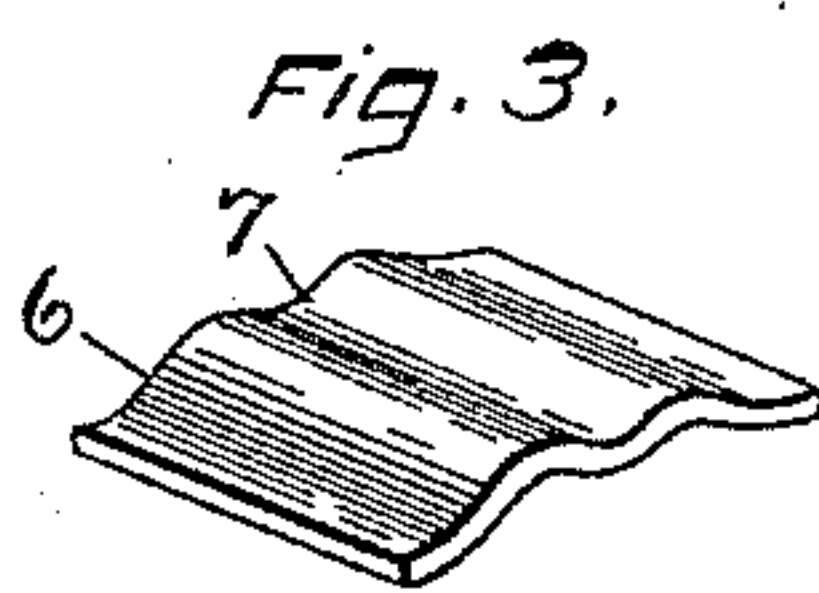
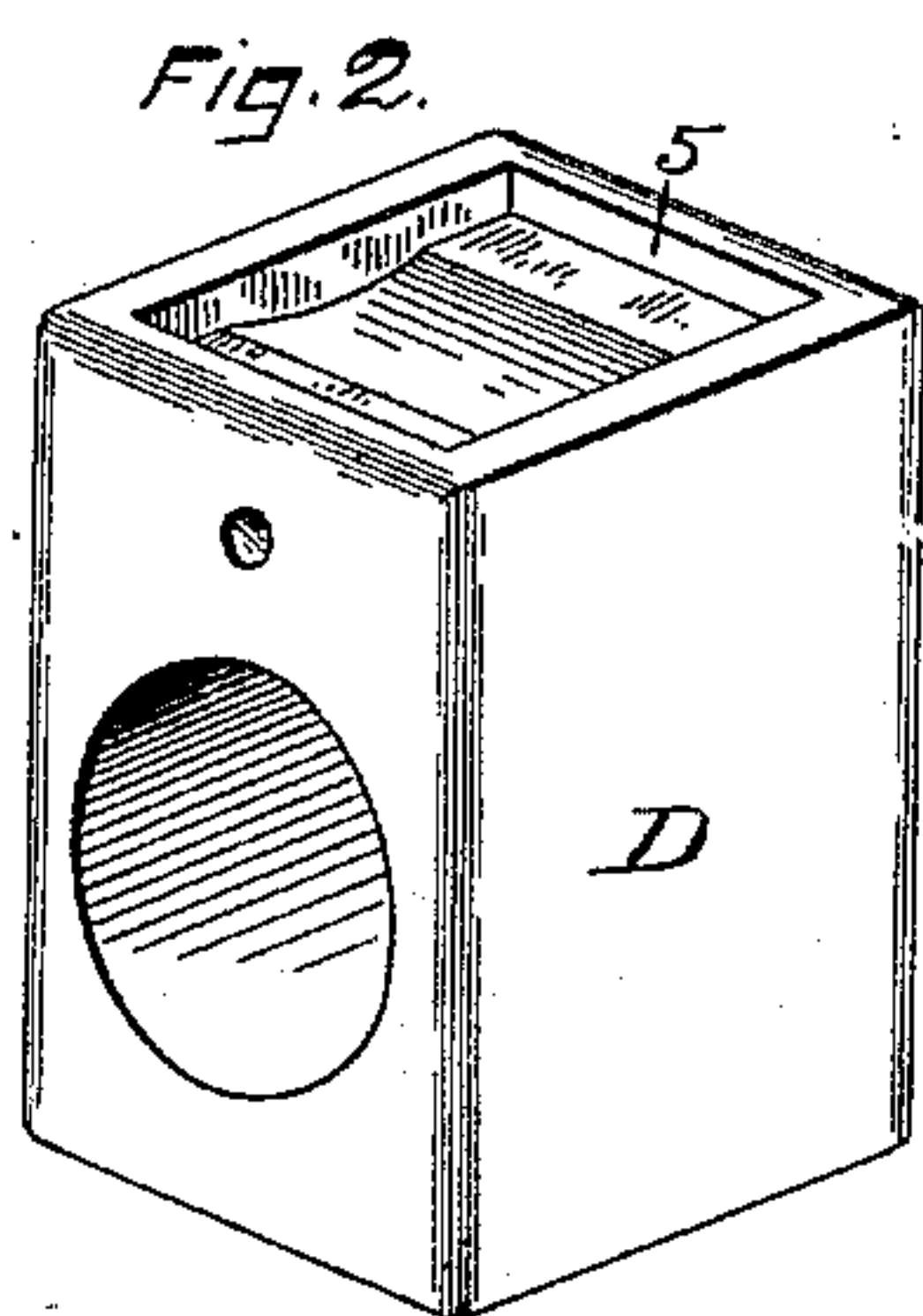
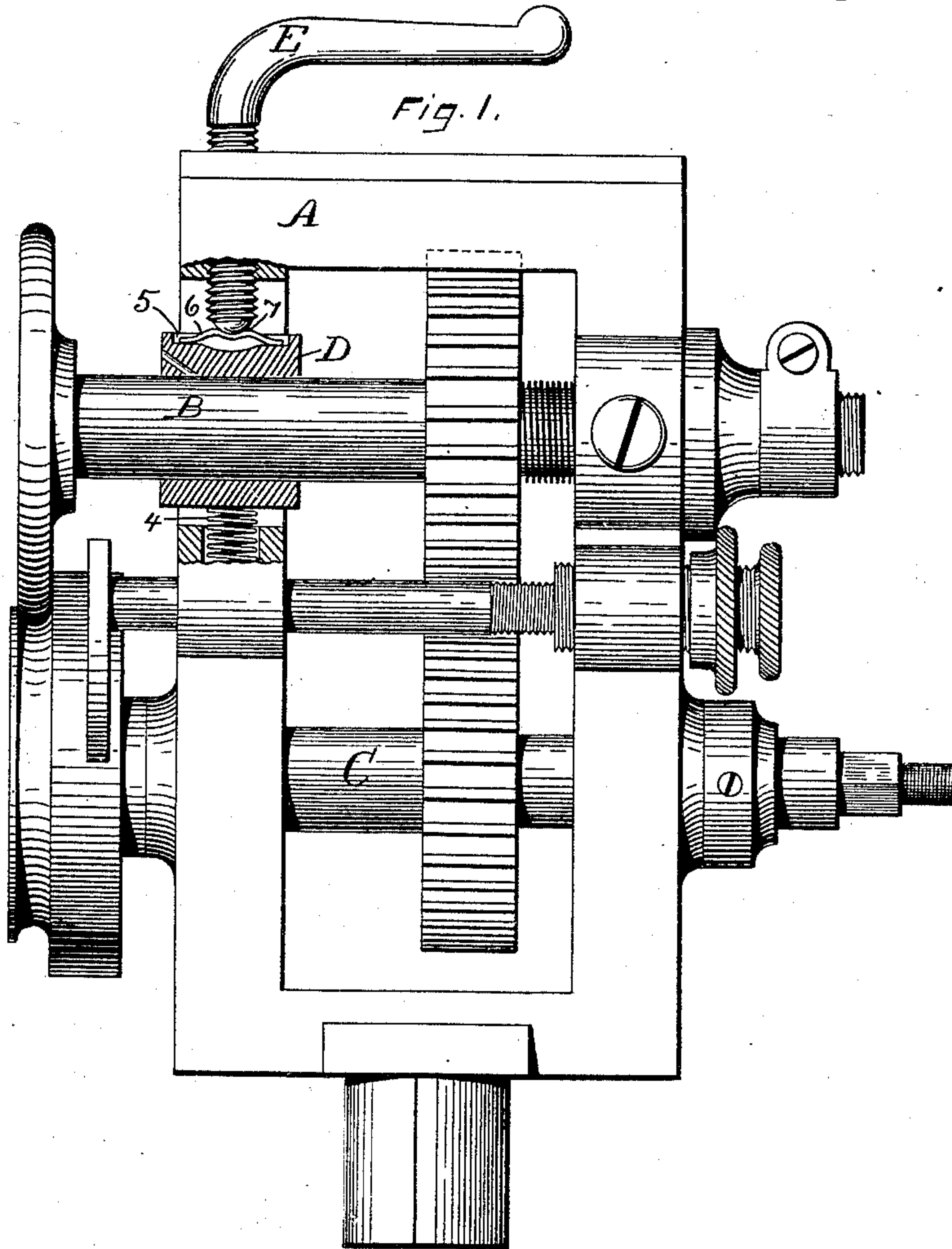


(No Model.)

E. E. STOW.
TINSMITH'S MACHINE.

No. 434,960.

Patented Aug. 26, 1890.



Witnesses.
John Edwards Jr.
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UNITED STATES PATENT OFFICE.

ENOS E. STOW, OF PLANTSVILLE, CONNECTICUT.

TINSMITH'S MACHINE.

SPECIFICATION forming part of Letters Patent No. 434,960, dated August 26, 1890.

Application filed June 12, 1890. Serial No. 355,186. (No model.)

To all whom it may concern:

Be it known that I, ENOS E. STOW, a citizen of the United States, residing at Plantsville, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Tinsmiths' Machines, of which the following is a specification.

My invention relates to improvements in tinsmiths' machines of the class having the bearing for the front end of the shaft of its upper roller vertically adjustable; and the main object of my invention is to hold the rollers approximately firmly together, but at the same to permit a slight degree of elasticity.

In the accompanying drawings, Figure 1 is a side elevation, partly in vertical section, of a tinsmith's machine which embodies my improvement. Fig. 2 is an enlarged perspective view of the front bearing for the upper shaft, and Fig. 3 is a perspective view of a spring for use in connection with said bearing.

I have illustrated my improvement as applied to a turning-machine of substantially the construction shown and described in Letters Patent No. 393,055, dated November 20, 1888; but my improvement is applicable to tinsmiths' and analogous machines in general when the bearing for the front end of the upper shaft is thrown upwardly by a spring and downwardly by means of a crank-screw or its equivalent.

In some machines, where the operator requires both hands to manipulate his work, a sliding plunger operated by a foot-lever is substituted for a crank-screw, so that the operator may depress the upper roller with one foot. In such a case I consider the rod or plunger that presses down upon the bearing of the upper roller as the equivalent of a crank-screw.

A designates the frame of the machine, B the shaft of the upper roller, and C the shaft for the lower roller. The bearings for these shafts, with the exception hereinafter specified for the front bearing of the upper roller, may be of any ordinary construction.

D designates the bearing or box for the upper roller, which may be solid when used for a shoulderless shaft, as shown, or it may, if desired, be made in two parts, divided in a horizontal plane passing through the axis of the shaft, provided the front end of the shaft

is shouldered, as in some machines. This bearing D is arranged to move up and down in suitable guides in the frame, and is thrown upwardly by the lifting-spring 4, as in ordinary machines of this class. The bearing, together with its shaft and roller, is forced downwardly by means of the crank-screw E or its equivalent. Heretofore this crank-screw or its equivalent has borne directly upon the upper end of the bearing. I recess the upper end of this bearing, as at 5, and within said recess I place a short stout spring 6, the middle portion being bent so as to form a transverse groove or corrugation 7, in which the end of the crank-screw rests. This transverse groove and recess in the upper end of the bearing prevent said bearing from working out of place longitudinally on the shaft in case the shaft is shoulderless. The spring is stiff enough so that ordinarily when the screw is turned downwardly the bearing and its shaft will be forced downward without any deflection of the spring and may be so held down against a certain amount of pressure. If, however, undue pressure is brought upon the rollers with a tendency to force them apart—as, for instance, in passing over seams or in case the rollers are not quite concentric—the spring will yield a little and permit the seam or high points to pass without unscrewing the crank-screw or bringing too much strain upon the machine or too much pressure upon the work. The recess in the upper end of the bearing is shallow, so that the spring 6 may strike bottom and prevent such strain being brought upon it as will be liable to injure the same.

I claim as my invention—

In a tinsmith's machine, the combination of the frame, the vertically-adjustable bearing for the front end of the upper shaft having the recess 5 at its upper end, the lifting-spring 4 for raising said bearing, the corrugated spring 6 within said recess, and the crank-screw or its equivalent with its lower end bearing upon the upper side of said spring, substantially as described, and for the purpose specified.

ENOS E. STOW.

Witnesses:

STEPHEN WALKLEY,
E. M. STANNARD.