

(No Model.)

A. W. SCHLEICHER.
LATHE SLIDE FEEDING DEVICE.

No. 274,394.

Patented Mar. 20, 1883.

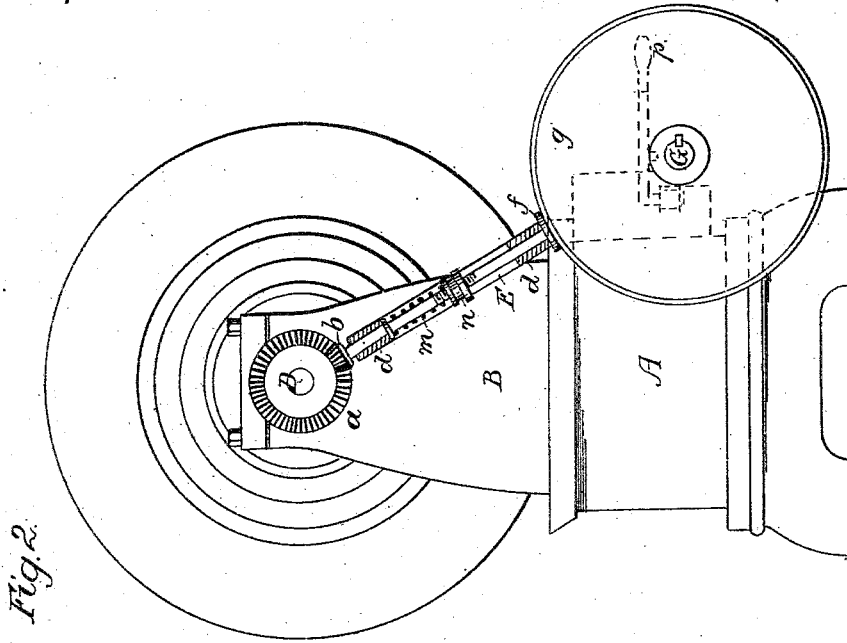


Fig. 2.

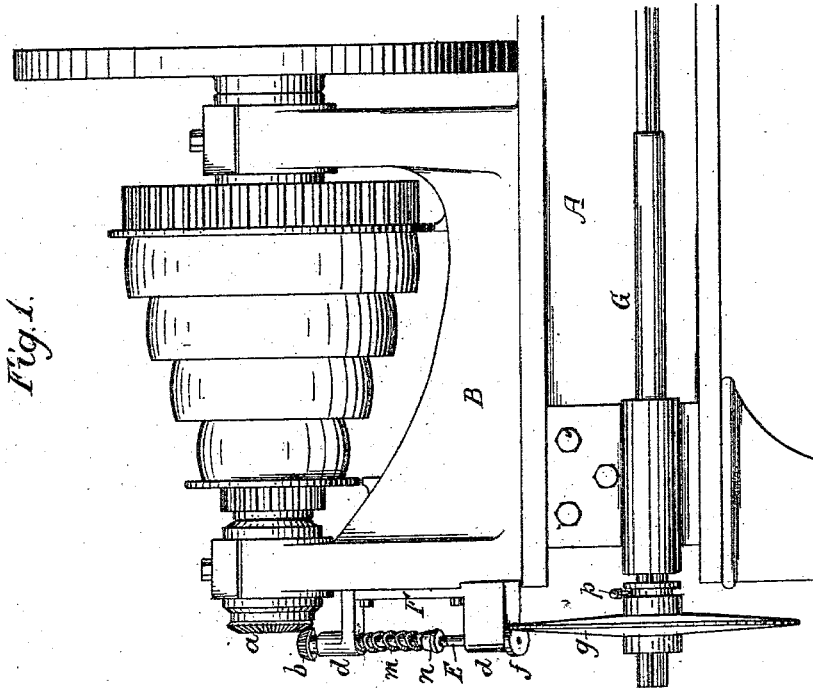


Fig. 1.

Witnesses:
Harry Drury
Hamilton Turner.

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by his Atty,
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UNITED STATES PATENT OFFICE.

ADOLPH W. SCHLEICHER, OF PHILADELPHIA, PENNSYLVANIA.

LATHE-SLIDE-FEEDING DEVICE.

SPECIFICATION forming part of Letters Patent No. 274,394, dated March 20, 1883.

Application filed June 26, 1882. (No model.)

To all whom it may concern:

Be it known that I, ADOLPH W. SCHLEICHER, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Turning-Lathes, of which the following is a specification.

My invention consists in the combination of an old mechanical device with certain mechanism described hereinafter, by which the said device is made available for feeding and regulating the feed of the carriage of a lathe and for reversing the same, as fully described hereinafter.

In the accompanying drawings, Figure 1 is a side view of sufficient of a lathe to illustrate my invention, and Fig. 2 an end view of the same.

A represents part of the lathe-bed, and B the head-stock, to bearings in which is adapted the spindle D of the lathe. The outer end of the spindle is furnished with a bevel-wheel, *a*, which gears into a bevel-pinion, *b*, on the upper end of a shaft, E, the latter being adapted to bearings *d* on a bracket, F, which is secured to the head-stock. On the lower end of the shaft E is a disk, *f*, the face of which is in contact with the periphery of a disk, *g*, secured to the end of the spline-shaft G, which actuates the tool-slide or carriage and is adapted to bearings on the bed A, as usual. The pressure of the disk *f* upon the periphery of the disk *g* is regulated by the tension of a spring, *m*, interposed between the upper bearing, *d*, of the shaft E and a nut, *n*, adapted to a threaded portion of said shaft, so as to be adjustable thereon to vary the tension of the spring, the shaft E having a slight longitudinal play in its bearings.

It will be observed that the disk *g* is driven by contact with the face of the disk *f*, so that the speed at which said disk is driven and the direction of its movement will depend upon the relation to the center of the disk *f* of the point of contact between said disk and the disk *g*—that is to say, the farther this point is from the center of the disk *f* the more rapid will be the rotation of the disk *g*—and when the point of contact between the disks is on

the right-hand side of the center of the disk *f* the disk *g* will be driven to the right, while when the point of contact between the disks is on the left-hand side of the center of the disk *f* the disk *g* will be driven to the left. The direction of movement and the speed of the spline-shaft G, and of the carriage controlled thereby, can thus be readily governed by simply moving the disk *g* laterally across the face of the disk *f*, this movement being effected without any stoppage of the lathe. In the present instance I have shown as the means for effecting this movement a lever, *p*, having a pin adapted to the grooved hub of the disk *g*, the latter having a feather adapted to a key-seat in the shaft G. Any other available means may be used, however, in place of this arrangement, and the shaft E may, if desired, be acted upon by a weight instead of a spring to maintain the disk *f* in proper frictional contact with the periphery of the disk *g*. The movement of the spline-shaft G being due to friction, any obstruction to the movement of the carriage will simply cause the disk *f* to slip upon the disk *g*, and will not be attended with injury to any of the parts of the device, as is the case when a positive feed is used.

A disk constructed to slide on but rotate with one shaft, and acting with its periphery on the face of another disk on another shaft, is an old device which has been used for feeding and changing the feed in machines. Hence I do not claim this, broadly; but

I claim as my invention—

The combination of a lathe-spindle, the feed-shaft G, and the disk *g*, constructed to be rotated with but to slide on the said feed-shaft, with the shaft E, having a disk, *f*, and geared to the said lathe-spindle, and with a spring, *m*, for acting on the shaft, so as to force its disk against the periphery of that on the feed-shaft, all substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

A. W. SCHLEICHER.

Witnesses:

HARRY DRURY,
HARRY SMITH.