Aug. 8, 1939. M. ROTHFIELD 2,168,451

SUPPORT FOR SEWING MACHINE TABLES

Filed April 10, 1937

Fig. 1

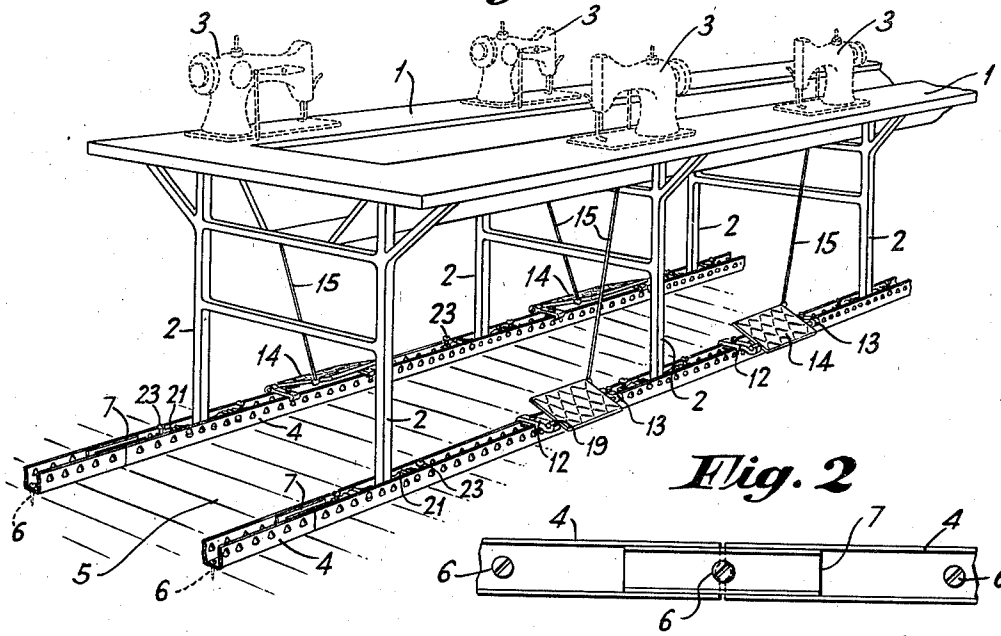


Fig. 2



Fig. 3

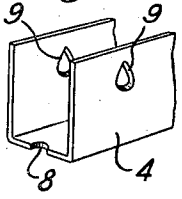


Fig. 4

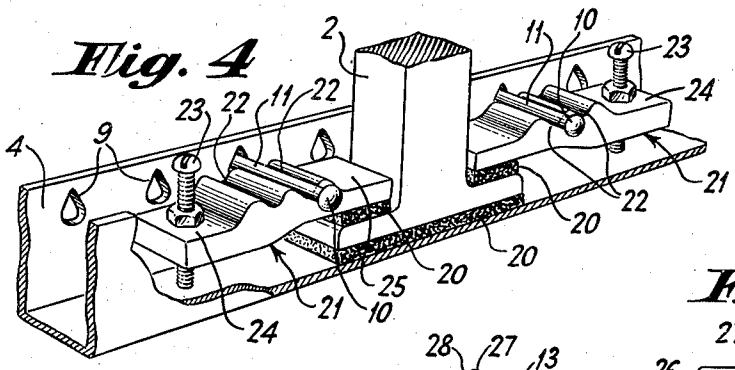


Fig. 5

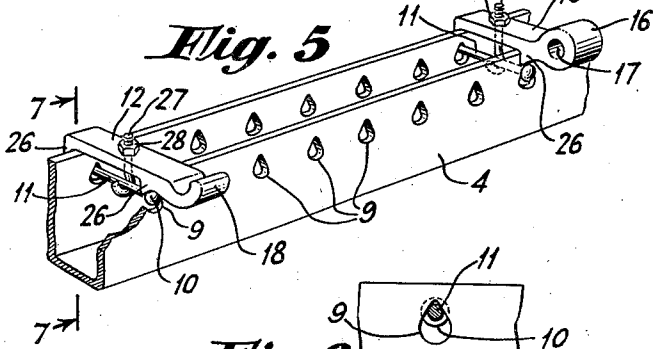


Fig. 6

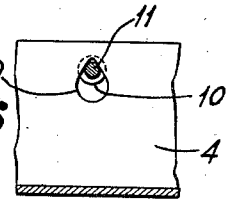
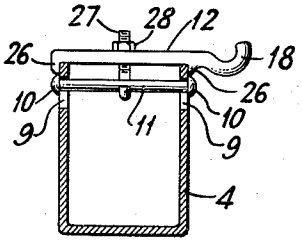


Fig. 7



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Patented Aug. 8, 1939 2,168,451

# UNITED STATES PATENT OFFICE

2,168,451

## SUPPORT FOR SEWING MACHINE TABLES

Max Rothfield, Brooklyn, N. Y.

Application April 10, 1937, Serial No. 136,036

13 Claims. (Cl. 311—13)

This invention relates generally to mountings for the legs of sewing machine tables, and particularly to an improved method of and means for securing the legs of the sewing machine tables to the floor.

In attaching sewing machine tables to the floor, as heretofore practiced, each leg of the table and treadle of the sewing machine was fastened to the floor by means of several screws. Where multiple sewing machine tables are employed, as in a factory, there are required an exceptionally large number of screws to attach the many tables and treadles to the floor. Inasmuch as the location of the legs depends on the length of the tables, and the tables differ in length, it is necessary for each new tenant on the premises to bore new holes in the floor in order to fasten thereto the legs of the tables. It will be apparent, therefore, that in the course of time the floor will become badly damaged.

Another disadvantage in known methods of attaching sewing machine tables to the floor is that the vibration of the floor caused by the machines during operation is so great, and the noise so objectionable, that the premises below and above the floor occupied by the factory are useful only for noisy factory operation.

The primary object of the present invention is to provide a means for supporting sewing machine tables which satisfies the following requirements: (1) Eliminates the necessity for numerous holes in the floor, and (2) reduces vibration and noise to a minimum.

Another object is to provide a support for a sewing machine table which is easily adjustable in position along with other tables, without the necessity of boring holes in the floor each time the table is moved relative to the other tables.

A further object is to reduce the cost of labor in installing a sewing machine plant by providing a means of support for the tables which is simple in construction and easy to install.

Essentially, the foregoing objects are achieved by providing a pair of parallel U-shaped sheet-metal rails to which the legs of the tables and the treadles of the machines are attached. Each rail may accommodate legs of several tables and is fastened to the floor by means of a screw in the center and at each end. Since the rails may have any desired length, each preferably about ten feet long, it will be evident that the number of holes necessary to attach the tables to the floor are considerably reduced. In fact, where the machines are heavy, the tables themselves will maintain the rails firmly in position and it is not necessary to employ any screws to fasten the rails to the floor. The rails are laid end-to-end and connected together by means of a short narrower U-shaped metal element which is placed within and overlaps the adjacent ends of the rails for a short distance. The table-legs are arranged to rest inside the rails on vibration and noise absorbent material, and are secured in position by clamps on both sides of the legs. These clamps are each held in position by means of a double headed pin arrangement which lies transversely of the U-shaped rail in holes stamped in opposite sides of the rail. To enable adjustment of the table legs to any desired position along the rails, holes are provided in the sides of the rails, spaced about one inch apart along the length thereof, for accommodating the clamps.

A feature of the invention resides in the use of these clamps for securing the table legs to the rails. The clamps are arranged to have their upper central portions dented to enable each clamp to be turned as a lever about a transverse pin adapted to lie in the dented part.

Other objects, features and advantages will appear in the following description, taken in conjunction with the drawing, wherein the same parts are represented by the same reference numerals.

In the drawing:

Fig. 1 is a perspective view of the improved rail supporting means of the present invention, showing the manner in which one or more sewing machine tables and their associated treadles are supported thereby;

Fig. 2 is a plan view illustrating the manner in which two rails are joined together;

Fig. 3 illustrates the end of a U-shaped rail of the invention;

Fig. 4 is a perspective view, partly cut away, of a portion of the arrangement of Fig. 1, showing in more detail how a table leg is supported on noise and vibration absorbers, and attached to the rail by clamps;

Fig. 5 illustrates the supporting brackets for the treadle of a sewing machine;

Fig. 6 illustrates the manner in which a pin fits into oppositely located holes in the sides of a rail; and

Fig. 7 is a vertical section of Fig. 5, taken along line 7—7 of Fig. 5.

Referring to Fig. 1 in more detail, there is shown a sewing machine table 1 of any desired length having pairs of duplicate legs 2, 2. Table 1 is designed to support a plurality of sewing

machines 3, 3, here shown in dotted lines. The legs of the tables are preferably made of metal and are mounted in parallel U-shaped sheet-metal rails 4, 4, in turn screwed into the floor 5 by means of carpenter screws or bolts 6, 6, one screw being located in the center of a rail and another at each end of the rail. The rails 4, 4 may have any desired length, although it is preferred that they be about ten feet long, and are linked to their next adjacent rails in the same straight line by means of a short U-shaped metallic section of rail 7 which is narrower than and placed within the rails 4, 4 so as to overlap for a short distance the ends of the adjacent rails 4, 4. Note Fig. 2. Section 7 has a hole stamped in the center thereof at the bottom for enabling a screw or bolt 6 to extend through it and through another hole in the rails below in order to fasten the ends of the rails 4, 4 to the floor. The ends of rails 4 are preferably each designed to have a semi-circular hole 8 (note Fig. 3) stamped therein, so that adjacent rails placed end-to-end cooperate to provide a substantially round opening for the screw in the short section 7 to extend through to the floor.

Rails 4, 4 are provided with upwardly tapering oval-shaped holes 9, 9 stamped in both sides along the length thereof, at regular intervals of about one inch. These holes are large enough at their widest part to allow the head 10 of a double-headed pin 11 to easily pass through it, and are designed, at their tapered narrow points, to hold the pin 11 fast to the rail when pressure forces the pin upwards. Because of the design of the holes 9, the double-headed pins 11 are easily inserted into the holes, and are able to grip the rails firmly when forced upward. Since the heads on the pins 11 are larger than the narrow tapered portion of the holes, the pins are prevented from slipping out of the holes. Note Fig. 6.

Pairs of brackets 12 and 13 are mounted at suitably spaced intervals on the rails 4, 4, for supporting the sewing machine treadles 14, each treadle in turn being connected to its associated sewing machine 3 by a pitman 15, as shown. Bracket 13 is provided with a substantially completely enclosed cylindrical lug 16 having a lug slot 17 extending lengthwise thereof for accommodating one end of the rock-shaft 19 of the treadle. The other end of the rock-shaft is adapted to rest on the semi-cylindrically shaped lug 18 of the bracket 12.

Fig. 4 shows, in detail, the manner in which each leg 2 of the table is mounted on the rails 4. The base of the leg 2 is arranged to rest directly on vibration-absorbent means 20, such as rubber or felt, placed in the trough of the rail. A lever-like clamp 21 on each side of the leg base securely fastens the leg to the rail 4. In order to prevent the vibrations of the table from being transmitted to the rail through the clamps, additional vibration-absorbent means 20 are placed between the top of the leg base and the clamps. The clamps thus insure a very secure attachment of the table legs to the rails, while the elastic medium 20 reduces vibration and noise to a minimum.

The lever-like clamp 21 comprises a strip of sheet metal or wood whose upper surface, preferably the central portion, is provided with one or more dents 22 designed to fit around the pin 11. The arrangement of the clamp is such that the screwing down of the machine screw 23 raises the end 24 of the clamp and lowers the end 25, the pin 11 acting as a fulcrum. By bending the clamp roughly to the form of a shallow S, greater leverage will be obtained. The provision of more than one dent in the clamp enables the making of slight adjustments in the position of the leg 2 without changing the position of the double-headed pin 11. To provide for such slight adjustments, the loosening or screwing up of the machine screw 23 lowers end 24 and raises the end 25. This enables the clamp to be moved under the pin 11 and permits the pin to rest in another dent of the clamp.

Figs. 5 and 7 show in more detail the manner in which treadle brackets 12 and 13 are attached to the rails. Each bracket extends on top across the legs of the U-shaped rail 4 and is provided with two small downwardly extending lugs 26 on the outer sides of and engaging the rail, for preventing the bracket from turning out of its proper position. A hook screw 27 whose lower end hooks around a pin 11 cooperates with a nut 28 to mount the bracket securely on the rail.

While a preferred embodiment has been illustrated and described, it should be understood that various modifications may be made in the form and arrangements of parts without departing from the spirit and scope of the invention.

What is claimed is:

1. Means for attaching a sewing machine table to the floor of a building, comprising a pair of U-shaped metal rails, said rails being secured to said floor at relatively widely spaced points, the sides of said rails being sufficiently wide to accommodate the legs of said table within the rails, clamps secured to said rails by means of pins passing through the side walls of said rails for attaching, solely by pressure, said legs to said rails, and vibration and noise absorbing material located between the bottoms of said legs and said rails and between said legs and clamps.

2. Means for attaching a sewing machine table to the floor of a building, comprising a pair of U-shaped metal rails, said rails being secured to said floor at relatively widely spaced points, the sides of said rails being sufficiently wide to accommodate the legs of said table within the rails, said rails having relatively closely spaced holes in both sides thereof extending regularly along the entire length thereof, a clamp for each leg of a table, and a pin for firmly securing each clamp to its associated rail, said pin being arranged and constructed to pass through a hole in each side of the rail.

3. Apparatus in accordance with claim 2, characterized in this that said holes are oval in form and taper upwards, said pin having a head at each end of such size as to pass freely through the wide portion of each hole.

4. Means for attaching a sewing machine table to the floor of a building, comprising a pair of U-shaped metal rails, said rails being secured to said floor at relatively widely spaced points, the sides of said rails being sufficiently wide to accommodate the legs of said table within the rails, a pair of clamps for attaching each leg to a rail, said clamps lying within the rail on opposite sides of the leg, and a pin passing through holes in the sides of the rail for holding each clamp fast to the rail.

5. In combination, a plurality of factory machine tables arranged in the same straight line, each table having at least one pair of parallel duplicate leg members, said leg members of said tables extending substantially in two straight lines, a pair of parallelly arranged U-shaped rails

for securing said legs to the floor, the bases of said legs resting within the sides of said rails, the sides of said rails being sufficiently wide to enable said legs to move freely therein, clamps for said legs, and pins passing through the side walls of said rails for securing said clamps to said rails.

6. In combination, a U-shaped rail, a table leg having a base located between the sides of said rail, and clamps on opposite sides of said base for attaching said leg to said rail, each of said clamps comprising a member having a dent in its upper surface, and a pin adapted to rest in said dent for holding said clamp fast to said rail, said pin extending through a hole in each side of said rail.

7. In combination, a U-shaped rail, a table leg having a base located between the sides of said rail, and clamps on opposite sides of said base for attaching said leg to said rail, each of said clamps being located within said rail below the free edges of the sides of the rail, said clamps each having a dent in its upper surface located transversely of said rail, and a pin adapted to rest in said dent for holding said clamp fast to said rail, said pin being secured at opposite ends to the sides of the rail.

8. In combination, a U-shaped rail, a table leg having its base portion located between the sides of said rail, a clamp for attaching said leg to said rail solely by pressure, vibration and noise absorbent material located between said leg and rail and between said clamp and leg, and means passing between the sides of said rail for fastening said clamp to said rail.

9. The combination defined in claim 7, characterized in this that said clamps each have the form of a shallow S.

10. In combination, a U-shaped rail, a table leg having a base portion adapted to rest within the sides of said rail, and a clamp for attaching said leg at said base portion to said rail, said clamp being constructed to function as a lever about its center portion, one end of said clamp resting on the base of said leg and the other end having adjustable means for raising or lowering same, and a pin located transversely of said rail and engaging the center portion of said clamp for holding said clamp in position on said rail, said pin being linked to the sides of said rail and functioning as a fulcrum for said clamp.

11. Means for attaching a sewing machine table to the floor of a building, comprising a pair of U-shaped metal rails, said rails being secured to said floor at relatively widely spaced points, the sides of said rails being sufficiently wide to accommodate the legs of said table within the rails, clamps for attaching, solely by pressure, said legs to said rails between the side walls thereof, means passing through the sides of said rails for firmly holding said clamps fixedly in position relative to said rails, and vibration and noise absorbing material located between the bottoms of said legs and said rails and between said legs and clamps.

12. In combination, a U-shaped rail having relatively closely spaced holes in both sides thereof extending regularly along the entire length thereof, said rail lying on a floor and having its sides extending upward, a table leg to be supported by and between the side walls of said rail, and means including a pin extending through a hole in each side of and held fast to both sides of said rail for attaching said leg to said rail.

13. In combination, a plurality of factory machine tables arranged in the same straight line, each table having at least one pair of parallel duplicate leg members on opposite sides of the table, a pair of parallel U-shaped metal rails spaced apart the width of said duplicate leg members, the sides of said rails being sufficiently wide to accommodate the legs of said table within the rails, a pair of clamps for attaching each leg to a rail, said clamps lying within the rail on opposite sides of the leg, and a pin passing through holes in the sides of the rail for holding each clamp fast to the rail.

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