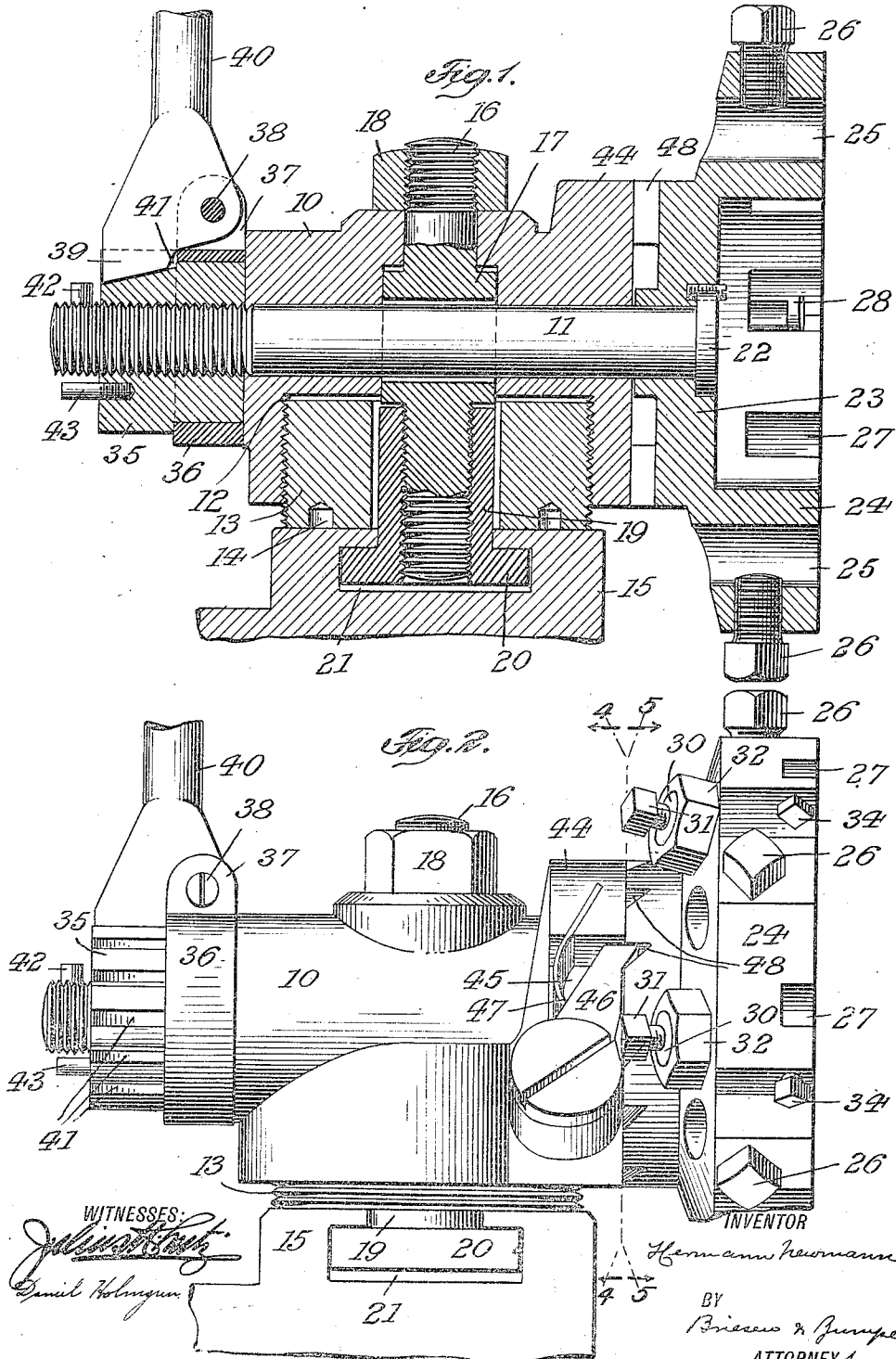


H. NEWMANN.
ATTACHMENT FOR ENGINE LATHES.
APPLICATION FILED FEB. 10, 1912.

1,031,956.

Patented July 9, 1912.

2 SHEETS—SHEET 1.



WITNESSES:
John H. ...
Samuel Holmgren

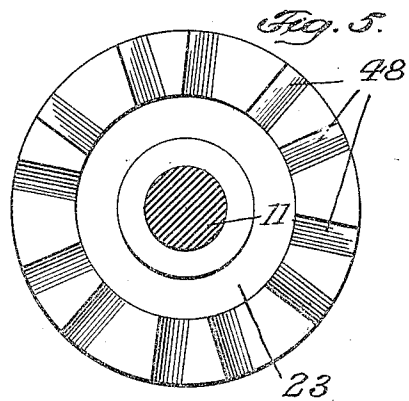
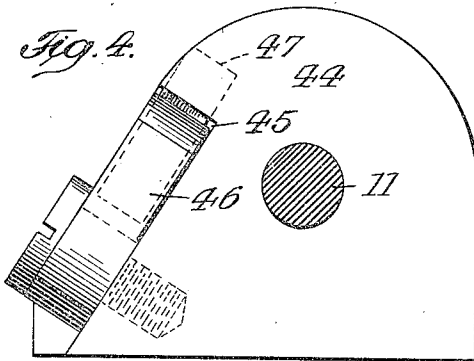
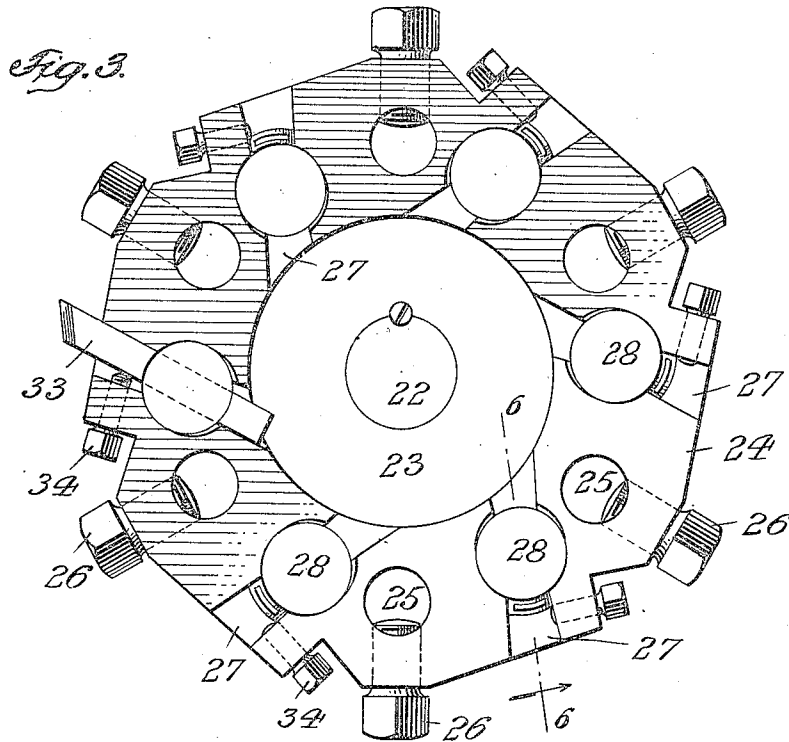
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Hermann Neumann
BY
Briesau & Junge
ATTORNEYS.

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2 SHEETS—SHEET 2.



WITNESSES:
Julius H. [Signature]
Daniel Holmgren.

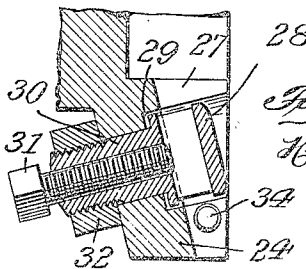


Fig. 6. INVENTOR,
Hermann Neumann
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UNITED STATES PATENT OFFICE.

HERMANN NEWMANN, OF NEW YORK, N. Y.

ATTACHMENT FOR ENGINE-LATHES.

1,031,956.

Specification of Letters Patent.

Patented July 9, 1912.

Application filed February 10, 1912. Serial No. 676,769.

To all whom it may concern:

Be it known that I, HERMANN NEWMANN, a citizen of Germany, residing at New York city, county and State of New York, have
5 invented a new and Improved Turret Attachment for Engine-Lathes, of which the following is a specification.

This invention relates to a turret attachment of novel construction, more particularly adapted to be secured to the slide rest of an engine lathe. The turret attachment may be readily centered opposite the lathe spindle, and carries different groups of tools which are secured in position in a novel
10 manner and are adapted to be readily brought into their working position.

In the accompanying drawing: Figure 1 is a vertical section of a turret attachment embodying my invention; Fig. 2 a side elevation thereof; Fig. 3 a face view; Fig. 4
20 a section on line 4—4, Fig. 2, looking to the left; Fig. 5 a section on line 5—5, Fig. 2, looking to the right, and Fig. 6 a section on line 6—6, Fig. 3.

25 A block 10 of approximately cylindrical form is provided with an axial bore adapted to accommodate a horizontal spindle 11 that extends at both ends a distance beyond the block. At its bottom, block 10 has a threaded recess 12 engaged by a correspondingly threaded annulus 13 which is provided with
30 spanner holes 14 and is supported upon the slide rest 15. At right angles to spindle 11 there extends through block 10, a screw 16 having a central aperture or eye 17 of such a size as to freely accommodate the spindle. The upper shank of screw 16 passes outwardly through a contracted neck of block
35 10 and carries a nut 18. The lower shank of the screw is engaged by a threaded sleeve 19 loosely fitted within annulus 13 and provided with a lower downwardly extending head 20 that is received by the longitudinal groove 21 of slide rest 15. If spindle 11
40 is to be raised or lowered, nut 18 is first slackened, so as to lower screw 16 and loosen the hold of head 20 on slide rest 15, such movement of the screw being permitted owing to the play of spindle 11 in aperture
45 17. The entire device is now drawn out of the slide rest, sleeve 19 and annulus 13 are turned to raise or lower block 10 to the extent desired, the device is refitted to the slide rest and nut 18 is tightened up.

50 The forward end of spindle 11 carries a collar 22 countersunk in the back 23 of a

cap-shaped tool carrier or head 24 which is fast on the spindle and rotatable therewith. Head 24 is provided with means for holding
two different groups of tools, such means
60 alternating with each other and being adapted to present the tools respectively in parallelism and at an inclination to the spindle axis. The first named means comprise a series of cylindrical bores 25 arranged in
65 a circle and extending in an axial direction, each bore being tapped for the reception of a clamp screw 26. The second named means comprise a series of surface grooves 27
70 formed intermediate bores 25 and extending outwardly at an obtuse angle to the spindle axis. Each groove 27 is formed with flaring outer and inner ends and with a circular section intermediate said ends. This circular section accommodates the transversely
75 bored head 28 of a tool holder, said head extending into a recess 29 communicating with groove 27 and having a slant which corresponds to that of the groove. The tubular shank 30 of the tool holder extends
80 obliquely backward through head 24 and is provided with an inner thread engaged by a clamp screw 31 adapted to impinge against the shank of the tool fitted into the bore of head 28. The outer exposed end of shank
85 30 is likewise threaded for the reception of a jam nut 32. To insert a tool 33, this nut is slackened, head 28 is advanced out of recess 29, the tool shank is inserted into the head and tightened up by screw 31 and then
90 nut 32 is manipulated to draw the head back into the recess and jam the exposed portions of the shank against the base of groove 27. Set screws 34 extending through head 24
95 at an angle to grooves 27 take up the strain on the tools and permit the latter to be adjusted from time to time as the tool bits wear off, the necessary lateral play of the tool shanks during this manipulation being
100 permitted by the flaring ends of the grooves.

Means are provided for giving to spindle 11, an axial turn, whenever a new tool is to be presented to the work. These means consist of a clamp nut 35 fitted upon the rearwardly protruding threaded end of the spindle and engaging the rear side of block 10.
105 The inner or forward section of this nut is encompassed by a freely rotatable ring 36 having bearings 37 to which is pivoted at 38 a dog 39 having handle 40. This dog is adapted to engage either one of a plurality
110 of transverse grooves 41 formed in the outer

or rear section of nut 35. The extreme outer end of spindle 11 carries a radial pin 42 which is adapted to engage an axially disposed pin 43 of nut 35, so that the movement of the latter may be transmitted to the former.

At its forward end, block 10 is provided with a flange 44 notched as at 45 for the accommodation of a forwardly extending pawl 46 influenced by a spring 47. This pawl is adapted to engage either one of a series of notches 48 formed in the back 23 of head 24, said notches corresponding in number and spacing to the different tool holding means 25, 27 formed in said head.

Whenever a different tool is to be placed into the operative position, dog 39 is turned sidewise by handle 40 to slacken nut 35. The dog is then thrown out of engagement with the nut and the latter is manually turned to the extent desired to impart a corresponding rotation by pins 43, 42 to spindle 11 and consequently to head 24, the proper alinement of the tool being insured by the engagement of pawl 46 with the notch 48 corresponding to said tool. After the desired change has been effected, nut 35 is again tightened up to lock the head in the position to which it has been set.

I claim:

1. A turret for lathes comprising a block, a spindle journaled therein, a tool-carrying head secured to the spindle, a screw extending through the block and having an eye that accommodates the spindle, and a threaded sleeve engaging the screw, said sleeve having a head adapted to engage a slide rest.

2. A turret for lathes comprising a block, a spindle journaled therein, a tool-carrying head secured to the spindle, a screw extending through the block and having an eye adapted to loosely accommodate the spindle and permit a play of the spindle within the eye, a nut carried by one end of the screw, a threaded sleeve engaging the other end of the screw, and a head on said sleeve that is adapted to engage a slide rest.

3. A turret for lathes comprising a block, a spindle journaled therein, a threaded annulus engaging the block, a screw extending through the block and having an eye adapted to accommodate the spindle, a nut car-

ried by one end of the screw, a threaded sleeve engaging the other end of the screw and encompassed by the annulus, said sleeve being provided with a head adapted to engage a slide rest.

4. A turret for lathes comprising a block, a spindle journaled therein, a head carried by the spindle, a plurality of grooves formed in the head and inclined at an obtuse angle to the spindle axis, recesses in the head that open into said grooves, a plurality of apertured tool holders accommodated within said grooves and projecting rearwardly into the recesses, and means for locking said tool holders within said recesses.

5. A turret for lathes comprising a block, a spindle journaled therein, a head carried by the spindle, a plurality of grooves formed in said head and having flaring ends and circular central sections, recesses communicating with said central sections, a plurality of apertured tool holders engaging said central sections and adapted to enter the recesses, and means for locking said tool holders within said recesses.

6. A turret for lathes comprising a block, a spindle journaled therein, a head carried by the spindle, a plurality of grooves formed in said head and having flaring ends and circular central sections, recesses communicating with said central sections, a plurality of apertured tool holders engaging said central sections and adapted to enter the recesses, means for locking said tool holders within said recesses, and a plurality of set screws extending through the head at an angle to the grooves.

7. A turret for lathes comprising a block, a spindle journaled therein, a screw extending through the block and having an eye that accommodates the spindle, a threaded sleeve that engages the screw and is adapted to be engaged by a slide rest, a head secured to the spindle and having a plurality of tool holders, and means for clamping the spindle to the block.

HERMANN NEWMANN.

Witnesses:

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KATHERYNE KOCH.