transverse support for a shaft extending the length of the table, and which shaft is connected in different ways with the several machines on top of the table. The present disclosure utilizes some of the structural features of the old form of frame and also utilizes a known form of individual power plant construction by means of which each machine is provided with its own electric motor and manually actuated brake and electric control mechanism. It has been suggested in the prior art to provide supports depending from the table top for the control mechanism in such single unit power plant and it has also been suggested to mount the electric motor on the stand which supports the table top. These constructions have the disadvantage in that they take up a considerable amount of room underneath the table, utilize space which is valuable in factory layouts, and provide cumbersome structure occupying space above the floor which should be clear to accommodate the legs of the operator, and which also utilizes the space on or near the floor which should be available to accommodate stock.

Accordingly, the primary object of the invention is to provide a form of table support which will accommodate a plurality of power units beneath the table top and which can be duplicated along the length of the table disposed in compact relation and which supports will feature simplicity of construction, the elimination of cumbersome parts, and the minimizing of structural parts heretofore found to be necessary to support a plurality of power units.

I obtain this object broadly by omitting one of the usual transverse bars found in similar kinds of table supporting frame constructions, and by substituting therefor, a structure hereinafter identified as a motor bridge which not only acts to brace the frame as heretofore, but which provides a narrow bar for supporting a pair of motor carrying platforms disposed in balanced relation on opposite transverse sides of the bridge.

Each of the platforms support a conventional form of electric motor and is connected through a control mechanism with a machine supported above the same on the top of the table.

The control mechanism, hereinafter identified as a transmission, and two forms of which are disclosed, one in my co-pending applications Serial No. 235,220, filed May 17th, 1918, and Serial No. 475,781, filed June 7th, 1921, is supported on the frame beneath the table top and in position to be belted readily to its motor.

Another object of the invention is to provide a simple means for mounting the said transmission in position on the frame without providing structural parts particularly for this purpose and by means of which mounting the controlling lever of the transmission is readily available to the operator and by means of which mounting the transmission can be readily adjusted to meet the requirements of the differently positioned motors carried by the motor platforms.

Still another object of the invention, and constituting a feature particularly necessary in factory organizations where the machines are necessarily disposed in crowded relation along the length of the table, is to provide a simple form of guard for the rotatable parts of the transmission, and which guard may be adjusted with the transmission so as to maintain the guard in operative position in the differently adjusted position of the transmission.

Various other objects and advantages of the invention will be in part obvious from an inspection of the accompanying drawings, and in part will be more fully set forth in the following particular description of one form of mechanism embodying my invention, and the invention also consists in certain new and novel features of construction and combination of details hereinafter set forth and claimed.

In the accompanying drawing:

Fig. 1 is a vertical transverse sectional

view taken through a power table and showing one of the upright frames inside elevation and illustrating a preferred embodiment of the invention.

Fig. 2 is a transverse sectional view of the device shown in Fig. 1 and taken on the line 2—2 of Fig. 1.

Figs. 3 and 4 are detailed views of the bracket supporting the transmission, Fig. 3 being a view of the parts in elevation, and Fig. 4 being a plan view of the same partly in section.

In the drawing there is shown an upright frame, 10, for supporting the table top, 11, it being understood there will be as many frames along the length of the table as there are pairs of machines positioned in the table top 11. Each of the frames comprise a pair of spaced apart uprights, 12, provided with feet, 13, resting on the floor, and connected at their upper end by means of casting, 14, constituting a table supporting frame. The uprights are connected intermediate their height by means of a T-angle bar, 15, demountably secured in place at opposite ends by bolts, 16′, and corresponding, in so far as its location is concerned, with a transverse piece found in similar construction now on the market. The bar, 15, hereinafter identified as a motor bridge, is provided adjacent in center and on opposite sides thereof with a pair of motor platforms, 16 and 17. These platforms are demountably secured to the motor bridge by means of bolts 18, and extend in opposite directions outwardly from the bridge, that is, longitudinally of the length of table, so as to balance the weight of the motors, 18 and 19 carried thereby on opposite sides of the bridge. The motors are designed to be bolted to the platforms in adjustable positions and a manner well known in motor mounting constructions.

In the drawing it is noted that the uprights are of channel construction and a transmission supporting bracket 20, is secured in vertically adjustable position on the web of each upright by means of the slot and bolt construction, 21. The brackets extend in opposite direction from the frame, and are each disposed adjacent to and parallel to its corresponding motor platform. The outer arm, 22, of each of the brackets, is provided with a slot 23, and the arm is engaged by a transmission frame, 24, secured thereto for adjustment to and from the frame by means of bolts, 25, passed through the slot, 23.

A transmission, 26, is carried by the frame, 24, and this transmission includes a brake, 27, a motor-driven pulley, 28, a machine-driving pulley, 29, and a controlling lever, 30, and in other respects the transmission corresponds to the constructions shown in the above-identified applications. The lever 30, projects from the transmission towards the portion of the table occupied by the operator, and it is understood that this actuating lever is usually connected to a foot treadle disposed on the floor convenient to the operator. The operator usually occupies the space to the left of the frame, (see Fig. 1) and thus in advance of the motor platform on the opposite side of the table. This arrangement of machine, operators and motors contributes to the economy in space disposition considered longitudinally of the table.

Where the operator is working close to the transmission, a guard, 31, is secured to the transmission bracket, so as to be adjustable therewith, as the transmission is adjusted to its proper driving relation with the motor. However, as the invention features economy in connection, this guard may be omitted.

In operation it will be understood that any machine can be coupled to its power unit by positioning a motor, obtained from stock, on the desired platform, mounting the transmission in place, and making the suitable driving connection between the motor and the driven pulley of the transmission. Any necessary adjustment of the transmission, either vertically or horizontally, may be attained by the repositioning of the securing bolts, and the part of the table so equipped is ready for operation.

By means of the device disclosed, it is possible to mount two motors and two transmissions in balanced relation relative to each other on a single thin table supporting frame. The parts are supported directly on the metal frame and are not subjected to, nor contribute to, any vibration present in the table top. The motors are disposed close to the transmission and yet at the same time there is provided the necessary length of belt drive to effect an economic transmission of power.

The frame can be used as a table support without any motors or transmission and the power units are mounted only when needed to drive a machine. In either case the space near the floor is clear of any projecting parts and all loads are supported solely on the frame uprights. As the bar forming the motor bridge is already a necessary structural part of the usual frame, it is appreciated that there is no extra material needed (except the motor platforms) to support the motors and the usual uprights provide a sufficient and convenient mounting for the transmission.

Having thus described my invention, I claim:

1. A sewing machine table including a table top, a supporting frame therefor extending transversely of the length of the table and including a pair of uprights, a T-angle bar constituting a motor bridge con-

necting the uprights, assisting to brace the frame intermediate its height and outlining the top of a free open space below the bridge, and a pair of motor platforms secured along one edge to the bridge substantially contained above the lower edge of the motor bridge to leave clear the space below the same and projecting horizontally therefrom in opposite directions longitudinally of the table, and spaced apart on opposite sides of the longitudinal medial plane of the table thereby to leave free spaces for the knees of the operators between longitudinally adjacent pairs of motor platforms, and each of said platforms provided with means for adjustably positioning thereon a motor.

2. A sewing machine table including a table top, a frame for supporting the same extending transversely of the length of the table top and including an upper casting and a motor bridge spaced below the upper casting and above the bottom of the frame, a motor platform projecting from said bridge, a transmission supporting bracket secured to the frame at one end thereof and projecting therefrom longitudinally of the table, a motor supported on the motor platform and on the side of the bridge adjacent the bracket and spaced inwardly from the end having the bracket, a transmission carried by the bracket in spaced relation to the frame, whereby it is disposed away from the frame and conveniently accessible to the operator at the table, a driving connection between the motor and transmission and an adjustable connection between the transmission and the frame whereby the driving relation between the motor and transmission may be varied.

Signed at New York city, in the county of New York and State of New York, this 27th day of January, A. D. 1922.

MAX TAIGMAN.