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WORKTABLE FOR GRINDING AND SIMILAR MACHINES

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Fig. 1.

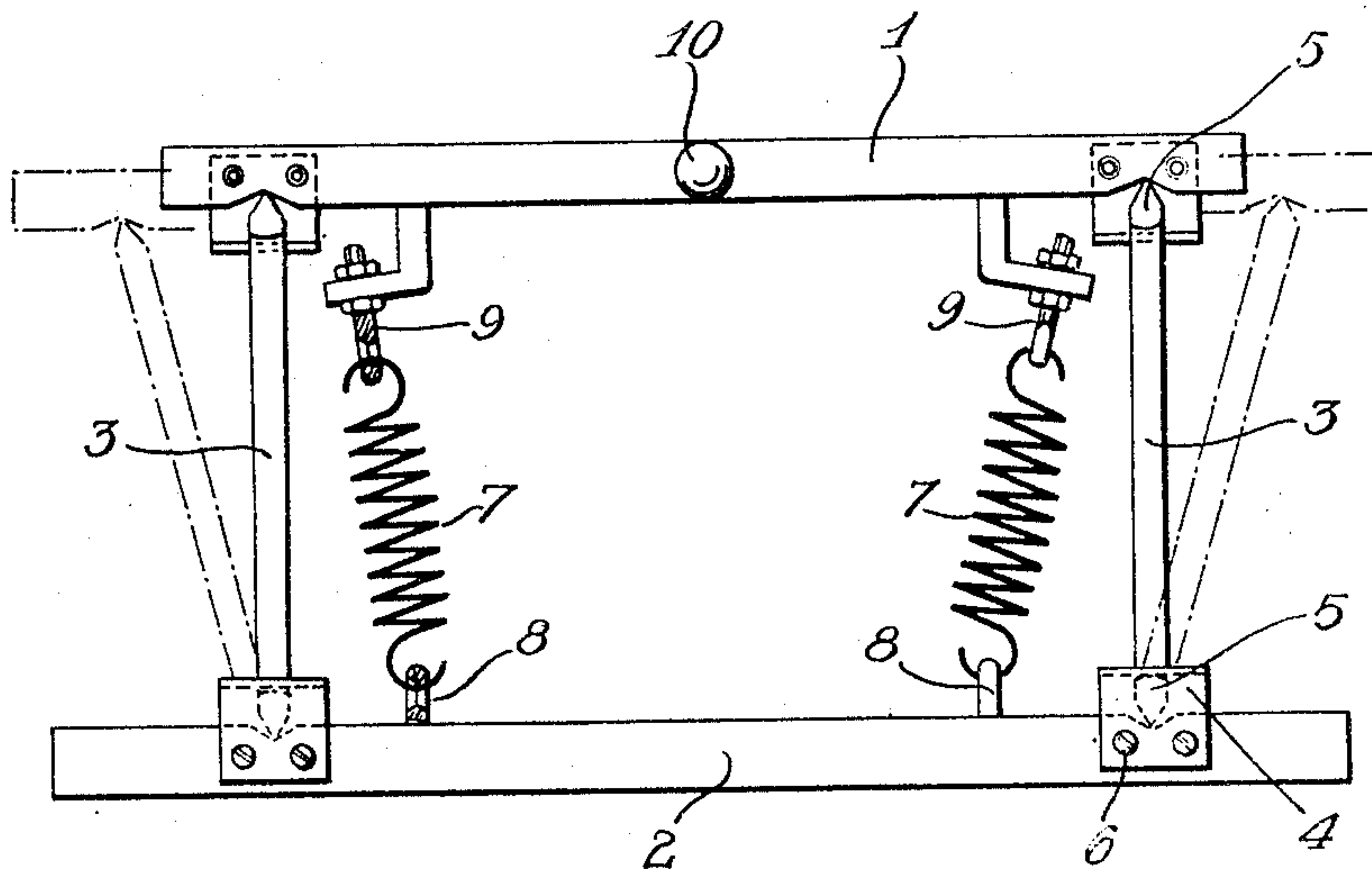
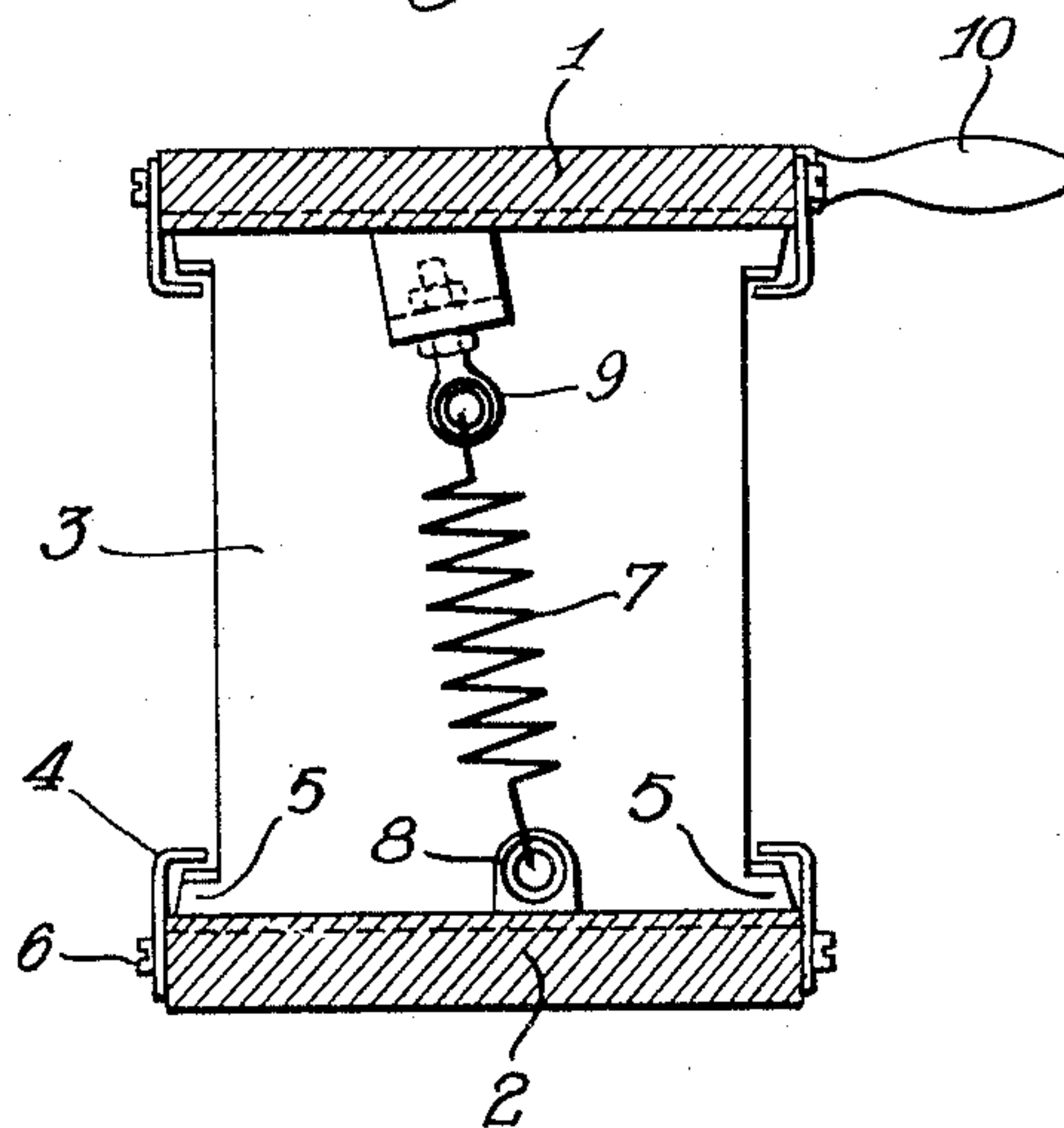


Fig. 2.



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WORKTABLE FOR GRINDING AND SIMILAR
MACHINES

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4 Claims. (Cl. 51—234)

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My present invention relates to a suspension device for a machine tool oscillating table and more particularly for the tool-carrying table of a sharpening machine.

It is based on the fact that modern metal working tools particularly those tipped with tungsten carbide, have to be presented to the action of the grinding wheel at very definite angles and have to have a reciprocatory movement of translation perpendicular to the trajectory of the grains of said wheel.

My present invention has the object to permit the control, by means of a minimum effort on the part of the operator, of the movement of translation of the tool-carrying table, said movement having the sole object to distribute heat and wear over the entire surface of the wheel without requiring any mechanical control.

With a view to the realisation of this object, the device according to the invention is characterised essentially in that the table rests on the base through the medium, on the one hand, of double rigid knife edge members, and on the other hand, of springs which are hooked to the base and to the table, for example by eyes and adjustable buckles on which the hooks of the springs oscillate.

In the practical realisation of the invention, the springs are placed obliquely in the longitudinal plane and in the horizontal plane.

Furthermore, the movement of the rigid knife edge members, which are usually guided in grooves provided in the table and base, is limited transversely by plates fixed to the table and base and bent over projections formed by the knife edge members.

The accompanying drawings show, by way of example, a device constructed according to the invention.

Figure 1 is a view in front elevation, and

Figure 2 is a view in cross section.

On the accompanying drawing, 1 denotes the oscillating table of a machine tool, for example a sharpening machine, and 2 the base on which the table 1 rests.

According to the invention, the table 1 rests on the base on the one hand by means of rigid double knife edge members 3, and on the other hand by means of springs 7.

The knife edge members 3 are guided in V-shaped grooves provided in the table and in the base, and their movement is limited transversely by plates 4 which are fixed to the table 1 and to the base 2, for example by screws 6. Said plates 4 and, in addition, bent over projections 5

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formed by the knife edge members 3 limit the transversal movement of the knife edge members 3.

The springs 7 are hooked at the bottom to the base by eyes 8 and at the top to the table 1 by means of adjustable buckles 9. The eyes 8 and buckles 9 permit the springs to oscillate.

As follows from the drawing, the springs 7 are placed obliquely both in the longitudinal plane and in the transverse plane.

Obliquity in the longitudinal plane has the effect of creating a position of equilibrium for the table in its middle position, as shown in Figure 1, and also of permitting its movement to the left and right at the cost of a very small effort, applied for example by a handle 10. The table thus tends always to return to its position of equilibrium; it oscillates like a pendulum and the maintenance of these oscillations demands only quite a negligible effort on the part of the operator.

The obliquity of the springs 7 in the transverse direction has the object of applying the knife edge members 3 always against the same plates 4, so as to take up play in a permanent manner.

To use my device, the work to be ground or sharpened is placed on the table 1 which is arranged across the face of the grinding wheel in the usual manner, but is not shown in the drawing. The handle 10, which is manipulated by the hand of the operator, is provided for shifting the table toward left and right, that is, toward and away from the grinding face of the wheel, so as to present the work to, or remove it from, the action of the grinding wheel. If need be, the same handle may be used to move the table transversally or parallel to the face of the wheel, but the latter movements are necessarily limited.

My device makes it possible for its operator to cause very desirable movement of the work, and to control the pressure of the work against the grinding face, merely by actuating the handle 10.

What I claim is:

1. Work table for grinding and similar machines, comprising a base, a table arranged above the base and adapted to oscillate, parallel platelike members, and springs, the base and table being provided on their inner sides with V-shaped grooves, the platelike members having at their lower and upper sides knife edges engaging said V-shaped grooves, said platelike members resting on the base and supporting the table, said springs being hooked to the base and table so that they extend obliquely with respect to a longitudinal

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vertical plane and a transversal vertical plane, these planes being assumed relative to the base.

2. The table according to claim 1, which further comprises means to adjust the tension of said springs.

3. The table according to claim 2, which further comprises means to limit transversal movements of the table.

4. Work table for grinding and similar machines, comprising a base plate, a table adapted to oscillate, parallel platelike members, tension springs, and means to limit transversal movements of the table, the base and table being provided on their inner sides with V-shaped grooves, said members having at their lower and upper sides knife edges engaging said V-shaped grooves, the platelike members resting on the base and supporting the table, said springs

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being fastened to the base plate and table so that they extend obliquely with respect to a longitudinal vertical plane and a transversal vertical plane, these planes being assumed relative to the base plate, said means consisting of abutment plates fastened to the sides of the base plate and table and adapted to engage the platelike members when moved transversally.

ADELIN ALFRED MATHIEU.

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