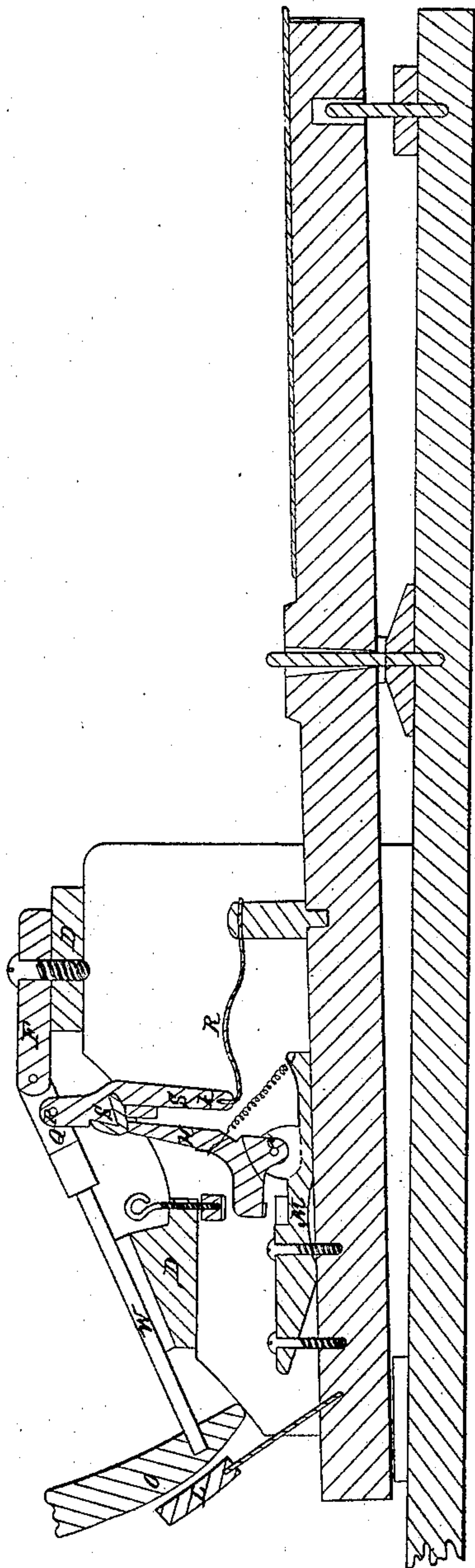


Patented Sep. 9, 1851.



Siberia 10th
Chas. E. Lapp.

James A Gray

UNITED STATES PATENT OFFICE.

JAS. A. GRAY, OF ALBANY, NEW YORK.

PIANOFORTE-ACTION.

Specification of Letters Patent No. 8,352, dated September 9, 1851.

To all whom it may concern:

Be it known that I, JAMES A. GRAY, of the city of Albany, State of New York, have invented a new Improvement in Actions of
5 Pianofortes; and I do hereby declare the following specifications, with the drawings attached thereto and forming a part thereof, to be a full and perfect description of the same.

10 The nature of my invention consists in having an independent movable or oscillating shoulder attached to the hammer butt for the hopper to act upon in throwing the hammer against the strings of the piano forte,
15 and also the extension of this shoulder downward so as to connect with a spring.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation.

20 I construct the different parts of the piano forte action, hopper bottom M, hopper H connected to the hopper bottom by the center pin at *a*, flange F, hammer O, hammer shank W, &c., in the customary or usual manner
25 but instead of having the shoulder of the hammer butt for the hopper H, to act against, detached from the hammer butt, or forming a part of it, I make an independent oscillating shoulder S, S, to the hammer butt

Q and connected to it by a center pin at P, 30 and extend it downward to *k*, so as to connect with a spring R, said spring being useful in keeping the shoulder S, S, in its proper position and in supporting or sustaining the shoulder S, S, and its superen- 35 cumbent weight the hammer O: in consequence of which arrangement the top of the hopper H, is permitted to play freely under the shoulder S; thereby enabling the performer to repeat the blow of the hammer 40 with more celerity, and also to have a more perfect control of the working and power of the same.

What I claim as my invention, and desire to secure by Letters Patent is— 45

In having the shoulder under which the hopper plays attached to the hammer butt by a center pin, forming an independent oscillating shoulder to the hammer butt, (said shoulder being usually detached from the 50 hammer butt, or composing a part of it).

I also claim the extension of the back part of the shoulder down so as to connect with a spring.

JAMES A. GRAY.

Witnesses:

SIBERIA OTT,
CHAS. E. HOYT.