

(No Model.)

W. SWABEL.
ATTACHMENT FOR LATHES.

No. 437,945.

Patented Oct. 7, 1890.

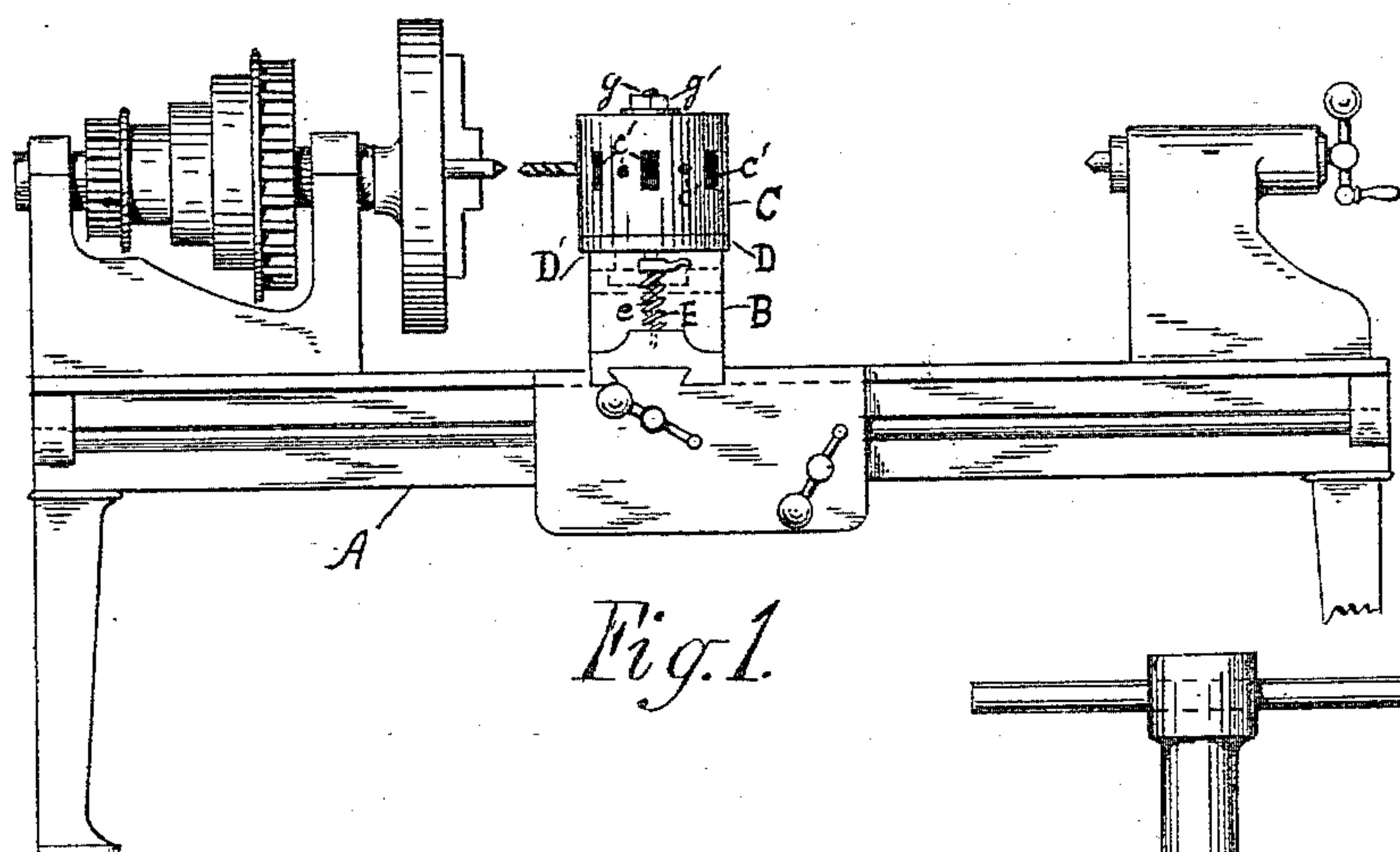


Fig. 1.

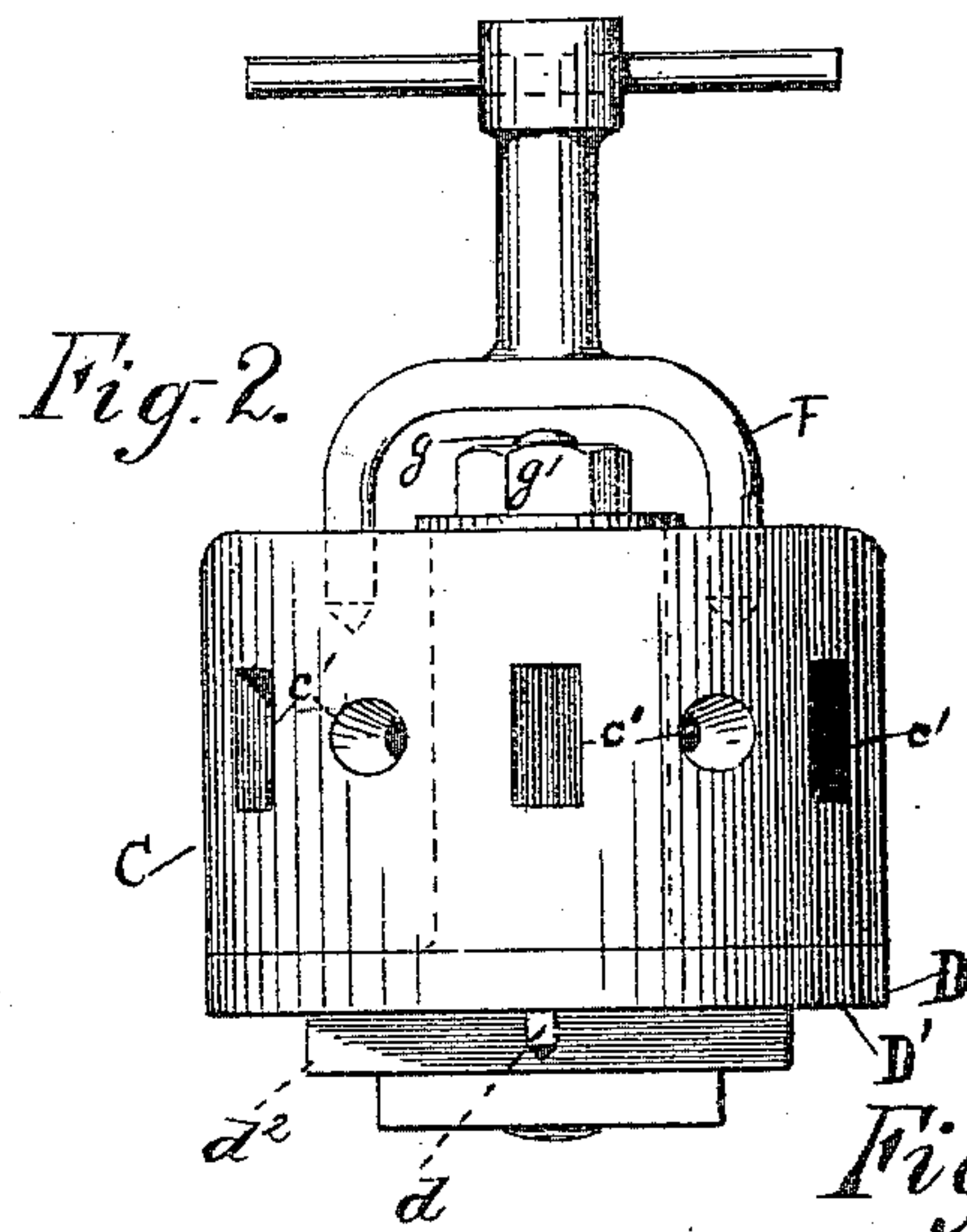


Fig. 2.

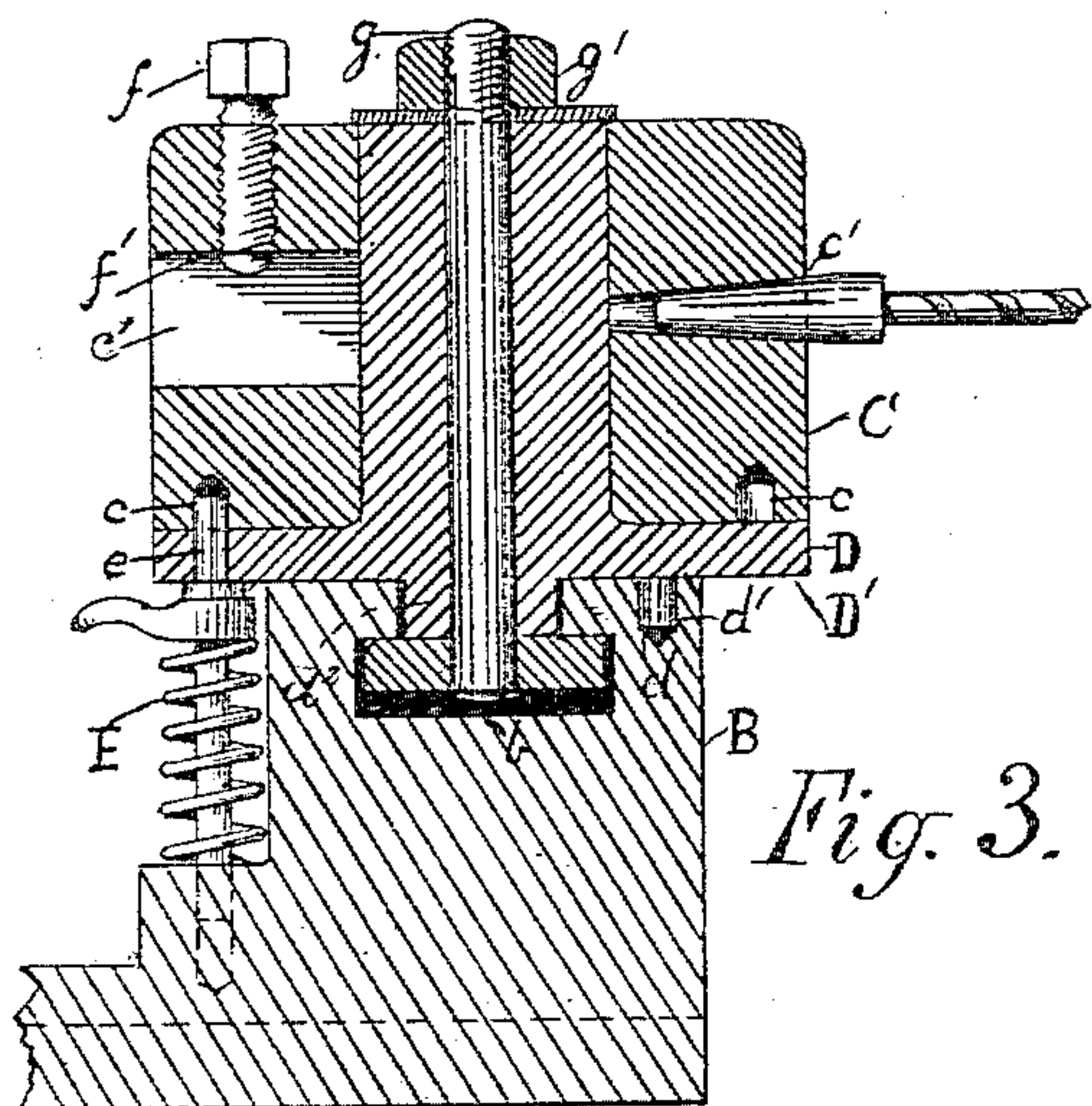


Fig. 3.

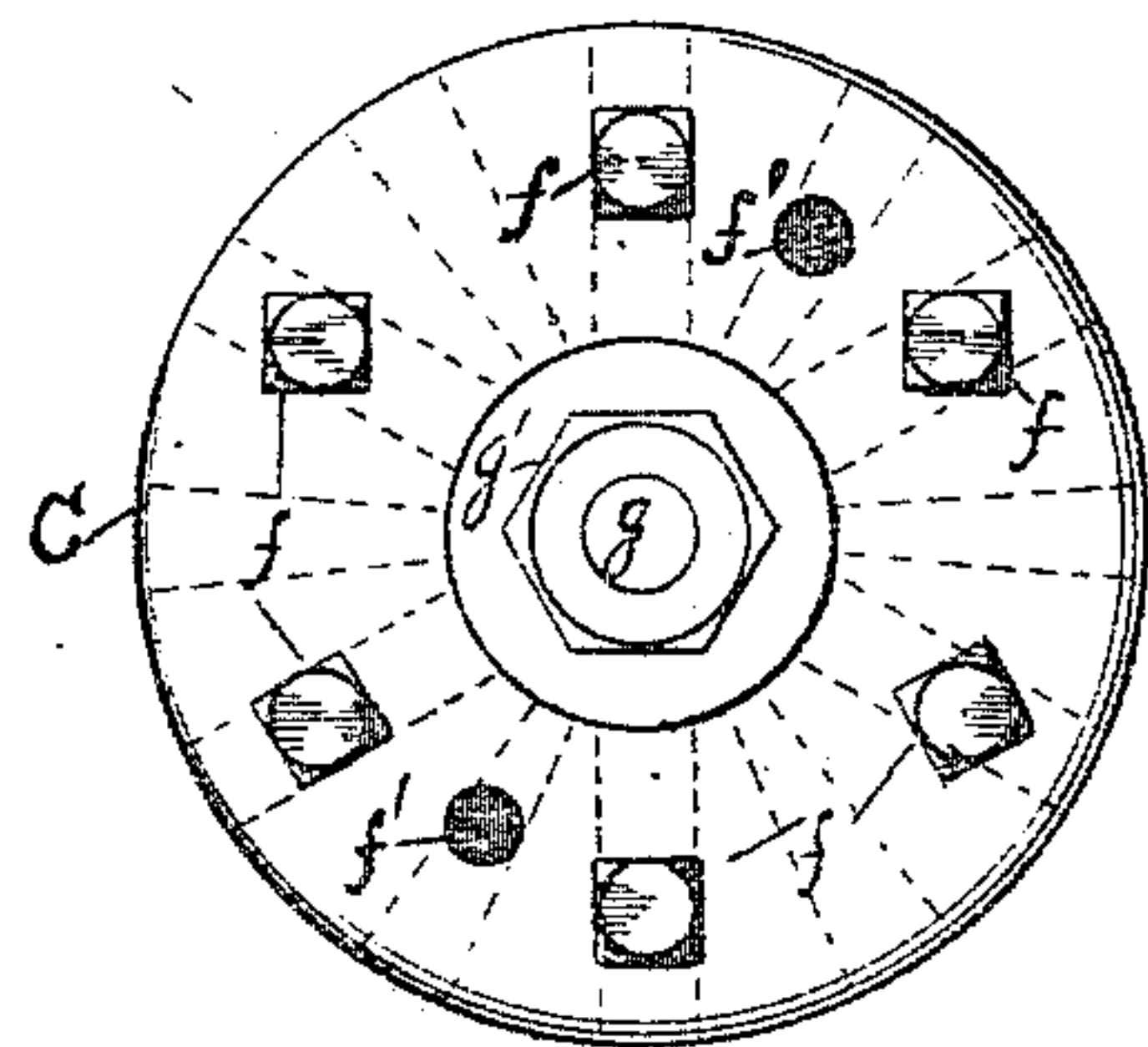


Fig. 4.

Witnesses.

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UNITED STATES PATENT OFFICE.

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ATTACHMENT FOR LATHES.

SPECIFICATION forming part of Letters Patent No. 437,945, dated October 7, 1890.

Application filed February 19, 1890. Serial No. 341,049. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM SWABEL, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Tool-Holding Attachments for Lathes; and I do hereby declare the following to be a full, clear, and exact description of said invention, such as will enable others skilled in the art to which it most nearly appertains to make, use, and practice the same.

My invention has relation to certain new and useful improvements in tool-holding attachments for lathes; and it consists of the parts and details of construction, as will be hereinafter more fully shown in the drawings, described, and pointed out in the specification.

The object of my invention consists in providing a simple and inexpensive tool-holding attachment which shall allow of the ready converting of an ordinary engine-lathe into a turret-lathe, which shall be so constructed as to permit of the reception and retention of a number of tools at the same time, and of tools varying in kind and size, thereby obviating the necessity of removing one and inserting another tool in place thereof, as is the case with the ordinary lathe; and my invention further consists in providing for the ready revolving of the turret or tool-holder and for the automatically locking thereof at any desired position, thereby allowing either of the tools to be brought into position for working without removing the one previously used from the holder.

Referring to the drawings forming a part of this specification, in which similar letters of reference are used to denote corresponding parts throughout the entire specification and several views of the drawings, Figure 1 is a side elevation of a lathe provided with my improved turret or tool-holder; Fig. 2, a detail view of the turret removed from the lathe or tool-rest; Fig. 3, a detail sectional view of the turret and tool-rest, and Fig. 4 a top plan view of the turret or holder.

The letter A is used to indicate the frame of an ordinary lathe, and B the tool-rest se-

cured upon said frame, which is provided with the T-shaped opening *b*.

The letter D indicates the tool-support, which is provided with a circular base *D'*, and depending from this base is an oblong portion *d*², which fits into the upper portion of the T-shaped opening of the tool-rest B.

The letter C represents my improved tool-holder or turret, which is held upon the support D, so as to revolve loosely thereon. The base *D'* of said support is provided with a series of downwardly-projecting pins *d*, which fit into recesses *d'*, formed in the face of the tool-rest B, and thus serve to maintain the support in a rigid position thereon. The under face of the turret or tool-holder is provided with a series of openings *c*, within which the upper end of the catch *e* is adapted to engage and hold the tool-holder in an adjusted position, so as to maintain the tool in working position in the lathe. The upward movement of said catch is regulated by means of the spiral spring E, which surrounds the same. The lower end of this bolt passes into an aperture in the shoulder formed in a recessed or cut-away portion of the rest.

The periphery of the tool-holder C is provided with a series of openings *cc'*, both elongated and circular, so as to permit the securing therein of varying kinds of tools. The holder is so constructed as to permit of from twelve to eighteen tools being securely fastened therein; but it is obvious that any number may be arranged around its periphery. In order to permit of adjustment and securing of the tools adapted to fit within the elongated openings, I provide the screw-threaded bolts *f*, which work through the screw-threaded openings *f'*, formed in the top of the holder. The openings extend entirely through into the elongated opening *c*, and said bolts pass therethrough and bear against the surface of the tools.

The revolving tool-holder is secured upon the support D by means of the screw-threaded bolt and nut *g g'* at the upper end, as shown more clearly in Fig. 3 of the drawings, and a washer at the lower end, which fits in the lower portion of the T-shaped slot of the opening of the tool-rest.

In Fig. 2 I have shown the tool-holder as being provided with the hand-key F, so as to permit of the ready revolving thereof.

It is obvious that by providing a holder in accordance with the above description the operator of the lathe is enabled to have under his control a multiple of tools by which to work or operate upon the metal which requires different grade of work, thus saving the necessity of delays in taking out of one tool and replacing it by another, as is the result by the use of the ordinary engine-lathe.

I am aware that minor changes may be made in the construction herein shown and described without necessitating a departure from the nature and scope of my invention.

Having thus fully described my invention, what I claim as new, and desire to secure protection in by Letters Patent of the United States, is—

1. In a tool-holder attachment for lathes, the combination of a tool-rest provided with recesses in its upper face and having one side cut away so as to form a side recess having an apertured seat or step, a spring-actuated bolt having its lower end passing in the aperture in the seat or step formed by said recessed portion, a tool-support provided with a circular base having a hole or aperture, and also provided upon its under side with depending pins adapted to fit in the re-

cesses in the top of the rest, and a revolving tool-holder provided upon its underside with a series of recesses adapted to register with the apertures of the tool-support as the holder is revolved and to receive the spring-actuated bolt which passes through the hole of the tool-support, substantially as set forth.

2. In a tool-holding attachment for lathes, the combination, with the tool-rest provided with a series of recesses in the top thereof, and also provided with a T-shaped slot, of a tool-holder support secured to said rest, having depending pins adapted to fit into the recesses formed in the top of the rest so as to prevent movement of said support, a vertical bolt passing through the tool-holder support, having a nut upon its upper end and a washer upon its lower end, said washer working the slot of the tool-rest, and the tool-holder adapted to revolve upon the support, said holder being provided with a series of openings around its periphery, in which the tools are secured, substantially as set forth and described.

In testimony whereof I have hereunto affixed my signature in the presence of witnesses.

WILLIAM SWABEL.

In presence of—

M. G. LOEFLER,
F. N. BIGELOW.