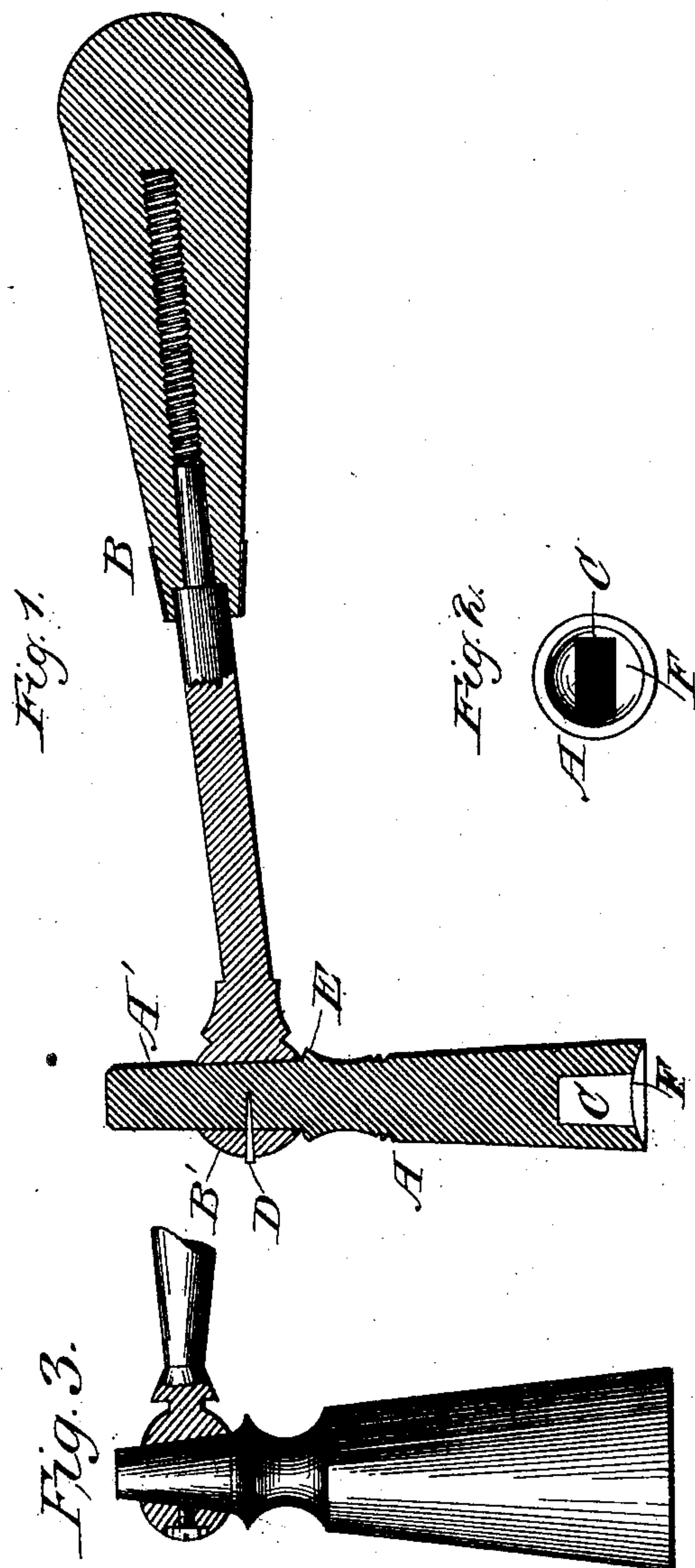


(No Model.)

H. E. FINNEY.
TUNING PIN SETTER.

No. 360,871.

Patented Apr. 12, 1887.



Witnesses.

Will R. Owsen
Chas. G. Page.

Inventor.

Henry E. Finney
By, Geo. G. Elliott
Atty.

UNITED STATES PATENT OFFICE.

HENRY E. FINNEY, OF CHICAGO, ILLINOIS.

TUNING-PIN SETTER.

SPECIFICATION forming part of Letters Patent No. 360,871, dated April 12, 1887.

Application filed January 28, 1884. Serial No. 118,895. (No model.)

To all whom it may concern:

Be it known that I, HENRY E. FINNEY, a citizen of the United States, residing in Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Tuning-Pin Setters for Pianos, of which the following is a specification.

In tuning pianos, and especially those which have been long in use, it frequently becomes necessary to set or drive down in their sockets the pins for the strings, in order that the pins shall be held firmly and prevented from being turned by the tension of the strings which are wound around the pins. These pins in a piano are arranged so closely together that in selecting any one pin to be set or driven down it is usually found necessary to transmit the force of a blow to the pin through the medium of some tool resting upon the top end of the pin, and in turn struck at its top end with a hammer or analogous implement—as, for example, it is common with professional piano-tuners to hold with one hand an ordinary nail-setter consisting simply of a short metal stem, and, resting this on the top end of the pin, strike the setter with some instrument held by the other hand of the operator; but in thus driving down or setting the pins they are, during the moment of impact, liable to turn under the tension of the strings, thereby entailing extra labor on the part of the operator—as, for example, in old pianos when a pin is thus struck it is liable to turn back, so as to entirely slacken up the string, and in turning the pin forward again it is apt to be drawn somewhat out, so that when released the pin will immediately turn back, or else the piano will soon get out of tune.

The object of my invention is to overcome such objectionable features incident to the tuning of pianos, and to provide an improved tool or device by means of which the pin can be prevented from turning while being set or driven down; also, to provide a strong, light, novel, and simple device constituting an efficient tuning-pin setter by which any one pin in the lot can be readily selected and prevented from turning while being driven down.

A further object is to provide a tool capable of subserving the above purposes, and also of being readily and easily brought into engagement with any one pin. These objects I

attain by means of the device hereinafter described and claimed, and illustrated in the annexed drawings, in which—

Figure 1 illustrates a longitudinal section taken centrally through a device constructed in accordance with my invention; Fig. 2, a plan view of that end of said device which is adapted to receive any one of the pins provided for the strings of a piano; Fig. 3, a detail side elevation, partly in section, showing a set-screw as an equivalent device to the pin for securing the handle to the stem.

The stem A, which is adapted at one end to fit on a tuning-pin, is made of a cylindrical shape from said end up to a point where it is contracted, so as to form a neck, A', with a shoulder, E, at the junction of said neck and the cylindrical main body portion, which latter is preferably made somewhat tapering from its end to the shoulder, although it could be made of a straight cylindrical conformation, if desired, so long as its configuration admits of its being introduced in a set of closely-set pins, so as to engage any one of the pins to be set. This stem is provided with a handle, B, fitted at one end on the neck of the stem and up to and against the shoulder at the junction of the neck and main body of the stem, said handle being arranged at such angle to the stem that when the handle is grasped by an operator the tool can be maintained in a vertical position.

The handle, which can be made extensible, if so desired, has a metal shank portion, B', which is enlarged or expanded at one end, so as to form a substantially spherical enlargement or bearing, B², through which a mortise is formed for the neck, upon which the said bearing is fitted. This bearing, which fits on the stem, is also fitted close up against the shoulder E at the junction of the neck and main body portion of the stem, in which way the inner end of the handle, while being fitted on the stem, is also seated against a shoulder on the latter, which admits of a more efficient and rigid connection between the two members. The enlarged end or bearing B' is provided with an opening for a pin, D, which enters said opening, and also extends into a socket in the neck; or, as an equivalent thereof, a set-screw can be employed.

The shoulder E is made at such distance back of the end of the neck, and the bearing

B' is made of such diameter, that when the bearing is fitted on the neck and fitted against the shoulder sufficient of the end portion of the neck shall extend beyond the shoulder to form a striking end for the stem, so that by holding the device with the socketed end of the stem engaging a pin and the opposite end thereof uppermost, the latter end can be struck with a hammer or other instrument, so as to drive the pin down more firmly in its seat.

The stem A is provided in its base or lower end with a socket, C, in which the pin to be turned or driven down, or both, is received. This socket is formed centrally in the base portion of the stem, and is made rectangular, so that when the stem is fitted upon a pin and turned the sides of the socket acting against the pin shall cause the latter to turn with the stem, and thereby vary the tension of the string proportionately to the extent to which such operation is conducted.

It will be obvious that by providing the stem with a comparatively long handle extending laterally from the stem sufficient leverage can be obtained to enable a person tuning the piano to hold the pins thereof against turning with great ease while they are being set or driven down, and that by inclining to some extent the handle relatively to the axis of the stem the instrument can be held by the operator in a natural and easy position while employing it to hold the pins with which the strings are connected.

If, now, it becomes necessary to drive down a pin in its socket in order to seat it more firmly therein, the only operation necessary will be to fit the stem on a pin, and while holding the handle of the stem strike the stem on its top end with a hammer or any convenient means, so that the impact received thereon shall be transmitted through the medium of the stem to the pin, upon the top end of which latter that portion of the stem which is at the inner end of the socket rests. It will be seen that the pin thus held against turning receives the force of a blow transmitted through a solid homogeneous body, whereby the impact on the pin will be positive, and also there will be no liability of breaking or injuring the handle, which is connected to and made rigid with the stem at a point below the top end of the

latter, which is struck as aforesaid, the walls of said concavity constituting a guide for guiding the stem on a pin when this end of the stem is seated on a pin.

Prior to my invention a tuning-hammer has been constructed with a stem socketed at one end, and connected with a handle having a forked end with an eye in each prong, through which the stem passes, and a quadrant fitted and vertically adjustable on the stem between the perforated ends of the prongs, the stem being in such case extended above. Such device, however, is not well adapted for driving down the pin, since the concussions impair the connection between the several parts, and also the labor and difficulty of manufacture has so added to the expense that such devices are not in favor with piano-tuners. In some instances a combined tool consisting of a body having a hammer at one end, a wrench and socket at the other, and a handle at the middle has been made; but such devices are not designed for setting piano-tuning pins, and have been cast in one piece with a configuration which adapts them for driving nails or subserving the purposes of an ordinary wrench, but which will not admit of their fitting a piano-tuning pin.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

A device for setting tuning-pins of pianos, consisting of a stem, A, provided at one end with a socket adapted to engage a tuning-pin, and at its opposite end contracted to form a neck with a shoulder, E, at the junction of the neck and main body of the stem, in combination with a handle, B, having one end expanded to form a single bearing, B', which is fitted upon the said neck up to and against the shoulder and detachably secured upon the neck by a set-screw, the outer end portion of said neck being extended beyond the bearing, so as to form a striking portion susceptible of being struck so as to set any one of a set of tuning-pins, no matter how closely they are set together, substantially as described.

HENRY E. FINNEY.

Witnesses:

W. W. ELLIOTT,
JNO. G. ELLIOTT.