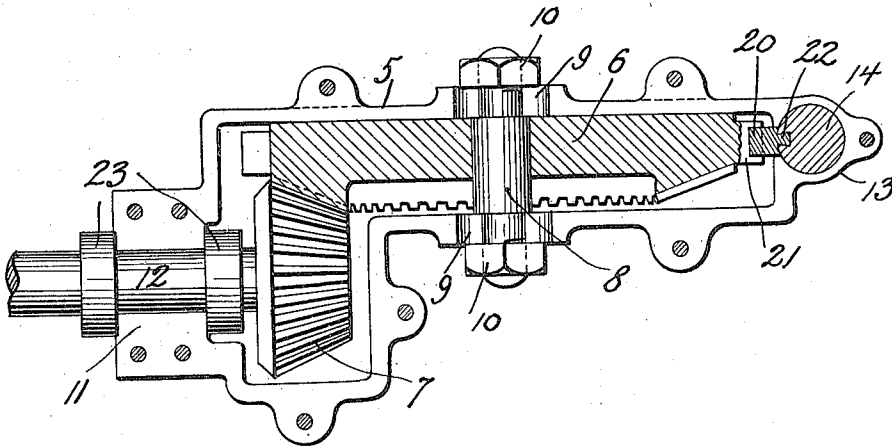
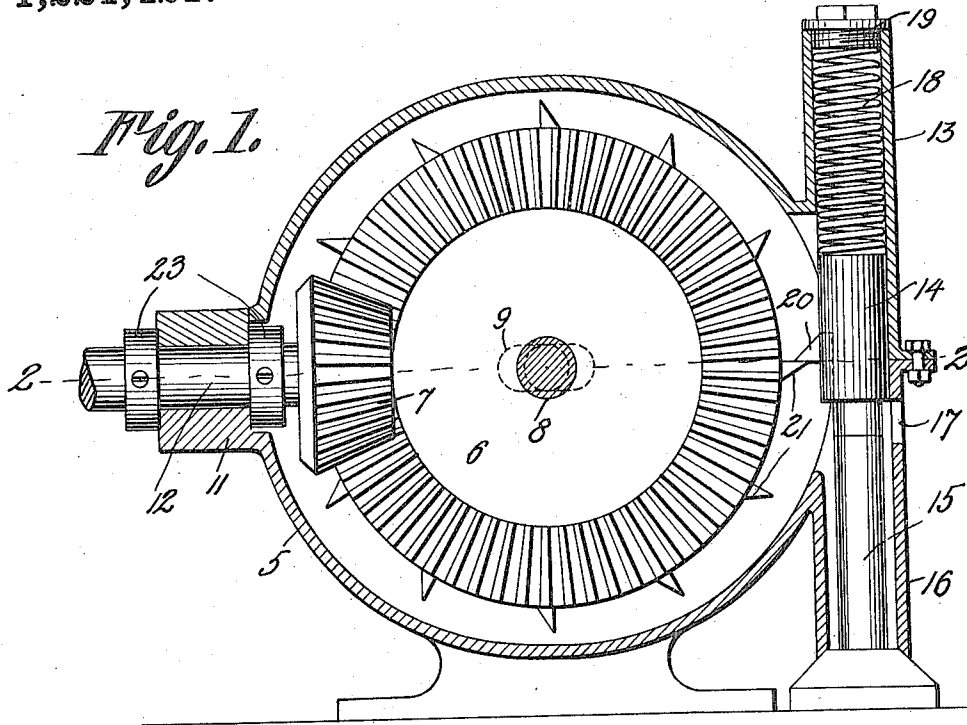


G. F. CROSIAR.
POWER HAMMER.
APPLICATION FILED APR. 17, 1916.

Patented Apr. 3, 1917.

1,221,421.



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GLENN F. CROSIAR, OF JOLIET, ILLINOIS.

POWER-HAMMER.

1,221,421.

Specification of Letters Patent.

Patented Apr. 3, 1917.

Application filed April 17, 1916. Serial No. 91,653.

To all whom it may concern:

Be it known that I, GLENN F. CROSIAR, a citizen of the United States, residing at Joliet, in the county of Will and State of Illinois, have invented new and useful Improvements in Power-Hammers, of which the following is a specification.

This invention relates to that class of power hammers having a sliding head, and the invention has for its object to provide a novel and improved power hammer of the class in which the sliding head is actuated by tappets and a spring, the latter being arranged to actuate the head to deliver the blow.

The invention also has for its object to provide a simple and efficient means for varying the stroke and the force of the blow.

With the objects stated in view, the invention consists in a combination and arrangement of parts to be hereinafter described and claimed, and in order that the same may be better understood, reference is had to the accompanying drawing forming a part of this specification.

In the drawing Figure 1 is a side elevation of the device with the housing thereof shown in section, and Fig. 2 is a horizontal section on the line 2—2 of Fig. 1.

Referring specifically to the drawing, 5 denotes a housing which is suitably shaped to inclose a tappet wheel 6 and a bevel pinion 7. The tappet wheel is in the form of a bevel gear, the same being mounted on a shaft 8 supported in bearing slots 9 in the opposite side walls of the housing, the shaft being adjustable in these slots for a purpose to be presently described, and being fixed in adjusted position by nuts 10. At one end of the housing is a bearing 11 for the shaft 12 of the pinion 7, said shaft extending from the housing and being provided with suitable operating means, which latter need not be illustrated as they form no part of the present invention. The other side of the housing has a tubular guide 13 for a sliding hammer head 14,

and below this guide and the hammer head is an anvil 15 which is inclosed by a tubular extension 16 of the housing in line with the guide 13. The inclosure 16 of the anvil 15 has an opening 17 through which the top or working face of the anvil is exposed so that the work may be placed thereon and removed.

Back of the hammer head 14, the guide 13 incloses a stout coiled spring 18 which bears against the hammer head and serves to force the same in a direction to deliver the blows. The upper end of the spring abuts against a screw plug 19 closing the corresponding end of the guide tube.

The hammer head 14 has a projecting side abutment 20 which extends into the path of the tappets 21 on the periphery of the gear wheel 6. When the gear wheel 6 is in motion, the tappets 21, one after the other, strike the abutment 20 and retract the hammer head 14 against the tension of the spring 18. As soon as the tappets 21 clear the abutment 20, the hammer is released, whereupon the spring 18 forces it downward toward the anvil 15 to deliver a blow to the work supported on the latter.

The abutment 20 has a dovetailed tenon 22 seating in a corresponding mortise in the side of the hammer head 14.

In order to vary the stroke of the hammer head 14 and the force of the blow delivered thereby, the gear wheel 16 is adjustable toward and from the hammer head, the bearing slots 9 extending in the direction of the latter. When the gear wheel is set farther back from the hammer head, the tappets 21 clear the abutment 20 sooner and the length of the stroke of the hammer is correspondingly reduced. This also reduces the extent to which the spring 18 is compressed, and hence the force of the blow is less.

In order that the pinion 7 may remain in mesh with the gear wheel 6 when it is shifted as hereinbefore described, the shaft 12 is provided with set collars 23 located at the ends of the bearing 11. Upon loosening

these collars, the shaft 12 may be shifted in the direction of its length to keep the pinion in mesh with the gear wheel.

I claim:—

- 5 A power hammer comprising a sliding hammer head, a guide for the hammer head, a bevel gear having tappets on its periphery, a side abutment on the hammer head extending into the path of the tappets, a

shaft carrying the bevel gear, a support for 10 the shaft having a slot in which the shaft is adjustably mounted, said slot extending in a direction transverse to the hammer head, means for locking the shaft in the slot, and a bevel pinion in mesh with the 15 bevel gear for driving the same.

In testimony whereof I affix my signature.

GLENN F. CROSIAR.

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