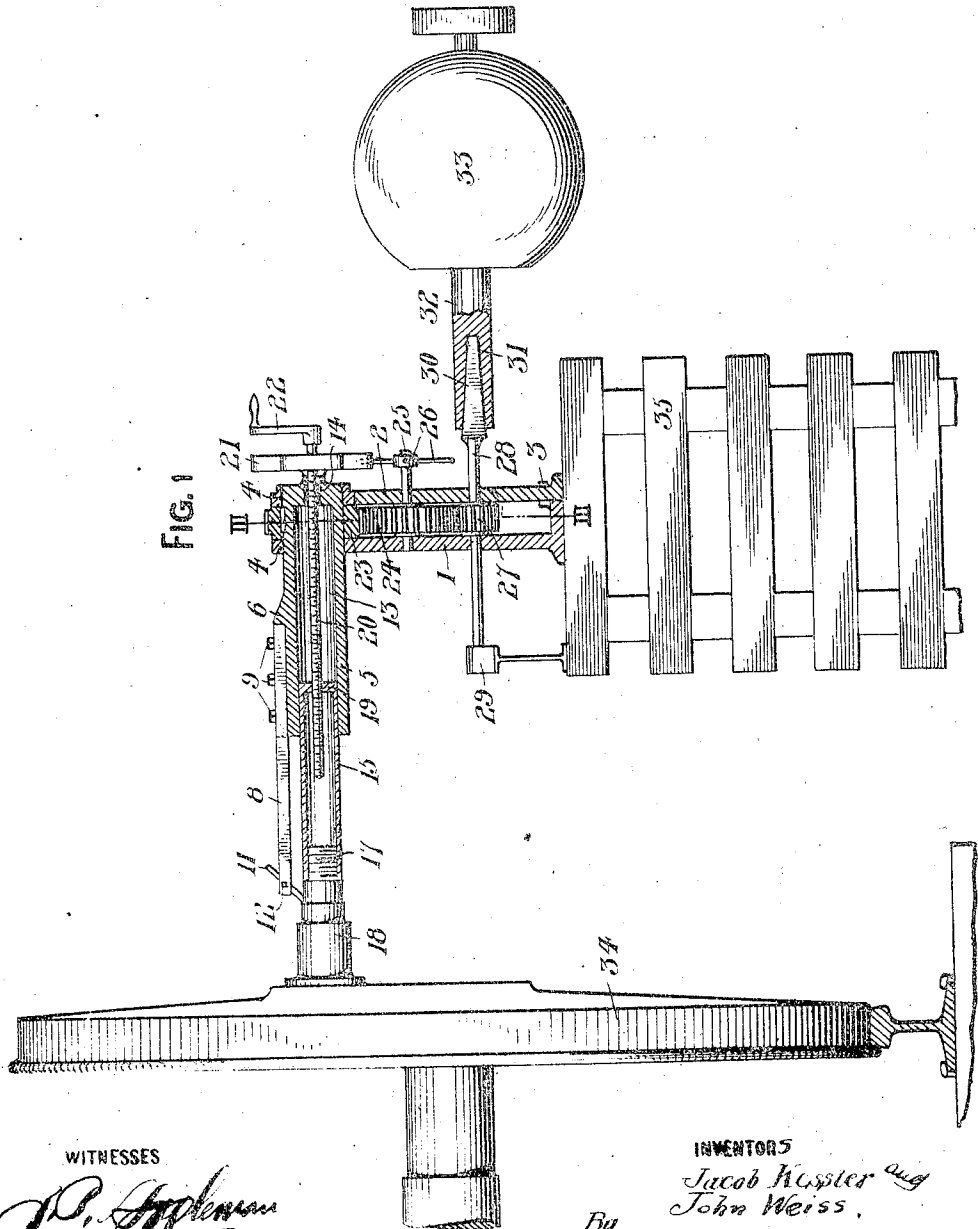


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MACHINE FOR TURNING CRANK PINS.
APPLICATION FILED NOV. 23, 1910.

1,015,188.

Patented Jan. 16, 1912.

2 SHEETS—SHEET 1.



WITNESSES

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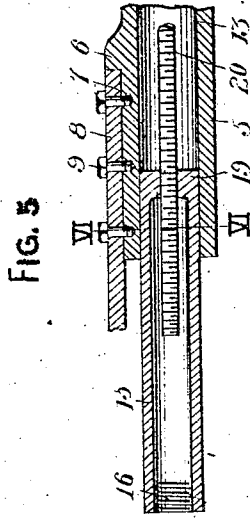


FIG. 6

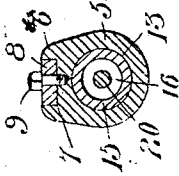


FIG. 3

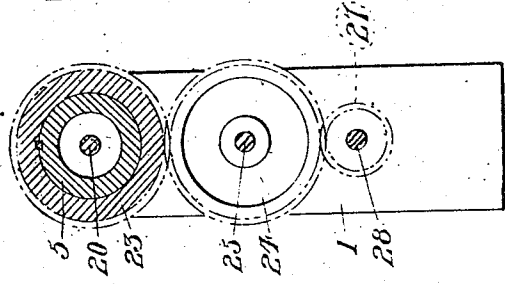


FIG. 2

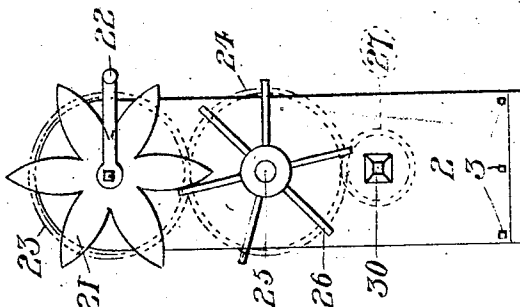
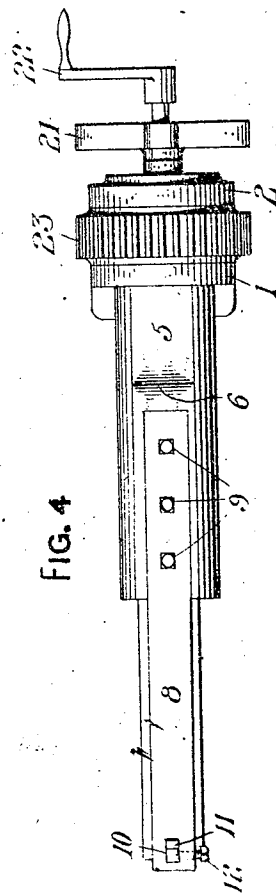


FIG. 4



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UNITED STATES PATENT OFFICE.

JACOB KESSLER AND JOHN WEISS, OF PITTSBURGH, PENNSYLVANIA.

MACHINE FOR TURNING CRANK-PINS.

1,015,188.

Specification of Letters Patent.

Patented Jan. 16, 1912.

Application filed November 23, 1910. Serial No. 593,811.

To all whom it may concern:

Be it known that we, JACOB KESSLER and JOHN WEISS, citizens of the United States of America, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Machines for Turning Crank-Pins, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to a turning machine especially designed for turning the wrist or crank pins of the drive wheels of locomotives or stationary engines, and the primary object of the invention is to provide a machine of the above type that will be portable, strong and durable, easy to operate and efficient for the purposes for which it is intended.

In accomplishing the above object, we first aim to provide a machine that is portable and easily placed in position to turn the surface of a pin without necessitating the removal of the drive wheel from the locomotive or the placing of the locomotive in a round-house or machine shop, it being only necessary to remove the drive bar and its bearings, place the machine in position, turn the pin and then replace the drive bar in its bearings, the locomotive being again ready for service. In the second place, the machine is provided with an automatic feeding device or a hand feeding device, either of which can be used for accurately turning the wrist or crank pin of the drive wheel.

These objects will be better understood when reference is had to the drawings and structural details to be hereinafter specifically described and then claimed.

In the drawings:—Figure 1 is a longitudinal sectional view of a turning machine set up for operating upon a wrist or crank pin, Fig. 2 is an end view of the machine, Fig. 3 is a vertical sectional view taken on the line III—III of Fig. 1, Fig. 4 is a plan of the machine, Fig. 5 is an enlarged longitudinal sectional view of a portion of the same, and Fig. 6 is a cross sectional view taken on the line VI—VI of Fig. 5.

A machine in accordance with this invention comprises two standards 1 and 2 having the lower ends thereof connected by bolts 3 or other fastening means. The standards 1 and 2 are arranged in parallelism and have the upper ends thereof provided with longitudinally alining openings

4. Revolvably mounted in said openings is a cylindrical tool holder 5, said holder having the outer end thereof provided with a longitudinal enlargement 6 cut away to provide a seat 7 for an extension bar 8, said bar being secured in the seat 7 by screw bolts 9 or other fastening means. The outer end of the extension bar 8 has an opening 10 for a turning tool or bit 11, said tool or bit being fixed within the opening 10 by a set screw 12. The tool holder 5 is provided with a longitudinal bore 13, the forward end of said bore being open and the rear end thereof closed with the exception of a small opening 14. Extending into the bore 13 is a tubular guide 15, said guide having the forward inner walls thereof screw threaded, as at 16, to screw upon the threaded spindle 17 of a wrist or crank pin 18. The tubular guide 15 has the rear end thereof closed, as at 19 and provided with a threaded opening for a feed screw 20, said feed screw extending rearwardly through the opening 14 and having the end thereof provided with a star wheel 21 and a detachable crank 22.

Keyed or otherwise mounted upon the tool holder 5 between the standards 2 and 3 is a gear wheel 23 meshing with a gear wheel 24 mounted upon a shaft 25 journaled in the standards 1 and 2, said shaft having one end thereof protruding through the standard 2 and provided with an actuating wheel 26 for the star wheel 21, said actuating wheel comprising a hub having radially disposed spokes adapted to impinge the radially disposed curved arms of the star wheel 21.

Meshing with the gear wheel 24 is a small gear wheel 27 mounted upon a shaft 28 journaled in the standards 1 and 2 and in an additional bearing 29 provided on the lower end of the shaft 28. The forward end of the shaft 28 is provided with a tapering shank 30 and this shank is adapted to extend into a socket 31 provided therefor in the end of the armature shaft 32 of a portable electric motor 33.

In order that the machine can be placed in position to turn the wrist or crank pin 18 without removing the drive wheel 34 from the engine, a suitable support 35 is arranged in proximity to the wheel 34 to support the standards 1 and 2 and the additional bearing 39. After the tubular guide 15 has been connected to the threaded spindle 17, the extension bar 8 and the bit 11 placed in

position, the screw 20 can be manually rotated by the crank 22 to properly position the bit 11 for turning the pin 18. The portable motor 33 can then be placed in engagement with the shaft 28, the motor started and through the medium of the gears 27, 24 and 23, the tool holder 5 will be revolved and automatically fed forward through the medium of the actuating wheel 26, the star wheel 21 and the screw 20. The standards 1 and 2 will gradually creep forward upon the support 35 as the bit 11 advances upon the pin 18, this pin in Fig. 1 of the drawings having been shown as partly turned.

15 The portable motor 33, which is supported by the operator of the machine, has simply been shown as one source of power for operating the shaft 28, and it is obvious that a flexible shaft from a suitable source of power could be used for the same purpose as the motor.

What we claim is:—

1. A crank pin turning machine comprising a guide fixedly engaging with the crank pin, a rotatable tool carrying element surrounding the guide, a feed screw extending in said element and engaging with the guide, means whereby said element is shifted longitudinally of the guide when the feed screw is revolved, a crank for manually revolving

the feed screw, a star wheel carried by the screw and interposed between said element and the crank, and a rotatable actuating wheel provided with spokes adapted to engage the arms of the star wheel for intermittently revolving it thereby rotating the screw.

2. A crank pin turning machine comprising a guide fixedly engaging with the crank pin, a rotatable tool carrying element surrounding the guide, a feed screw extending in said element and engaging with the guide, means whereby said element is shifted longitudinally of the guide when the feed screw is revolved, a crank for manually revolving the feed screw, a star wheel carried by the screw and interposed between said element and the crank, and a rotatable actuating wheel provided with spokes adapted to engage the arms of the star wheel for intermittently revolving it thereby rotating the screw, said actuating wheel arranged below said star wheel.

In testimony whereof we affix our signatures in the presence of two witnesses.

JACOB KESSLER.
JOHN WEISS.

Witnesses:

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