W. V. WALLACE.

Piano-Caster.

No. 211,360. Patented Jan. 14, 1879.

Fig. 2.

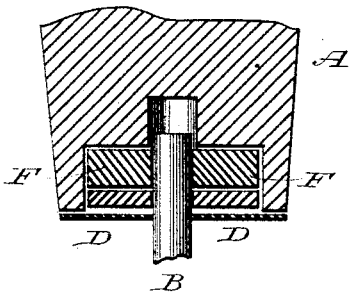
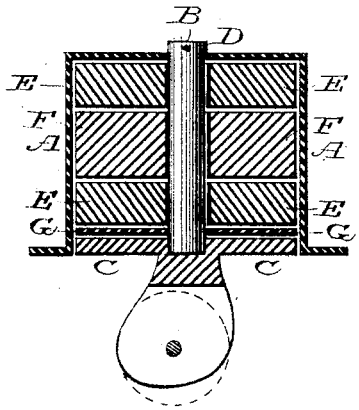


Fig. 1.



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UNITED STATES PATENT OFFICE.

WILLIAM V. WALLACE, OF DORSET, VERMONT.

IMPROVEMENT IN PIANO-CASTERS.

Specification forming part of Letters Patent No. **211,360,** dated January 14, 1879; application filed November 9, 1878.

To all whom it may concern:

Be it known that I, WILLIAM V. WALLACE, of Dorset, in the county of Bennington and State of Vermont, have invented a new and useful Improvement in Piano-Casters, which improvement is fully set forth in the following specification and accompanying drawing.

The object of my invention is to furnish, in the convenient form of a caster, a buoyant support for a piano which will admit of freer vibrations of the instrument than when it rests upon more rigid standards.

To this end I have made metal cups A A, (shown in Figure 1 in annexed drawing,) which serve to hold the packing and form the frame of my new caster, which is set into the bottom of the piano-leg, and secured with screws.

B B is the arm which holds the roller, with shoulder C C, adapted to rest on the packing and sustain the weight of the instrument, and is held vertically by passing through frame at D, above which is a pin or nut to retain and permit upward movement of roller-arm, a hole being made in the leg to admit of this movement.

Among many experiments I tried skeleton-frames of wood in cup A A; also, very thin steel tubes, perforated with numerous holes; thin wooden washers with rubber layers between; thin steel with rubber, leather, felt, hair, straw, &c., but obtained the best result with the use of cork, the elasticity and buoyancy of which act approximately as a suspender of the instrument, permitting a freer vibration of the instrument itself by preventing its vibrations being diverted to a carpet or other more sound-deadening material than the cork.

I place in the cups A A two wooden washers, E E, and one-half inch thickness of cork F F; iron washer G G, which allows C C to revolve easily with roller, the inner space in cups being about one inch deep and one and one-half inch wide. This size and shape and arrangement of parts may be modified at will.

This method will be found very effective where the piano has a hard unsympathetic tone—well illustrated in the ordinary upright piano—and by freeing its vibrations greatly improves its musical quality. These casters may be applied to reed and other organs.

When the tone is thin and feeble, packing the cups with alternate layers of cork and thin steel gives strength and volume.

In Fig. 2 a sectional view of a modified method of applying my invention is shown. A is leg of piano, with suitable cavity to receive packing and roller-arm; B, roller-arm, with shoulder-bearing on packing F F; D D, metal plate, fastened to the bottom of leg, and adapted to sustain arm and packing in place.

I am aware that cork has been used as an insulator in a musical instrument known as "Franklin's Harmonica;" and I therefore do not broadly claim cork in musical instruments; but,

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

1. The inclosing-cup A A, containing cork or other similar buoyant packing, arranged to form an insulating-caster, substantially as shown and described.

2. The revolving roller-arm B B, provided with shoulder C, arranged and adapted to bear on the cushion E F and sustain the piano, substantially as shown and described.

3. The combination of frame A A, arm B B, with shoulder C C, and packing E F, all arranged with the roller to form an insulating-support, substantially as shown and described.

4. The cork cushion or its equivalent, in combination with the caster, and arranged to prevent the dispersion of the vibrations, and form an elastic support for a piano, substantially as described, for the purpose specified.

5. In a piano or other similar key-board instrument, an insulator composed of cork, arranged and adapted to prevent the diversion of the musical vibrations.

WILLIAM V. WALLACE.

Attest:

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