





# UNITED STATES PATENT OFFICE.

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## ADJUSTING DEVICE FOR CASES OF AUTOMATIC PIANO-PLAYERS.

SPECIFICATION forming part of Letters Patent No. 750,612, dated January 26, 1904.

Application filed November 13, 1903. Serial No. 181,012. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK V. CROFUT, of Derby, in the county of New Haven and State of Connecticut, have invented a new and useful  
 5 Improvement in Adjusting Devices for Cases for Automatic Piano-Players; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a  
 10 full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view of the inside of one end of a case for automatic piano-players,  
 15 showing one of my improved adjusting devices attached thereto; Fig. 2, a sectional view on the line *a b* of Fig. 1; Fig. 3, a transverse sectional view through the adjusting-nut; Fig. 4, a side view, partially in section, of the ad-  
 20 justing-key.

This invention relates to an adjusting device for cases of automatic piano-players.

In the more usual construction of adjusting devices for automatic piano-players a screw is  
 25 arranged in the center of each end of the case, which is turned by means of a pinion operated through a hole in the side of the case. This makes it desirable to provide a bushing for this opening, and in adjusting the screws the  
 30 key or crank is liable to slip and mar the case. Furthermore, in adjusting at the center the caster-frames are liable to rock and so throw the case out of proper position with relation to the keys. It is usually necessary to remove  
 35 the front of the case when an attachment is being adjusted for a piano, and the object of this invention is to provide means for adjusting the elevation of the case from a point accessible from the front when the case is re-  
 40 moved.

A further object is to obtain a rigid frame which not only holds the casters in proper position, but also reinforces the sides of the case, and the invention consists in the construction  
 45 as hereinafter described, and particularly recited in the claims.

In illustrating my invention I have shown only one end of a casing; but it will be un-

derstood that a similar device is employed at each end.

To the sides A of the case I attach a yoke B, having arms C at each end formed integral therewith, and in these arms are vertical pas-  
 50 sages forming sockets D, through which screw-threaded spindles E extend, in the lower ends  
 55 of which casters F are swivelly mounted. Upon each of the spindles is a nut G, internally threaded, corresponding to the threads on the spindles and formed with external spur-teeth  
 60 H. These nuts have a bearing in clearance-slots I, formed in the sockets, whereby they are held against vertical movement, but free to rotate. Meshing with these teeth are worm-  
 65 screws J, mounted upon a shaft K and held in position by bearings L. The forward end of  
 70 this shaft is formed with a notch M or made angular to receive a key N, by which it may be turned. The forward end of this shaft  
 75 terminates inside the front A' of the case and so that when that front is removed the shaft is  
 80 readily accessible. The spindles E extend above the arms C, and to prevent their turning in their sockets they are connected to-  
 85 gether by a stay O, which is a flat piece of metal entered into notches P in the upper ends  
 90 of the spindles and connected therewith by pins Q.

To adjust the frame to different elevations, the front A' of the case is removed, exposing  
 80 the ends of the shaft K. The turning of this shaft causes the worm-screws J to rotate the nuts G, and thereby raise or lower the spin-  
 85 dles E and cause the casters F to project to a greater or less extent below the bottom of the case. The yoke and sockets at opposite ends  
 90 form a rigid support for the casters and reinforce the sides of the case and positively prevent rocking, and as access to the adjusting device is to be had through the front of the case the necessity of the key-opening in the side of  
 95 the case is avoided.

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

1. An adjusting device for cases for auto-  
 95 matic piano-players consisting of a yoke hav-

ing sockets at each end, vertical screw-threaded  
spindles arranged in said sockets carrying  
casters at their lower ends, nuts on said spin-  
dles, and means for simultaneously turning  
5 both nuts, substantially as described.

2. An adjusting device for cases for auto-  
matic piano-players consisting of a yoke hav-  
ing sockets at each end, vertical screw-threaded  
spindles arranged in said sockets carrying  
10 casters at their lower ends, nuts on said spin-  
dles said nuts having external teeth and a  
transversely-arranged shaft having worms at  
opposite ends meshing with the teeth on said  
nuts, substantially as described.

15 3. An adjusting device for cases for auto-  
matic piano-players consisting of a yoke hav-

ing sockets at each end, vertical screw-threaded  
spindles arranged in said sockets carrying  
casters at their lower ends said spindles con-  
nected together at their upper ends, nuts on 20  
said spindles, and means for simultaneously  
turning the nuts on both spindles, said means  
being accessible at the front of the case, sub-  
stantially as described.

In testimony whereof I have signed this 25  
specification in the presence of two subscrib-  
ing witnesses.

FRANK V. CROFUT.

Witnesses:

JAS. T. MACKAY,  
N. W. PRAG.