

No. 863,575.

PATENTED AUG. 20, 1907.

A. T. ANDERSON.
LATHE APPLIANCE.
APPLICATION FILED MAY 23, 1906.

3 SHEETS—SHEET 1.

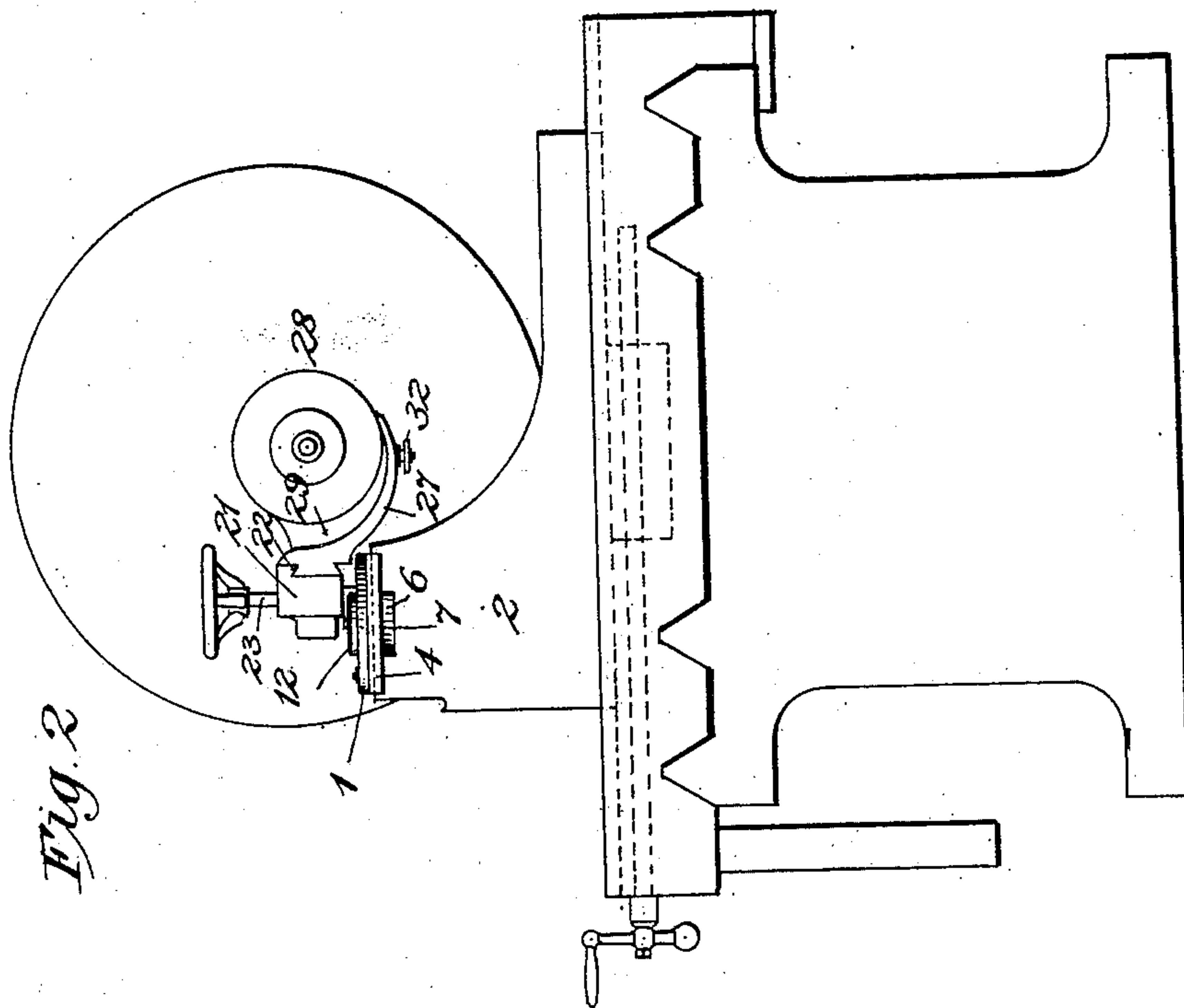


Fig. 2

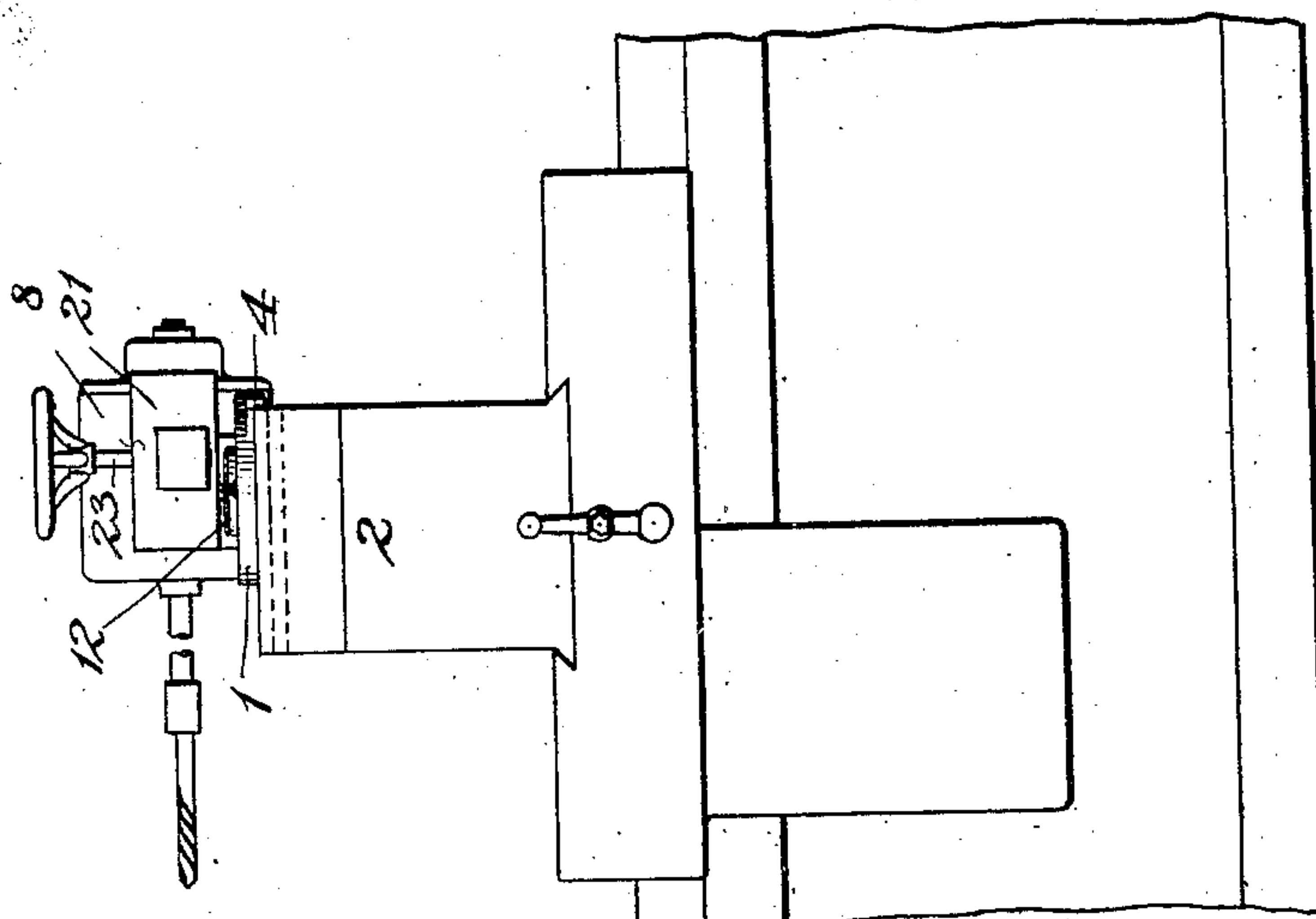


Fig. 1.

Witnesses;

Sidney P Hollingsworth

Charles Lowell Howard.

Inventor;
Alfred J. Anderson,
by G. H. M. T. & M.
Attys.

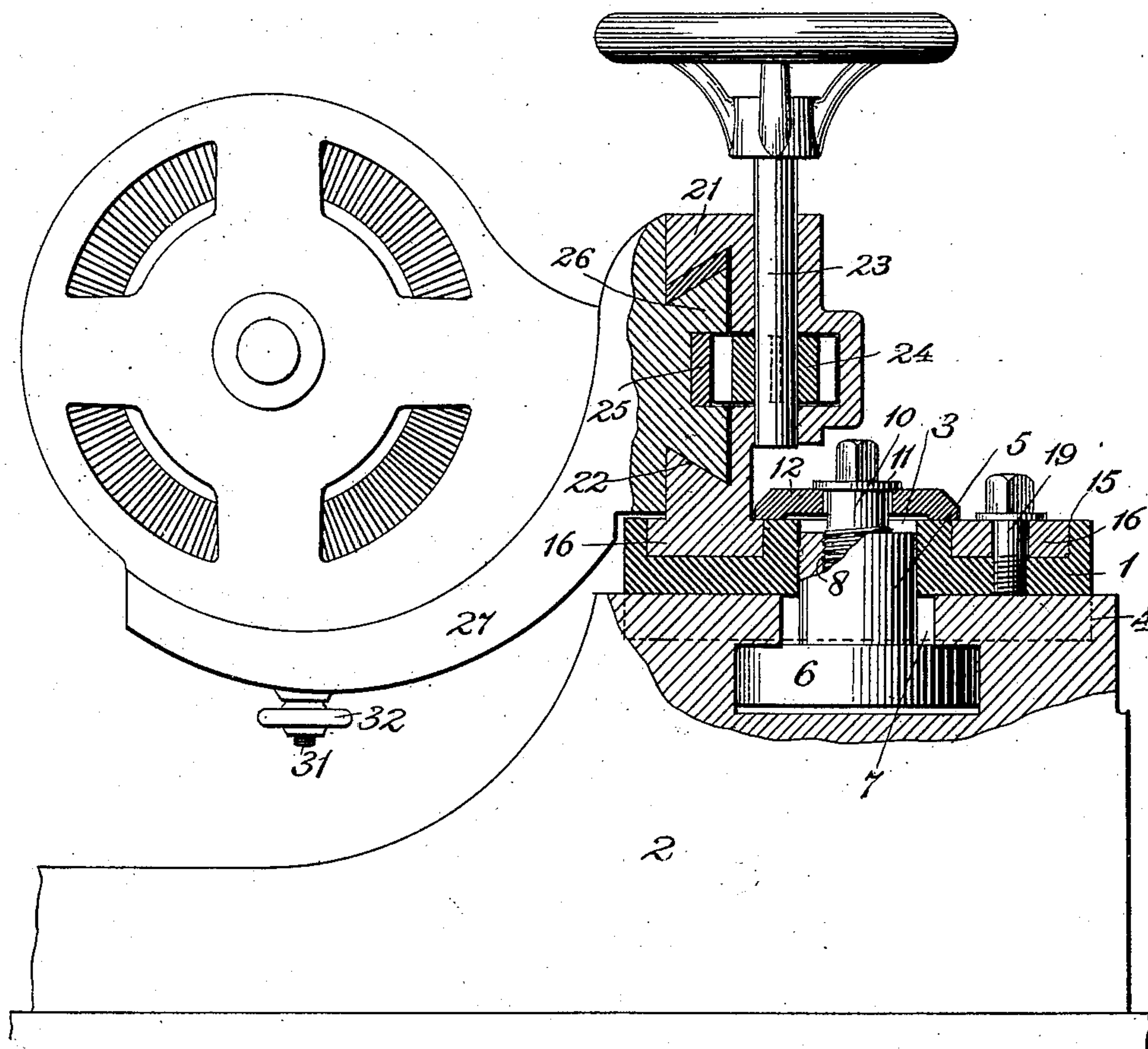
No. 863,575.

PATENTED AUG. 20, 1907.

A. T. ANDERSON.
LATHE APPLIANCE.
APPLICATION FILED MAY 23, 1906.

3 SHEETS—SHEET 2.

Fig. 3.



Witnesses;
Sidney P. Hollingsworth
Charles Lowell Howard

Inventor;
Alfred J. Anderson,
by *W. H. W. J. Howard,*
Attys.

No. 863,575.

PATENTED AUG. 20, 1907.

A. T. ANDERSON.
LATHE APPLIANCE.
APPLICATION FILED MAY 23, 1906.

3 SHEETS—SHEET 3.

Fig. 4.

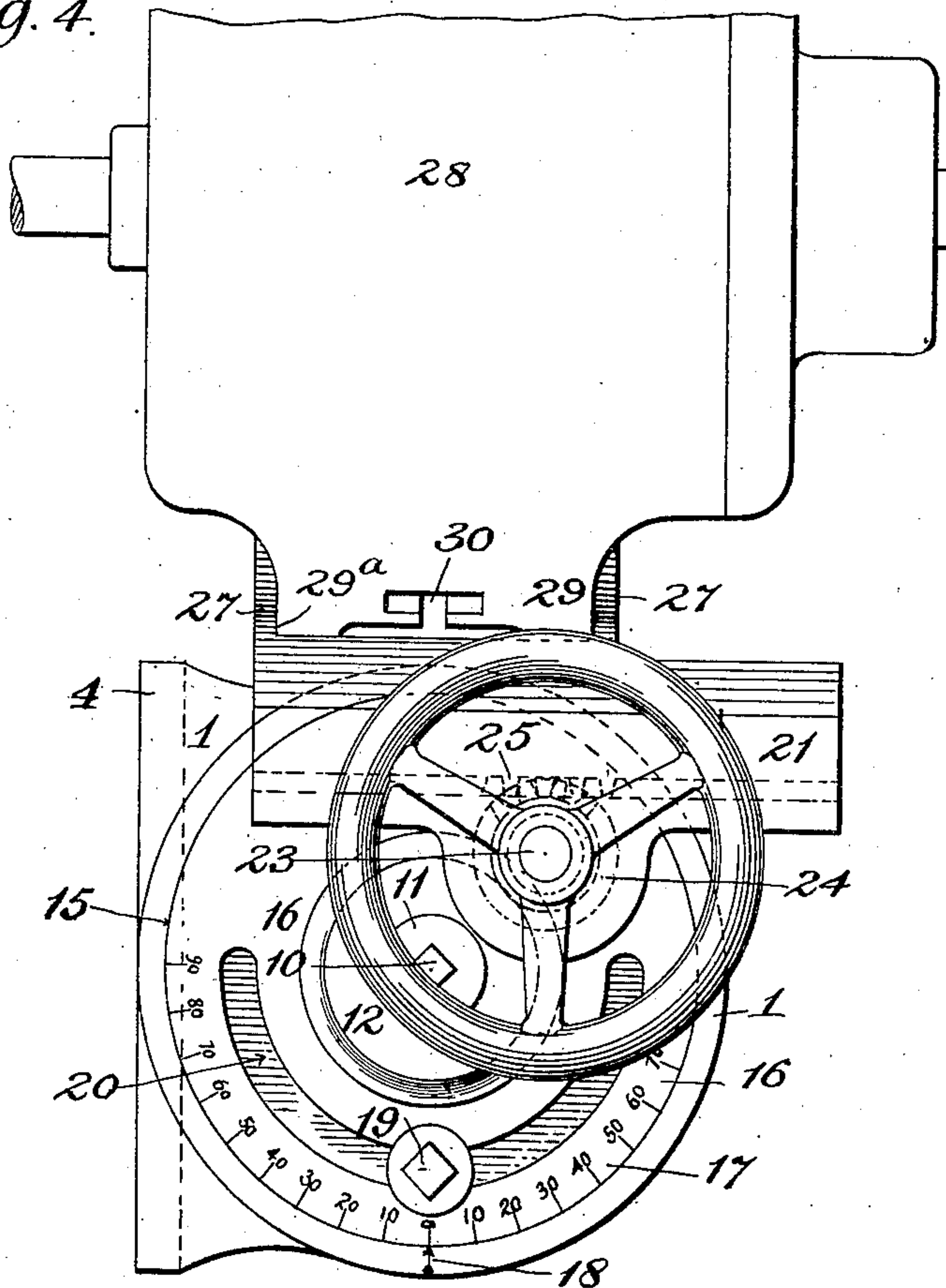


Fig. 5.

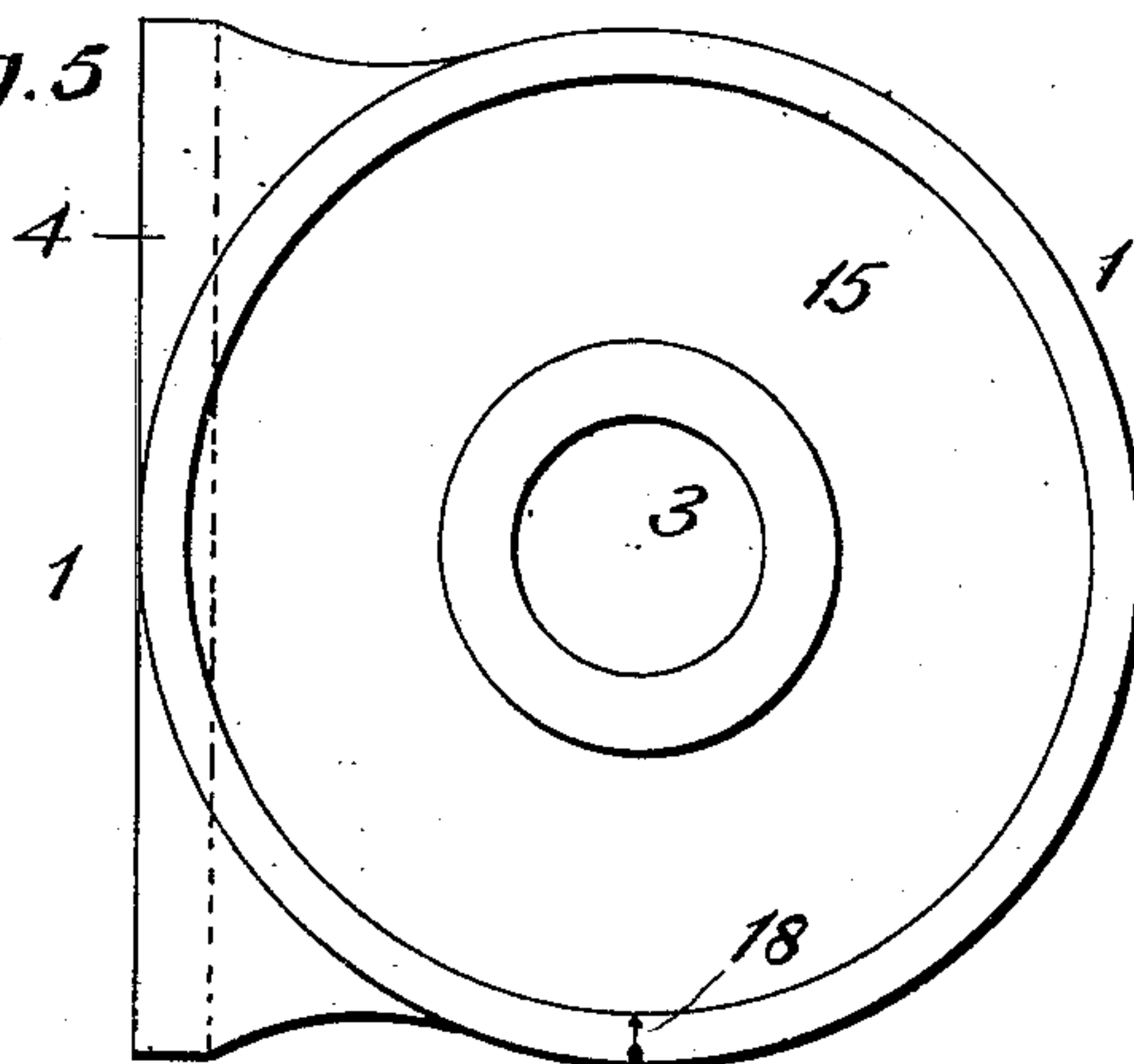
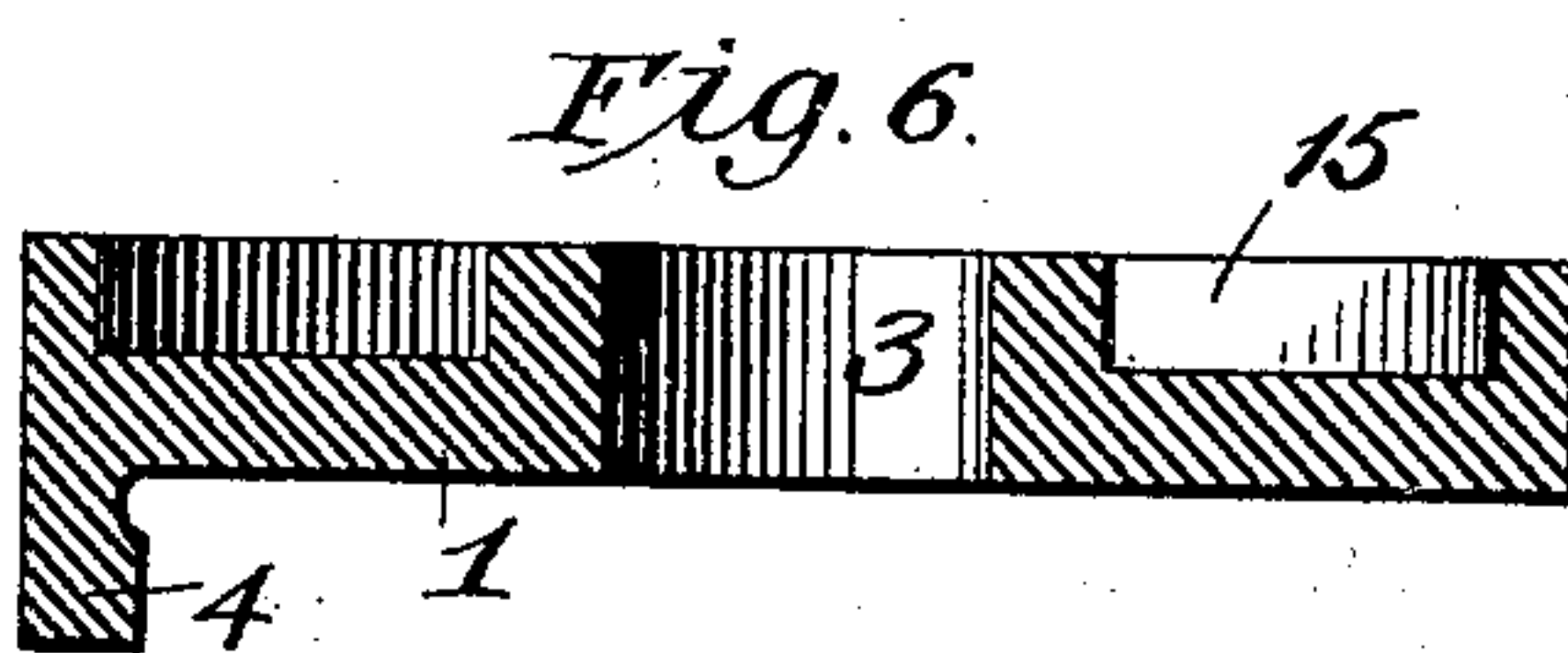


Fig. 6.



Witnesses:
Charles P. Hollingsworth
Frank Lewis Howard

Inventor:
Alfred T. Anderson
by *W. J. Thomas*
attys.

UNITED STATES PATENT OFFICE.

ALFRED T. ANDERSON, OF ST. LOUIS, MISSOURI.

LATHE APPLIANCE.

No. 863,575.

Specification of Letters Patent.

Patented Aug. 20, 1907.

Application filed May 23, 1906. Serial No. 318,372.

To all whom it may concern:

Be it known that I, ALFRED T. ANDERSON, a citizen of the United States, residing at St. Louis, in the county of St. Louis and State of Missouri, have invented new and useful Improvements in Lathe Appliances, of which the following is a specification.

This invention (which is an improvement upon that described in my Patent No. 791,394, granted May 30, 1905) relates to lathe appliances, and has special reference to center drills or grinders, the object being to provide a simple device by the use of which the drill or grinding or polishing disk may be easily adjusted to work at any desired height or angle.

The object is attained in the mechanism illustrated in the accompanying drawings; and the invention consists in certain novel features of the same, as will be hereinafter first fully described, and then particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a front elevation of the device applied to a lathe. Fig. 2 is an end elevation of the same. Fig. 3 is a side view of the device partly in section. Fig. 4 is a plan view. Figs. 5 and 6 are, respectively, a plan and a sectional view of the base plate.

Similar numerals of reference indicate similar parts in the respective figures.

In carrying out my invention I employ a base-plate 1, adapted to rest on the carriage 2 of a lathe and which is provided with a central opening 3 that registers with the T-slot in the carriage when the device is in its operative position, and also with a guide or truing flange 4 on the underside of the base plate in position to bear against the side of the lathe carriage 2 to square or true the base plate and the parts carried thereby with the spindle of the lathe, or the article to be operated on by the appliance.

Fitted in the opening 3 is a post 5, preferably cylindrical in shape, rising from a disk 6, the two parts being adapted to slide in the usual T-slot 7 on the top of the carriage. The upper portion of the post 5 is internally threaded, as shown at 8, and is engaged by a clamping-screw 10, which passes up through the opening 3 in the base-plate and is provided with an annular rib or shoulder 11 bearing upon a washer 12 which rests upon the base-plate and extends over the central opening therein, as clearly shown. The upper end of this clamping-screw is angular, so that it may be engaged by a wrench or key.

When the device is to be secured in position, the post is slipped laterally through the end of the T-slot in the lathe-carriage, with the disk 6 fitting in the horizontal portion of the said slot and the base-plate resting on the upper side of the carriage. The screw 10 is then rotated, so as to carry the washer 12 downward against the base-plate, and consequently to clamp the base-plate to the carriage.

In its upper side the base-plate is provided with an annular groove 15, in which is fitted a ring 16, having a series of graduations 17 on its upper side which facilitate an accurate adjustment of the device to work at any desired angle by moving past or registering with an index or pointer 18, marked on the upper surface of the base-plate. The ring is secured in its adjusted position by a set-screw 19, mounted in the base-plate and passing through a slot 20, formed in the ring concentrically with the sides of the same. The upper portion of the screw bears upon the top of the ring, so as to bind it upon the base-plate, as will be understood. Rising from and integral with the ring 16 and on the opposite side of its center from the graduations 17 and the slot 20 is a beam 21, which extends horizontally beyond the edge of the ring and is provided with a dovetailed horizontal groove 22 in one side. Mounted in this beam is a vertical shaft 23, carrying a hand-wheel on its upper end and a pinion 24 near its lower end. The pinion 24 meshes with a rack-bar 25, formed on the dovetailed rib 26, constituting the back of a bracket which supports the casting within which the drill or grinder is mounted. The dovetailed rib fits in the dovetailed groove 22 and the main portion of the bracket extends downward and outward therefrom in a curved arm 27, upon which the casting or casing 28 is secured. The casing 28 is a hollow cylindrical casting having an eccentric rib 29 on one side which fits in a groove 29^a in the upper surface of the supporting-arm 27, and is provided with a T-shaped slot 30, adapted to engage the shank and head of a bolt 31, which is mounted in an opening in the curved supporting-arm and carries a clamping-nut 32 on its lower end which is adapted to be turned up against the under side of the said arm to secure the casting at any desired point. The tool-carrying shaft is mounted centrally within the casing or casting 28 and forms the armature of an electric motor secured therein. On the end of the shaft beyond the end of the casing is secured a drill, a cutter, an emery disk, or other tool according to the work to be accomplished.

By the use of the guide or truing flange 4 forming a part of the base plate 1, I render unnecessary the lateral clamping device shown in my said former patent as associated with the post 3, which device involves the employment of clamping jaws adapted to be forced outward against the sides of the T-slot by means of the feeding screws 7. In my said patent the object of this clamping device is to securely hold the base plate in its proper position or in parallelism with respect to the carriage, and this same result is effected under my present improvement by the simple expedient of combining with the carriage a base plate having in itself a truing guide or flange, and employing with such plate only vertical clamping means.

I do not restrict myself to the exact details of construction, combination, and arrangement herein set

forth, it being obvious that minor variations thereof not involving the exercise of invention may be made by the skilled mechanic, and such departures from what is herein described and claimed not involving invention I

5 consider as within the scope and terms of my claims.

Having thus described my invention, I claim:—

10 The combination in a lathe appliance of a carriage having a T-slot; a base plate having therethrough a central opening and furnished on its upper face with a concentric groove, the latter to receive adjustable operative parts, and on its under side with a lateral guide or truing

flange parallel to and in contact with a side of the carriage; a post fitting in the central opening of the base plate and provided with a lower disk, said post fitting the T-slot of the carriage, and means for vertically clamping said post and thereby the base plate to the carriage, substantially as set forth. 15

In testimony whereof I affix my signature in presence of two witnesses.

ALFRED T. ANDERSON.

Witnesses:

CLARENCE J. ANDERSON,
JNO. W. BRANDON.