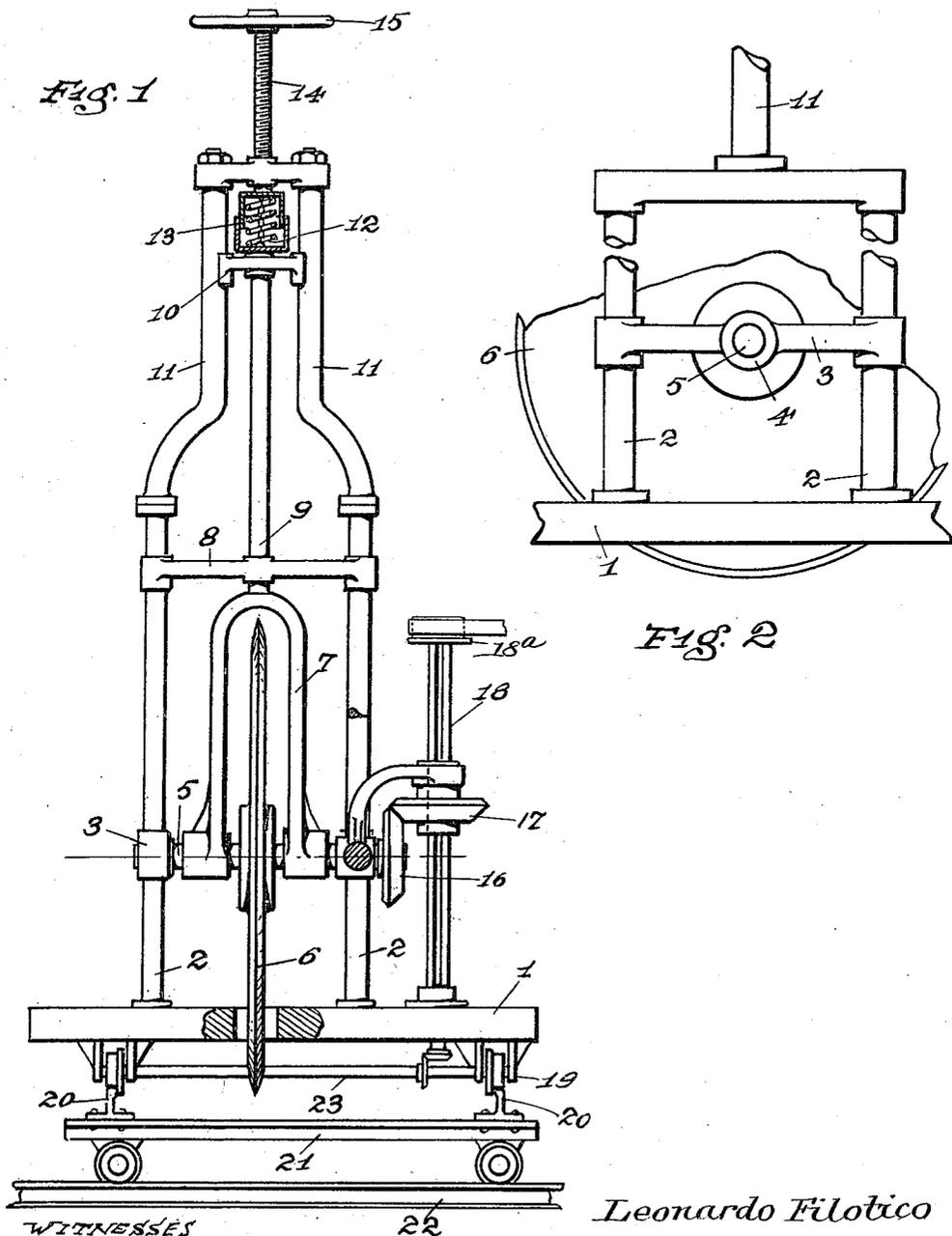


L. FILOTICO.
 STONE CUTTING MACHINE.
 APPLICATION FILED JAN. 15, 1916.

1,230,696.

Patented June 19, 1917.



WITNESSES
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LEONARDO FILOTICO, OF MANDURIA, ITALY.

STONE-CUTTING MACHINE.

1,230,696.

Specification of Letters Patent. Patented June 19, 1917.

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To all whom it may concern:

Be it known that I, LEONARDO FILOTICO, a subject of the King of Italy, and residing at Manduria, Province of Lecce, Italy, have invented certain new and useful Improvements in a Stone-Cutting Machine, of which the following is a specification.

The invention to be hereinafter described, relates to stone cutting machines.

In order to more clearly disclose the construction, operation and use of the invention, reference should be had to the accompanying drawing forming part of the present application. Throughout the several figures of the drawing like reference characters designate the same parts.

In the drawing:

Figure 1 is a front elevation of the machine complete.

Fig. 2 is a detail of the sliding bearings.

The main object of the invention is to produce a neat, compact, efficient, durable and easily and quickly operated machine, of simple construction, for cutting stone.

This machine is especially adapted for use in caves for cutting rocks in squared blocks.

Referring to the drawing in detail, 1 is a horizontal base supporting four vertical rods 2. On these rods are slidably mounted the horizontal member 3, the bearings 4 and the shaft 5. On this shaft is keyed a disk 6, said shaft being supported by a U-shaped member 7. The extremity of this member is guided by a head-cross 8 and connected to a vertical rod 9 and a smaller head-cross 10 sliding between the guides 11. To this head-cross is fixed a compression spring 12 inclosed in an extensible box 13. The top part of box 13 is connected with a pressure screw 14 operated by the hand wheel 15. The disposition of these different parts gives a vertical displacement of the disk 6, the stroke of this displacement being controlled by the screw 14.

The extension of the shaft 5 has a conical gear 16 in mesh with the conical gear 17, this gear being mounted on the vertical shaft 18 in such a manner as to be free to slide vertically and in the same time rotate with it. The shaft 18, is rotated by a belt and pulley 18^a.

The base 1 is mounted on a truck 19 moving on an axis parallel to the plane of rotation of the disk 6, the truck 19 runs on a couple of tracks 20 connected with a second

truck 21 running on the track 22 placed on the stone to be cut. By this arrangement, the disk 6 can be displaced in a direction normal to the direction of the advance of the truck 21, permitting to quickly displace the machine as soon as a cut has been made, and also to obtain a series of perfectly parallel cuts, and consequently of well cut sections of stone.

When the base is in position, power is transmitted by suitable means to the shaft 18, and by the gears 17 and 16 to shaft 5 and disk 6.

As soon as the disk begins to rotate, the member 7 is pushed down by the hand wheel 15 and screw 14, thus driving the disk into the stone. The depth of the cut can be regulated by the vertical descent of the U shaped member 7.

The horizontal advance of the disk can be obtained by suitable means between the shaft 18 and the axle 23 of the truck 19, these means being disposed in such a way as to obtain an advance proportional to the hardness of the stone to be cut.

What I claim is:

1. In a stone cutting machine, the combination of a base, standards extending upwardly from the base, a vertically adjustable carriage mounted on the standards, a horizontal shaft mounted in the carriage, a cutting disk fixed to the shaft and projecting through a slot formed in the base, means for rotating the shaft, a stem extending centrally from the carriage, a cross head mounted on and in alinement with the stem and engaging the standards, an adjusting screw in alinement with the stem, a spring interposed between the screw and the cross head, and means for feeding the base over the work.

2. In a stone cutting machine, the combination of a base, standards on the base, a carriage mounted on the standards, a cutting disk carried by the carriage, means for rotating the cutting disk, a tension device mounted on the standards acting to force the cutting disk toward the work, a manually operable screw coöperating with the tensioning device to maintain tension on the disk as it cuts into the work.

3. In a stone cutting machine, the combination of a base, standards mounted on the base, a carriage mounted on the standards, a horizontal shaft mounted in the carriage, a cutting disk mounted on the horizontal

shaft, a gear on the horizontal shaft, a vertical rotative shaft, a gear splined to the vertical shaft and meshing with the first mentioned gear, whereby to rotate the cutting disk, a stem extending centrally from the carriage, a cross head on the stem and engaging the standards, an adjusting screw in alinement with the stem at the top of the standards, and a spring interposed between the adjusting screw and the cross head to create tension on the cutting disk.

4. In a stone cutting machine, the combination of a movable truck, tracks arranged transversely of the truck, a base, a shaft on the base, wheels on the shaft and operating on the track, a gear wheel on the shaft, a vertical shaft on the base, a gear wheel on

the latter shaft which meshes with the gear wheel on the first mentioned shaft, standards on the base, a carriage mounted on the standards, a horizontal shaft mounted in the carriage and carrying a disk, a beveled gear wheel on the horizontal shaft, a beveled gear wheel on the vertical shaft which meshes with the beveled gear wheel on the horizontal shaft, a stem extending centrally from the carriage, and manually operated means engaging the stem to place the cutting disk under yielding tension while operating on the work.

In testimony whereof I have signed my name the 12th day of January, 1916.

ING. LEONARDO FILOTICO.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."