(No Model.)

C. E. CUNNINGHAM & W. D. WARNICK.

PIANO STOOL.

No. 431,803. Patented July 8, 1890.

Fig. 3.

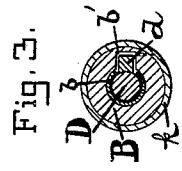


Fig. 4.

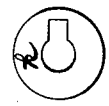


Fig. 5.

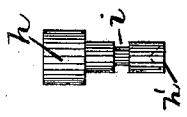


Fig. 2.

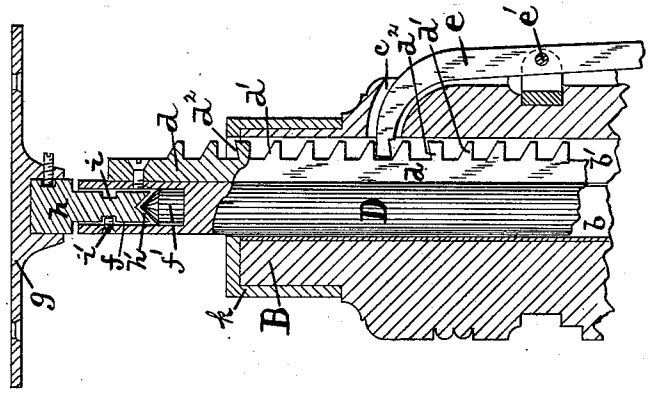
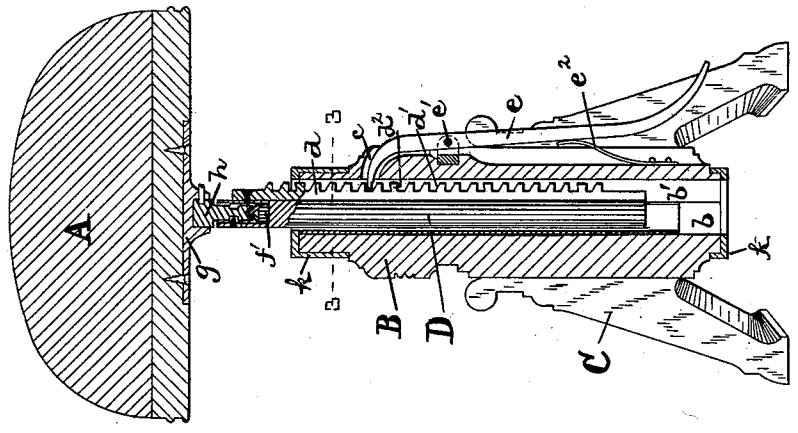


Fig. 1.



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PIANO-STOOL.

SPECIFICATION forming part of Letters Patent No. 431,803, dated July 8, 1890.

Application filed April 14, 1890. Serial No. 347,886. (No model.)

To all whom it may concern:

Be it known that we, CHARLES E. CUNNINGHAM and WILLIAM D. WARNICK, citizens of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Piano-Stools, of which the following is a specification.

This invention relates to an improvement in piano-stools, and has for its object to provide such construction as will enable the seat of the stool to be raised or lowered without the necessity of twirling the seat, as is the case where the screw is used.

The construction whereby the desired result is accomplished will be described in connection with the accompanying drawings, in which—

Figure 1 is a sectional elevation of the stool. Fig. 2 is a sectional view of part of same on larger scale. Fig. 3 is a sectional view on line 3 3 of Fig. 1. Fig. 4 is a top view of the post-cap. Fig. 5 is a side view of the pivot-bar.

The letter A designates the seat, B the stand or base, and C the legs. The stand or base B has a cavity *b* through its center, so as to receive the racked bar D, which is attached to the seat A. This cavity or bore is part round and has at one side a square-shaped groove *b'*. The racked bar D fits snugly therein, the tooth part *d* occupying the square part *b'*, as shown in Fig. 3. A vertical lever *e* is pivoted to the base B at *e'*, and its upper end passes through a side hole *c* in the base B and engages with the racked bar D. A spring e^2 is fastened by one end in the base and presses against the lower end of the lever *e*, so as to keep the upper end engaged with the racked bar D. The racked bar D has two kinds of teeth—slip-teeth *d'* and stop-teeth d^2. The slip-teeth *d'* are half V-shaped—that is, their under side projects laterally at a right angle to the vertical bar and their upper side has a downward incline. The lower right-angled side of a slip-tooth *d'*, resting on the upper end of the lever *e*, will sustain the seat, and when it is desired to raise or elevate the seat A it is only necessary to grasp the seat and lift it, whereupon the downward incline of the upper side of the teeth *d'* will slip up over the end of the lever *e*. At certain intervals—say every fifth slip-tooth—is a stop-tooth d^2. These have a straight lateral under side like the other teeth, but have a reverse inclined upper side—that is, the upper side inclines upward instead of downward. These stop-teeth d^2 will not slip either up or down past the end of the lever *e*.

In order to give the seat A a revolving motion without causing it to raise or lower, the upper end of the racked bar is provided with an axial bore *f*, into which is fitted tight a cone-shaped steel bearing *f'*. Attached to the seat A is a metal plate *g*, to which a pivot-bar *h* is fixed rigidly. This pivot-bar has a concaved end socket *h'*, which fits snugly over the cone-bearing *f'*. This pivot-bar *h* occupies the axial bore *f* and revolves therein on the steel cone-bearing *f'*. The pivot-bar *h* is provided with an annular groove *i*, and a screw *i'* passes through the wall of the bore *f* in the upper end of the racked bar D, and engages in said groove *i*. A metal cap *k* fits on each end of the base-post B, and has openings through which the racked bar passes.

The operation of the stool is as follows: To elevate it to any desired height the seat is merely raised by the hands. When desiring to lower the seat, the lower end of the lever is depressed, which disengages it from the racked bar D. The precise construction and arrangement of this lever are immaterial, as it may be so arranged as to be within reach of and worked by the hands instead of by the foot. This construction of the racked bar and the lever may be used also in chairs.

Having described our invention, we claim—

1. The combination of a racked bar D, provided with two kinds of teeth—to wit, slip-teeth *d'*, having a right-angled under side and a downwardly inclined upper side, and stop-teeth d^2, having a right-angled under side and an upwardly-inclined upper side, a seat A, pivoted freely on the upper end of said racked bar, a base provided with a vertical cavity for the racked bar, and a lever pivoted on the base and engaging the said teeth on the racked bar, as shown and described.

2. The combination of a racked bar D, provided with two kinds of teeth—to wit, slip-teeth *d'* and stop-teeth d^2, and having at its

upper end an axial bore *f*, fitted with a cone-shaped bearing *f'*, a seat A, provided with a pivot-bar which occupies the axial bore and revolves on the said cone-bearing, and a lever pivoted on the base and engaging the said teeth on the racked bar, as shown and described.

In testimony whereof we affix our signatures in the presence of two witnesses.

CHARLES E. CUNNINGHAM.
WILLIAM D. WARNICK.

Witnesses:
JOHN E. MORRIS,
JNO. T. MADDOX.