

UNITED STATES PATENT OFFICE.

FREDERICK L. TRAYSER, OF MAYSVILLE, KENTUCKY.

IMPROVEMENT IN PIANO-ACTIONS.

Specification forming part of Letters Patent No. **143,647**, dated October 14, 1873; application filed February 15, 1873.

To all whom it may concern:

Be it known that I, FREDERICK L. TRAYSER, of Maysville, in the county of Mason and State of Kentucky, have invented a new and Improved Piano-Action, of which the following is a specification:

My invention consists of a combined repeating and back-check attachment to the French grand action, by which it is designed to render said action equal to the most perfect repeating action, which, on account of its complication and extraordinary cost, cannot be used in ordinary pianos. The said attachment consists of a notched arm on the hammer-rod and an adjustable-headed screw on the jack, so contrived that, as the hammer drops from the string, it is caught by the head of the screw in the notch of the arm and held in check about a quarter of an inch from the string, to allow it to vibrate, while the rebound is prevented by the heel of the arm below the notch bearing against the head of the rod, and the arrangement of the jack, hammer-butt, notched arm, and adjusting-rod is such that, after the hammer is caught this way, the key being allowed to rise slowly, the jack will again fall into its notch as soon as the key has risen an eighth of an inch, so that a repetition can be made at any rise of the key above that amount, thus rendering the French grand action a repeating action without additional expense in the construction.

Figure 1 is a side elevation of my improved action in the normal condition. Fig. 2 is a side elevation of it, showing the positions of the parts after the hammer has struck and fallen back, and been caught and checked, preparatory to a repeating stroke.

Similar letters of reference indicate corresponding parts.

A is the key, B the jack for actuating the hammer, C the hammer-butt, D the hammer-shank, and E the hammer, of a French grand action. F is the string. G is the arm which I attach to the hammer-shank. H is the notch in the side of it, and I is the adjusting screw-rod which I apply to the jack for catching in the notch H of arm G, to check the hammer when it falls away from the string, and hold it ready for a repeating action; also, to allow the jack to return into the notch J of the hammer-butt by the rising of the key, which it does by the time the key rises about an eighth of an inch, as aforesaid, the hammer resting meantime on the rod L. The rebound of the hammer, after being caught by the arm G and rod I, is prevented by the heel K of the arm G acting against the head of the rod I, as shown in Fig. 2.

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

1. The combination of the back-check and repeating attachment G I with the hammer and jack of a French grand action, when said parts are constructed and arranged substantially as specified.

2. The arrangement of the heel K of arm G, relatively to the head of the rod I, as described, to prevent the rebound of the key, substantially as specified.

FREDERICK L. TRAYSER.

Witnesses:

THO. A. RUPESS,
W. W. BALL.