No. 776,554. PATENTED DEC. 6, 1904.

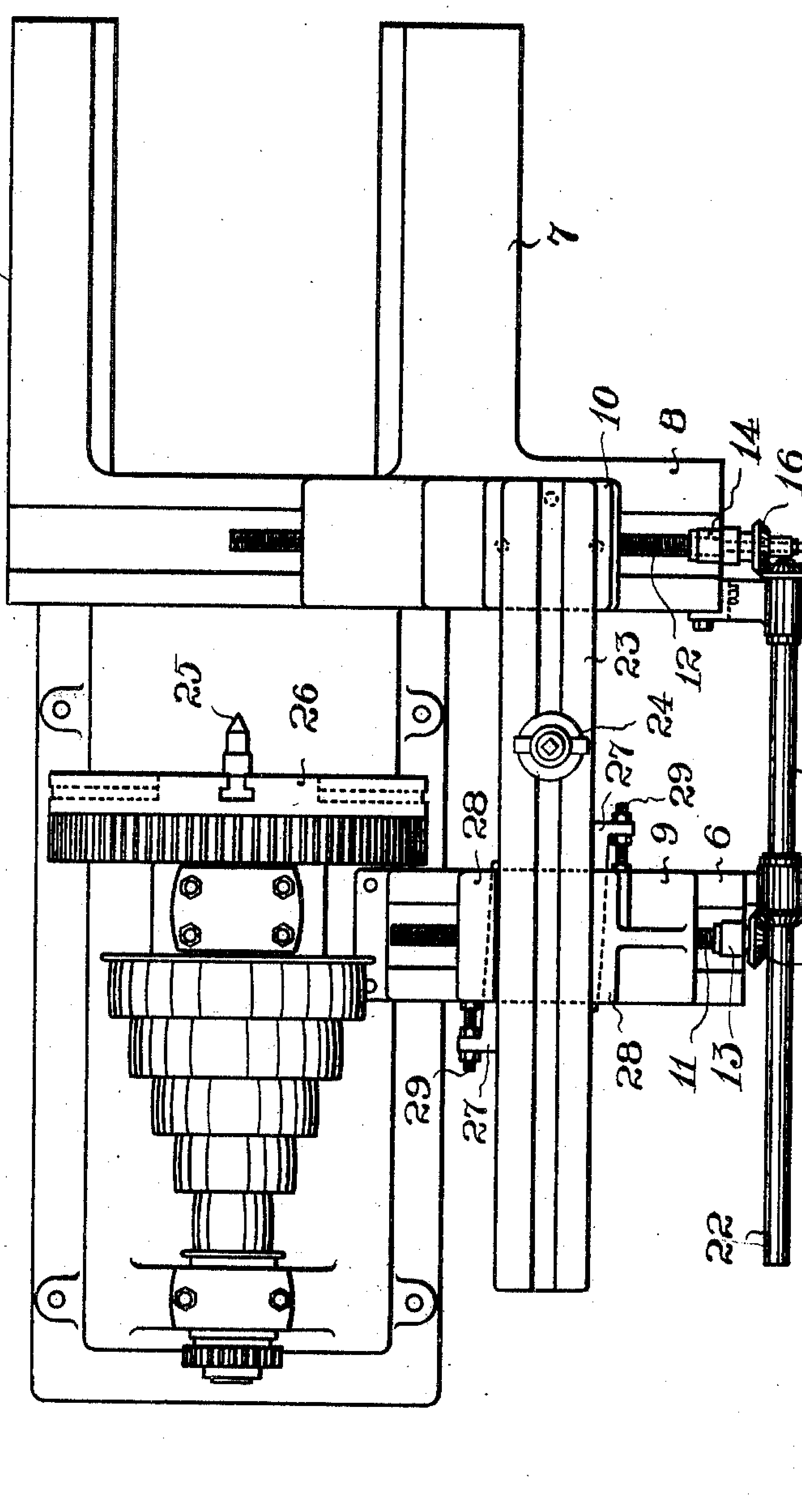
R. F. SCOTT.

LATHE.

APPLICATION FILED JUNE 2, 1904.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1



WITNESSES:

INVENTOR

Robt. F. Scott

BY

Chas. N. Butler

ATTORNEY.

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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 2

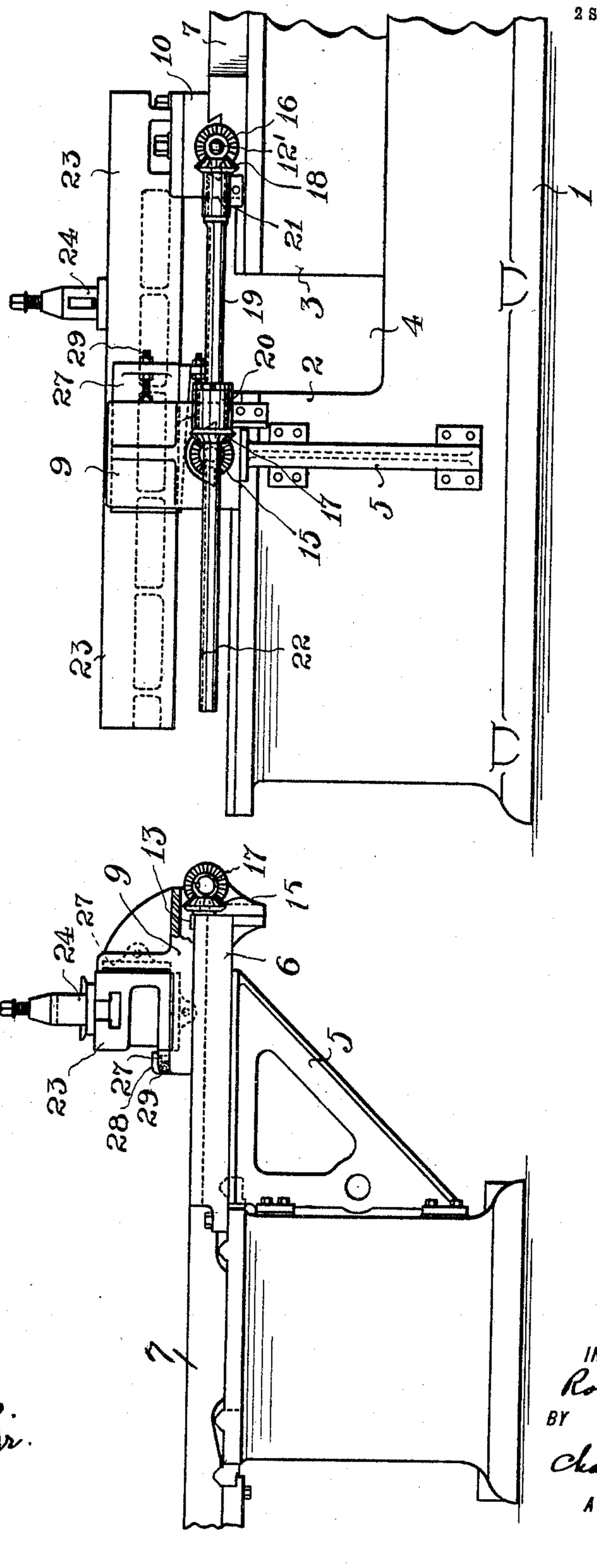

Fig. 3

WITNESSES:

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No. 776,554. Patented December 6, 1904.

UNITED STATES PATENT OFFICE.

ROBERT F. SCOTT, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO EDWIN HARRINGTON, SON AND COMPANY, INCORPORATED, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION.

LATHE.

SPECIFICATION forming part of Letters Patent No. 776,554, dated December 6, 1904.

Application filed June 2, 1904. Serial No. 210,828. (No model.)

To all whom it may concern:

Be it known that I, ROBERT F. SCOTT, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain Improvements in Lathes, of which the following is a specification.

This invention is designed primarily to provide means for turning work of extended dimensions.

The nature and characteristic features of the improvements will more fully appear by reference to the following description and the accompanying drawings in illustration thereof, of which—

Figure 1 represents a top plan view of a lathe having my improvements applied thereto. Fig. 2 is a side elevation, and Fig. 3 is an end elevation thereof.

As shown in the drawings, the improvements are applied to a lathe comprising the bed 1, having the head 2 and the movable extension-shears 3, between which and the head there is a gap 4. The head has secured thereto a strut 5, which supports an extension-guide 6, and the extension-shears have movable thereon the carriage 7, which supports an extension-guide 8.

Cross-slides 9 and 10 engage the respective guides 6 and 8, in which they are moved by the respective screws 11 and 12, engaging the slides and journaled in the bearings 13 and 14 on the guides. Fixed on the ends of the screws 11 and 12 are the beveled gears 15 and 16, which are engaged by the beveled gears 17 and 18, held against rotation on a shaft 19, journaled in the bearings 20 and 21, fixed to the extension-guides, the gear 17 being engaged by a spline 22, permitting the longitudinal movement of the shaft through the gear. The screw 12 has an extension 12′, providing means for the engagement of a wrench or handle for operating the screws to move the cross-slides and tool-rest 23 supported thereby along the guides and adjust the position of the tool 24 with reference to the center 25, the tool being adjustable to positions for working beyond the periphery of the face-plate 26 and turning the surface of a cylinder revolving in the gap and having a larger diameter than the face-plate.

The tool-rest 23 is permanently fixed to the cross-slide 10 and is guided in the cross-slide 9 by the wedging wearing-plates 27, movable in the bearings 28 on the slide by the screws 29. By adjusting the position of the carriage 7 and the tool-rest 23 relatively to the bearings 28 the longitudinal extent of the operation of the tool 24 may be varied.

It will thus be seen that an extended cylindrical area may be turned by means of these improvements, which provide facility for doing work otherwise beyond the capacity of the lathe, a particular use therefor being found in turning and threading drums for use in elevator mechanisms.

Having described my invention, I claim—

1. In a lathe, a bed, a guide connected with and extending transversely to and beyond said bed, extension-shears movable on said bed, a carriage supported by said shears, a guide on said carriage extending transversely to and beyond said shears, slides movable on said guides and a tool-holder carried by said slides, substantially as specified.

2. In a lathe, a head, in combination with shears separated from said head by a gap, a guide connected with and extending transversely to and beyond said head, a guide connected with and extending transversely to and beyond said shears, and a tool-rest having cross-slides movable in said guides, substantially as specified.

3. In a lathe, a head, in combination with shears separated from said head by a gap, a guide connected with and extending transversely to and beyond said head, a guide connected with and extending transversely to and beyond said shears, a tool-rest, cross-slides movable in said guides and supporting said rest, and means for separating said slides and adjusting the position of said tool-rest with reference to one of its supporting-slides, substantially as specified.

4. In a lathe, a pair of transverse extension-guides, a tool-rest, slides supporting said tool-rest and movable in said guides, screws for moving said slides in said guides, a revoluble shaft, and gears connecting said shaft with said screws, substantially as specified.

5. In a lathe, a pair of transverse extension-guides, slides movable in said guides, a tool-rest carried by said slides and movable through one of them, screws having gears thereon for moving said slides, and a revoluble shaft having gears thereon for engaging and revolving the gears on said screws, said shaft being movable through one of the gears thereon, substantially as specified.

In testimony whereof I have hereunto set my hand, this 1st day of June, 1904, in the presence of the subscribing witnesses.

ROBERT F. SCOTT.

Witnesses:
THOMAS S. GATES,
UTLEY E. CRANE, Jr.