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W. L. RUTAN.
MACHINE SUPPORT.
APPLICATION FILED MAR. 13, 1905.

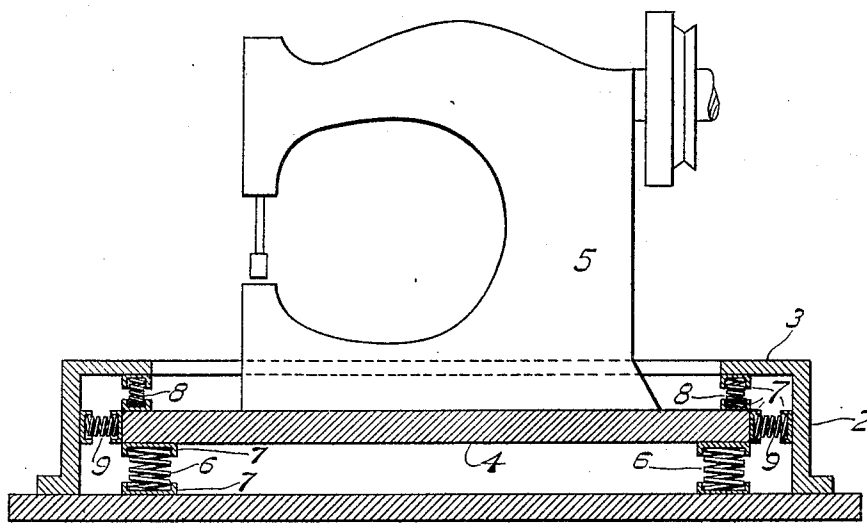


FIG. 1.

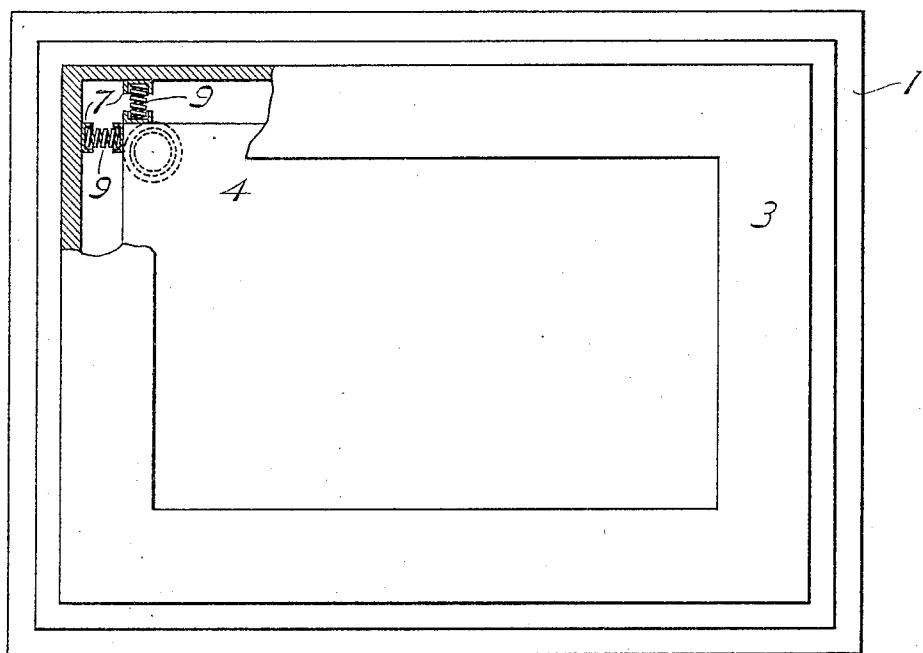


FIG. 2.

WITNESSES

Alfred H. Hildreth
Edward S. Day

INVENTOR

William L. Rutan
by his Attorneys
Phillips Van Orman & Kirk

UNITED STATES PATENT OFFICE.

WILLIAM L. RUTAN, OF BOSTON, MASSACHUSETTS.

MACHINE-SUPPORT.

No. 804,884.

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To all whom it may concern:

Be it known that I, WILLIAM L. RUTAN, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Machine-Supports; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to supporting devices for machinery.

The object of the present invention is to provide a supporting device upon which a machine in its entirety may be mounted, the supporting device acting to absorb the jar and vibration of the machine when in operation.

Heretofore it has been the general practice to mount machinery directly upon the floor of the building in which it is located, the legs or standards of the various machines being often secured to the floor by means of bolts or screws. In the case of machines having reciprocating and unbalanced parts, excepting, perhaps, those operating at a very low speed, the jar and vibration imparted by them to the floor and to the building is often excessive, especially where the building was not originally designed for machinery. Not only is this constant jar and vibration injurious to the building, but even when not excessive is objectionable to the occupants of the building, particularly when parts of the same are devoted to purposes other than manufacturing. The machine-support hereinafter described is designed to receive and to support a machine in its entirety and is so constructed and arranged that the vibrations of the machine mounted thereon are almost completely absorbed, and little if any vibration is imparted to the floor or to the building in which the machine is located, whether specially designed for machinery or not.

With these objects in view the present invention consists of the machine-support hereinafter described and claimed.

In the accompanying drawings, which illustrate a machine-support adapted for use with a sewing-machine, Figure 1 shows the machine-support in vertical section, while Fig. 2 shows it in top plan, a portion being broken away at one corner to illustrate more clearly the arrangement of the parts.

The subbase 1 of the machine-support is rec-

tangular in form and is provided near its edge with the vertical wall 2, having at its top the inwardly-extending flange 3. The base 4, upon which the machine 5 is mounted, corresponds in shape to the subbase 1, but is smaller and is supported at each corner by a large open spring 6, the ends of which are mounted in sockets 7, secured to the bottom of the base and to the top of the subbase, respectively. The size and strength of these springs 6 are determined by the weight of the machine the support is designed to carry, and in the case of very heavy machines it may be desirable to employ six or even eight of these springs. These springs are designed to permit vertical and horizontal movement of the base 4 relative to the subbase 1 and to thus absorb the vibrations transmitted to the base 4 by the machine 5. In the preferred form of the invention these springs are assisted by the auxiliary springs 8, one at each corner of the base and between the top of the base and the bottom of the flange 3 and acting in opposition to the larger springs 6, the combination of the two springs absorbing more effectively the vibrations of the base 4 and the machine 5. With many machines the vertically-acting springs alone will be sufficient to absorb the horizontal vibrations; but with some machines it will be desirable to provide additional springs, especially where the machine is driven by means of a tightly-stretched belt, in which case the horizontal springs 9 may be interposed between the edges of the base 4 and the vertical walls 2. A pair of these horizontal springs 9 are preferably provided at each corner, the two springs being at right angles, as shown in Fig. 2, thus subjecting the base to the action of a pair of opposed horizontal springs at the sides and ends.

Heretofore it has been proposed to avoid the jar and vibration imparted by certain classes of machines by providing yielding spring-supported bearings for the shaft which rotated at a high speed. It has also been proposed to suspend other machines from the ceiling by means of cords or wires having provision for a slight yielding. The present invention, however, differs from these prior arrangements in that it provides a support suitable for any type or class of machine and upon which the machine may be mounted and can be operated in the usual and ordinary manner.

Having thus described the invention, what is claimed is—

1. A machine-support, having, in combination, a base upon which the machine is mounted, a subbase, and springs interposed between the base and subbase constructed and arranged to permit horizontal movement of the base relative to the subbase, substantially as described.
2. A machine-support, having, in combination, a base, a subbase, and springs interposed between the base and subbase constructed and arranged to permit vertical and horizontal movements of the base relative to the subbase, substantially as described.
3. A machine-support, having, in combination, a base upon which the machine is mounted, a subbase, and springs interposed between the base and the subbase constructed and arranged to permit movement of the base relative to the subbase in all directions, substantially as described.
4. A machine-support, having, in combination, a base upon which the machine is mounted, a subbase, a plurality of vertically-disposed springs between the base and the subbase, and a plurality of pairs of opposed, horizontally-disposed springs between the base and the subbase, a portion of these pairs of

said springs being substantially at right angles to the remainder, substantially as described.

5. A machine-support, having, in combination, a base upon which the machine is mounted, a subbase, and a plurality of pairs of opposed, vertically-disposed springs between the base and the subbase, and a plurality of pairs of opposed, horizontally-disposed springs between the base and the subbase, a portion of said springs being substantially at right angles to the remainder, substantially as described.

6. A machine-support, having, in combination, a base, a subbase provided with a vertical wall having an inturned flange at its top, a plurality of vertically-disposed springs between the bottom of the flange and the top of the base and between the bottom of the base and the top of the subbase, and a plurality of pairs of opposed, horizontally-disposed springs between the wall and the four sides of the base, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM L. RUTAN.

Witnesses:

ALFRED H. HILDRETH,
FRED O. FISH.