(No Model.) 2 Sheets—Sheet 1.

J. HARTNESS.

TURRET LATHE.

No. 556,415. Patented Mar. 17, 1896.

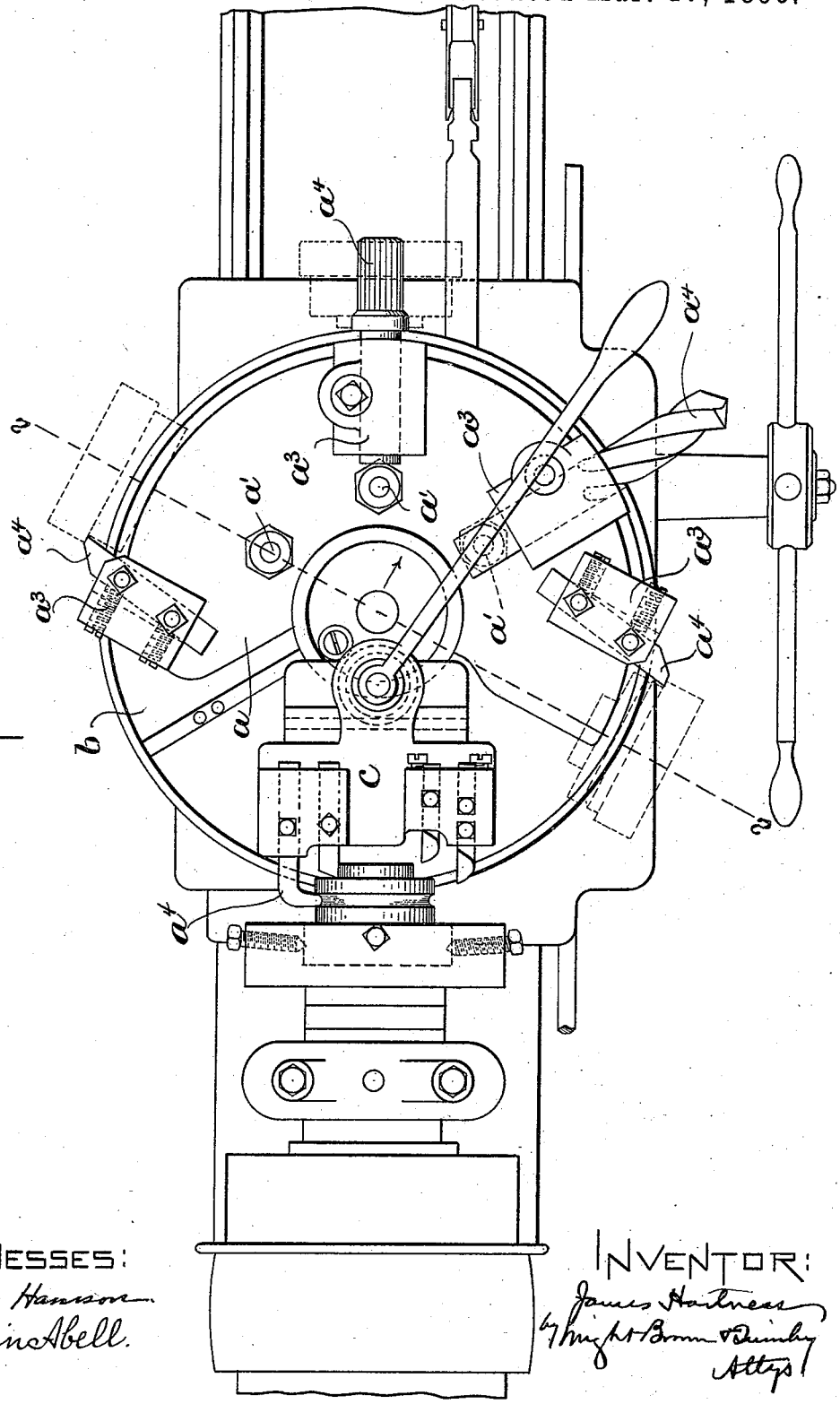

FIG. 1.

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(No Model.) 2 Sheets—Sheet 2.

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FIG. 3.

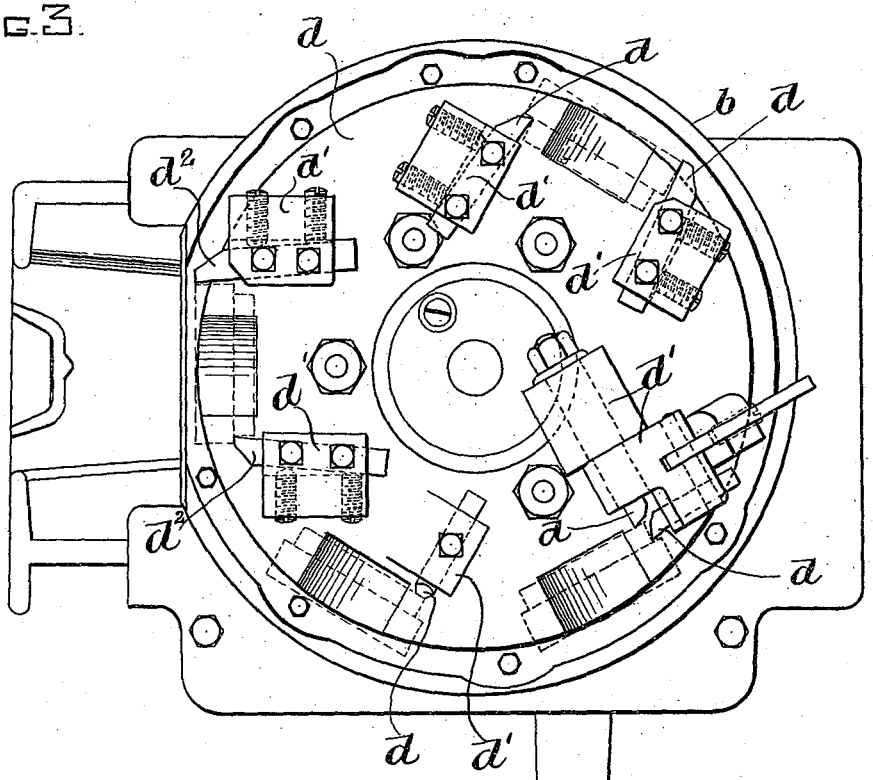
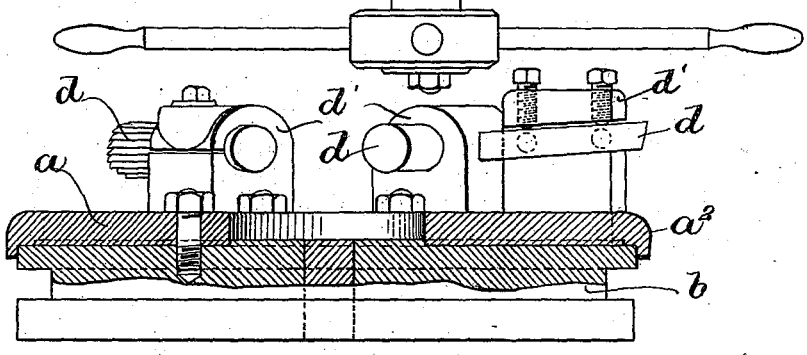


FIG. 2.



WITNESSES:
A. D. Harrison
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INVENTOR:
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UNITED STATES PATENT OFFICE.

JAMES HARTNESS, OF SPRINGFIELD, VERMONT.

TURRET-LATHE.

SPECIFICATION forming part of Letters Patent No. 556,415, dated March 17, 1896.

Application filed May 9, 1895. Serial No. 548,693. (No model.)

To all whom it may concern:

Be it known that I, JAMES HARTNESS, of Springfield, in the county of Windsor and State of Vermont, have invented certain new and useful Improvements in Turret-Lathes, of which the following is a specification.

The present invention relates to turret-lathes for metal-turning, and has in view the provision of a form of attachment which will expedite the handling of that class of work known in a machine-shop as "chucking," and differing from other turnings in the fact that its diameter is greater than its length, and most of the operations are performed from the end instead of over and around the work. I term the attachment a "jig-tool," and it is intended to accomplish the object of preserving the proper adjustments of the various tools used in chucking operations while the machine is being used for other work, and to also secure a more rigid presentation of the tools than heretofore.

The invention contemplates the employment of a suitably-formed casting designed to be bolted to the turret and having tool sockets or holders located at different positions corresponding with various operating positions of the turret, the casting by reason of its detachability allowing for a permanent adjustment of the tools it carries to a certain class of work, so that by removing the casting the entire set of tools adjusted for this special work are removed, but maintained in the same relative adjustment, so that when the same class of work is again brought to the machine the simple application of the casting to the turret puts the machine in condition for operating on the work. A machine equipped for chucking would be provided with as many of these castings as there were important pieces to chuck likely to be brought to the machine, say at intervals of one or two months.

In the accompanying drawings two forms of attachment are illustrated.

Figure 1 shows a top plan view of a portion of a lathe with one form of jig-tool applied to the turret. Fig. 2 shows a section on line 2 2 of Fig. 1. Fig. 3 shows a similar view to Fig. 1 with a different form of jig-tool on the turret.

Referring first to Figs. 1 and 2, the letter a designates a casting of partially-annular form, which casting is designed to rest on the top of a flat turret b and is detachably fastened to the same by bolts a'. The casting is preferably formed with a marginal flange a^2 taking over the edge of the turret, as shown in Fig. 2. On the upper side of the casting there are formed at suitable intervals corresponding with operating positions of the turret a number of tool sockets or holders a^3, in which the tools a^4 are adjusted. Now these various tools may be adjusted to act successively on a certain piece of work, and this adjustment may be preserved, so that by applying the casting to the turret whenever that class of work is brought to the machine the machine is at once ready to do the work.

When the machine is to be used for other work, the casting is simply disconnected from the turret and laid aside for the time; but the adjustment of the tools carried by it is not disturbed.

A cross-slide c, carrying a number of tools, is shown as mounted on the turret independently of the casting a; but it is obvious that such cross-slide and appurtenances might be mounted on the casting and constitute part of the jig-tool.

In Fig. 3 the base-casting d of the jig-tool is shown as being completely annular in form and having tool-holders d' and tools d^2, which fill all the operating positions of the turret. It is evident the device may be variously modified in the matter of the number of tools it is to carry.

Although I have here chosen to illustrate the attachment as adapted to flat turrets, such as shown in former patent, No. 457,967, granted to me August 18, 1891, yet it is obvious that the attachment might be adapted to old-style turrets of the form shown in Patent No. 431,809, granted to me July 8, 1890.

What I claim as my invention is as follows:

An attachment for turret-lathes, the same comprising a support or casting formed on

one side to fit the turret and bearing on the opposite or upper side a number of tool-holders whose sockets lie in a plane at right angles to the axis of the turret, said tool-holders being arranged in a substantially circular row, and means for detachably securing said support to the turret, substantially as and for the purpose described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 6th day of May, A. D. 1895.

JAMES HARTNESS.

Witnesses:
P. J. DONOVAN,
W. D. WOOLSON.