(No Model.)

P. GOLDSMITH.

PEDAL FOR PIANOS.

No. 564,191. Patented July 21, 1896.

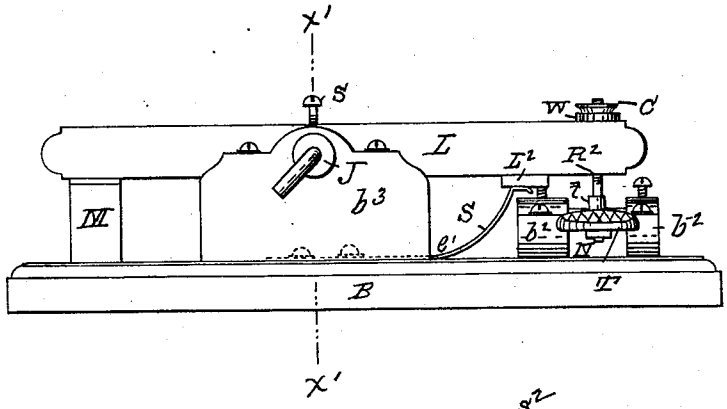


Fig 1

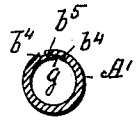


Fig 6

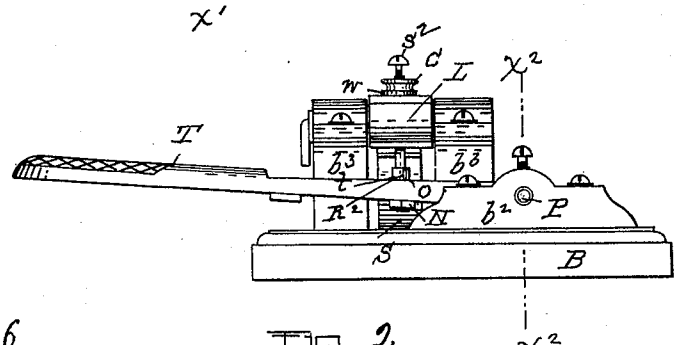


Fig 2

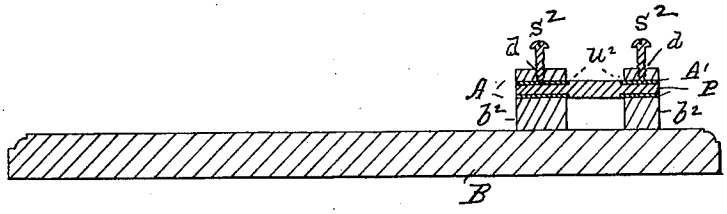


Fig 4

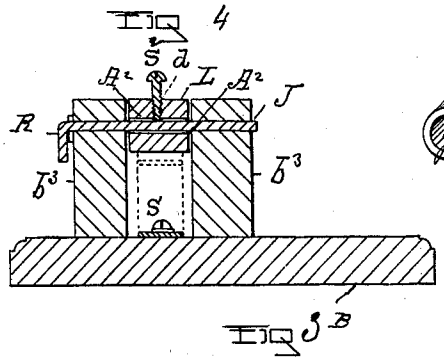
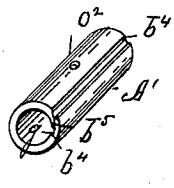


Fig 3

Fig 5



WITNESSES

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PAUL GOLDSMITH, OF TROY, NEW YORK.

PEDAL FOR PIANOS.

SPECIFICATION forming part of Letters Patent No. 564,191, dated July 21 1896.

Application filed March 5, 1896. Serial No. 581,887. (No model.)

To all whom it may concern:

Be it known that I, PAUL GOLDSMITH, of the city of Troy, county of Rensselaer, and State of New York, have invented new and useful Improvements in Pedals for Pianos, of which the following is a specification.

My invention relates to pedals for pianos; and the object and purpose of my improvements are the rendering of these devices noiseless in their action.

As usually made pedals for pianos, after having been used for some time, are apt to squeak and give forth discordant sounds that conflict with those produced by the piano, and to prevent the occurrence of these contingencies is the purpose of my invention.

Accompanying this specification, to form a part of it, there is a sheet of drawings containing six figures illustrating my invention, with the same designation of parts by letter reference used in all of them.

Of the illustrations, Figure 1 is a front elevation of my improved piano-pedal. Fig. 2 is an end elevation of it. Fig. 3 is a section taken on the line x' x' of Fig. 1, with the treadle omitted. Fig. 4 is a section taken on the lines x^2 x^2 of Fig. 2. Fig. 5 is a perspective of the split tube-form bearing used for the hinging-pins of the treadle and lever to rotate in, and Fig. 6 is a cross-section of the split tube-form bearings shown at Fig. 5.

The several parts of the apparatus thus illustrated are designated by letter reference, and the function of the parts is described as follows:

The letters B designate the pedal-base; T, its treadle, which latter at its inner end is provided with a hinging connecting-pin P, arranged to turn in split tube-form bearings A′, placed in journal-boxes b^2 b^2, that are upwardly projected from the base B.

The letter L designates the pedal-lever, which is hinged for a fulcrum at J in a split tube-form bearing A^2, arranged to turn on a hinging-rod secured in the upcast journal-boxes b^3 b^3, this hinging-rod being indicated at R.

The lever L, where immediately over the treadle at right angles thereto, is provided with an adjusting-rod R^2, which is at its top constructed with a metal cap C, having a washer of felt W interposed between the cap and the lever. This rod R^2 is projected downwardly to pass loosely through the treadle at O, and at its lower end where below the treadle it is threaded and provided with a nut N, and where passing through the treadle this rod is covered with rubber tubing t, by which the movement of the rod through the treadle is rendered noiseless, and by the threaded nut the measure of movement communicated to the lever L is graduated.

The letter S designates an upwardly-curved leaf-spring, the lower end e' of which is attached to the base, and the upper end of the spring bears against a patch of leather L^2 attached to the under side of the lever, the function of the free end of the spring where bearing on the leather being to force down the lever L after having been raised, the leather patch serving to prevent the production of discordant sound by engagement with the spring thereat.

The letters d designate oil or lubricant ducts, of which there is one arranged to furnish lubricant for the journal J of the lever L and one for each of the boxes b^2 b^2 of the treadle-bearings.

The split tube-form bearings A′ and A^2 are made alike and each of them is produced from a tube which is slit on one side from end to end, with the edges of the slit each beveled at b^5 and made with a shoulder or stop b^4, and with the beveled edges arranged to lap past each other, but not to meet at the shoulders, but so arranged as to produce a groove g on the inner face of the bearing extending throughout its length, the said groove forming a receptacle for oil or lubricant. Each of the bearings A′ projects inwardly at u^2 beyond the side of the boxes to bear against the side of the treadle. Each of these bearings A′ and A^2 is provided with an oil-passage O^2 formed in their upper surfaces, and the letters d designate ducts made in the bearing-boxes b^2 b^2, and of which there is also one made in the lever L immediately over its journal J, and these ducts are for supplying oil to the split tube-form bearings, they each being vertically in line with the openings O^2 made in the bearings.

The letters S^2 designate screws, of which there is one for the duct d of the journal J and one for each of the treadle-bearings b^2 b^2.

These screws when removed from the ducts d for the entrance of lubricant and when screwed down into the ducts they each enter the opening O^2 of each of the bearings to hold the latter in place and to keep them from turning with the hinging-pins moving therein.

The letter M designates a lever-stop which is upwardly projected from the base B, and in which the outer end of the lever L rests when not moved by the treadle.

As thus made and arranged a pedal for pianos is produced which is perfectly noiseless in its action and prompt in its action.

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

1. In a piano-pedal the combination with the treadle T, having at its fulcrum end a hinged connection produced by means of the pin P, attached to said treadle, and at each side of the latter provided with a slit tube-form bearing A′, having an oil-groove g, and opening O^2, and each of said bearings arranged in a bearing-box b^2, at each side of the treadle, each of said boxes having an oil-duct d, and screws S^2; of the lever L, having an oil-duct d, and screw S^2, and journaled at J, by means of a slit tube-form bearing A^2, arranged in said lever, said bearing being provided with a groove g, and opening O^2, and having a hinging-pin R, passing through said bearing, and secured at each side of said lever in a box b^3; the rod R^2, adjustably connecting said treadle and lever; and the spring S, constructed and arranged to operate substantially in the manner as and for the purposes set forth.

2. In a piano-pedal the combination with the treadle T, having at its fulcrum end a hinged connection produced by means of the pin P, attached to said treadle, and at each side of the latter provided with a slit tube-form bearing A′, having an oil-groove g, and opening O^2, and each of said bearings arranged in a bearing-box b^2, at each side of the treadle, each of said boxes having an oil-duct d, and screw S^2; of the lever L, having an oil-duct d, and screw S^2, and journaled at J, by means of a slit tube-form bearing A^2, arranged in said lever, said bearing being provided with a groove g, and opening O^2, and having a hinging-pin R, passing through said bearing, and secured at each side of said lever in a box b^3; the rod R^2, adjustably connecting said treadle and lever; the spring S, and the lever-stop M, constructed and arranged to operate substantially in the manner as and for the purposes set forth.

3. A slit bearing for piano-pedals formed by a slot made in one side of the tube, with edges of the slit, each oppositely cut away on a bevel b^5, and made with a shoulder or stop b^4, by which the edges may be lapped past each other to produce the lubricant-groove g, substantially in the manner as and for the purposes set forth.

Signed at Troy, New York, this 4th day of May, 1895, and in the presence of the two witnesses whose names are hereto written.

PAUL GOLDSMITH.

Witnesses:
W. E. HAGAN,
CHARLES S. BRINTNALL.