W. J. KOENIG.

BORING MACHINE.

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1,166,769.

Patented Jan. 4, 1916.

Fig. 1.

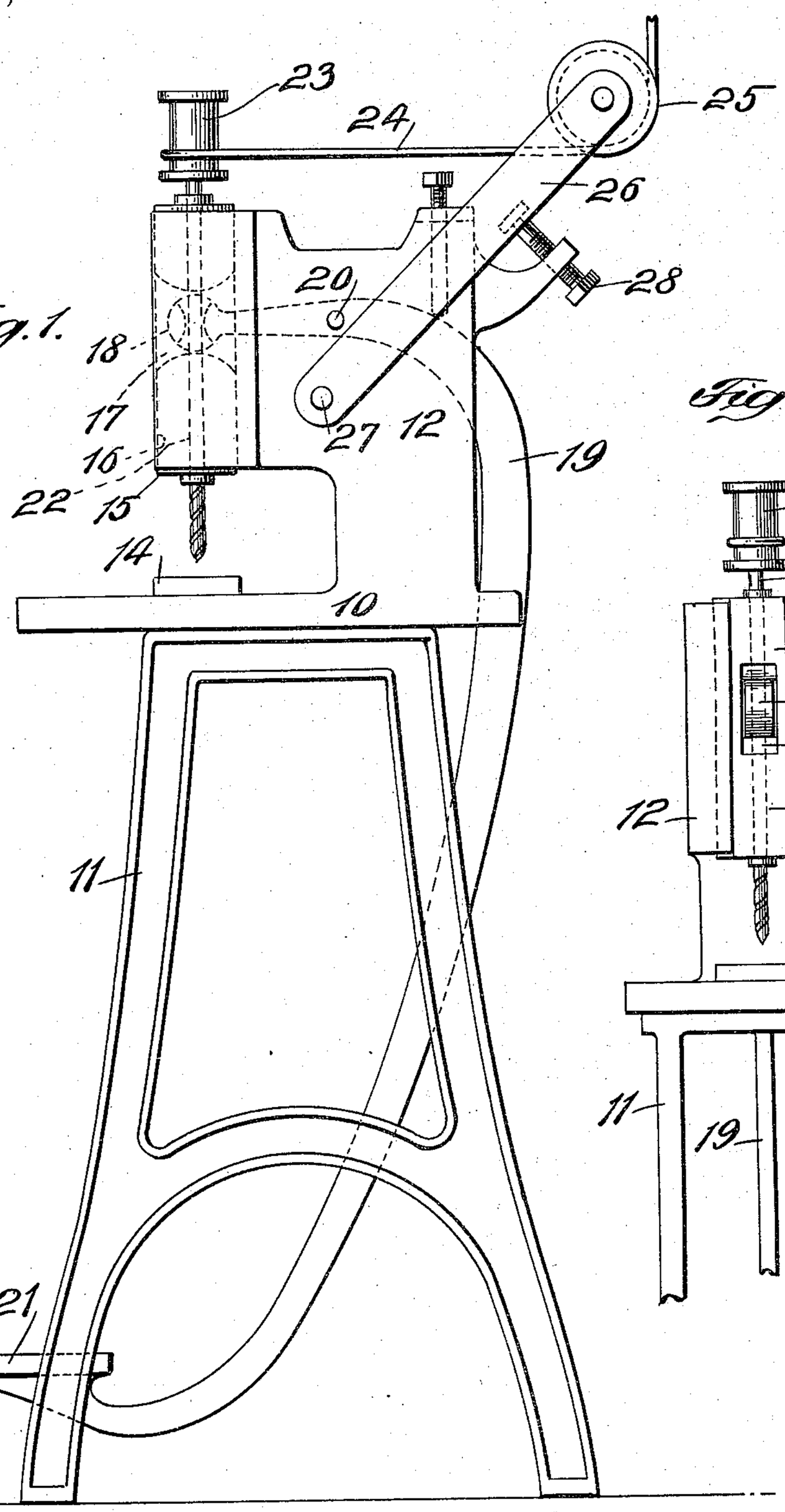


Fig. 2.




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# UNITED STATES PATENT OFFICE.

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## BORING-MACHINE.

1,166,769. Specification of Letters Patent. Patented Jan. 4, 1916.

Application filed February 8, 1913. Serial No. 747,065.

*To all whom it may concern:*

Be it known that I, WILLIAM J. KOENIG, a citizen of the United States, and a resident of the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Boring-Machines, of which the following is a description in such full, clear, and exact terms as will enable any person skilled in the art to which it pertains to make and use the same.

The invention relates to a machine, the object of which is repeatedly to bore holes in work of any sort and it is especially adapted to operations in which the work is held in the hand of a workman and the operation of the machine controlled by that workman.

To this end the invention resides in certain special features of construction and combination of parts which will be fully described hereinafter and particularly pointed out in the claim.

Reference is now had to the accompany drawings which represent the preferred embodiment of my invention.

In these drawings Figure 1 is a side view of the machine and Fig. 2 is a front view.

The machine has a base 10 which is preferably mounted on legs 11 which hold the base at an elevation convenient for the operator. A bracket 12 rises from the base and overhangs the forward side thereof. Under this overhanging part of the bracket is arranged a worktable 14. The overhanging part of the bracket carries a vertically operating slide 15, the same lying in a guideway 16 in the bracket. The said slide 15 is provided with a transverse opening as at 17 to receive the rounded end 18 of a foot lever 19. The curved upper end of the foot lever 19 extends through a suitable cavity in the bracket 12 and is mounted on a fulcrum pin 20 carried in the bracket. The lower portion of the lever curves downwardly and forwardly between the legs 11 and terminates in a treadle 21. By operating the treadle the slide 15 may be forced downward and the lever 19 is so hung that the gravity of the parts will return the slide 15 to a raised position.

My invention consists in rotatably mounting in the slide 15 a boring tool or bit 22, the sharpened lower end of which is directly above the worktable 14 so that the work held on the table may be reached by the tool. The tang-portion of the tool is held to rotate in the slide 15, but is prevented from axial motion independently thereof by suitable collars.

The tool 22 may be rotatably driven in various ways. One example of a means for so driving this tool is shown in the drawings and consists in a broad faced pulley 23 fastened to the upper end of the tang-portion of the tool 22. Around said pulley a belt 24 passes the runs of which are guided on two idler pulleys 25 from which pulleys the belt passes upward to the line shaft and drive pulley. Said idler pulleys 25 are carried on an arm or arms 26 pivoted at 27 to the bracket 12 and adjustable by a screw or other device 28 to regulate the tension of the belt.

In the operation of the machine the boring tool 22 rotates continuously and the operator places the pieces of work one after another on the table 14 in proper position for the operation of the boring tool. Each time that a piece of work is so positioned the operator depresses the treadle 21 and the tool is driven through the work. Upon releasing the treadle the gravity of the lever 19 lifts the tool from the work and allows the operation to be repeated.

Having thus described my invention what I claim is new and desire to secure by Letters Patent of the United States, is:

In a boring machine the combination with a framing having means to support the work and a bracket overhanging the same, a vertically reciprocal slide in said bracket over the work supporting means and provided with a transverse opening, a treadle lever fulcrumed on the framing and one end thereof engaged with the slide in the opening thereof to operate the same, a rotary boring tool mounted in the slide extending through the lever and slide, and means continuously to rotate said tool.

In testimony whereof I have hereunto signed my name in the presence of two witnesses.

WILLIAM J. KOENIG.

Witnesses:
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