

C. W. GRAVES.
PIANO SHIELD.
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1,017,288.

Patented Feb. 13, 1912.

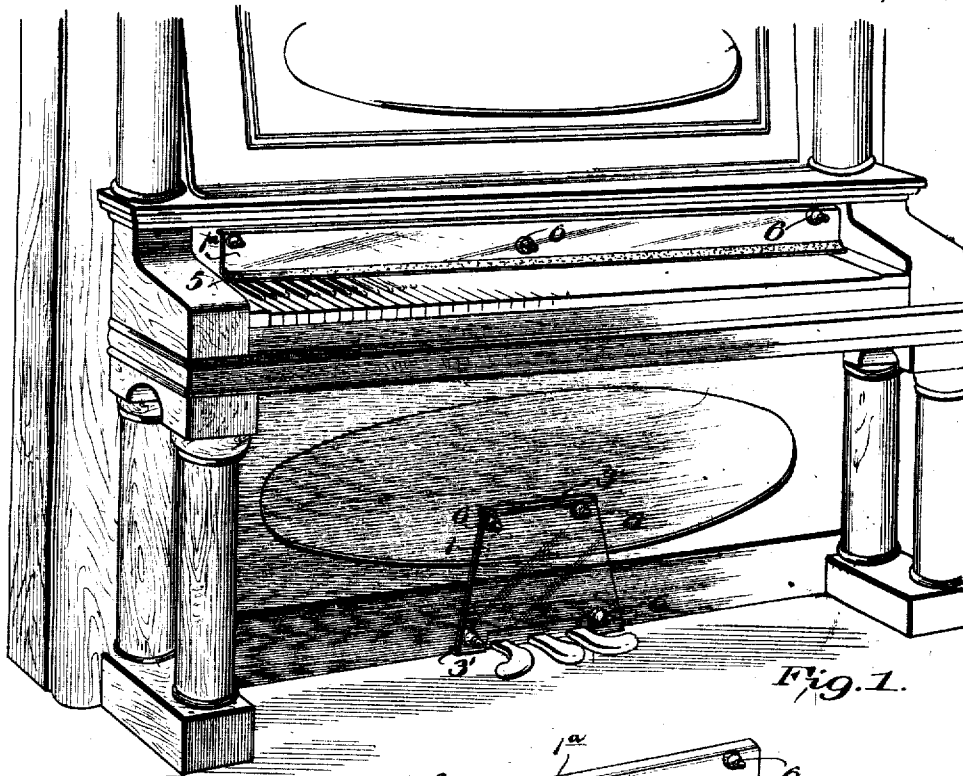


Fig. 1.

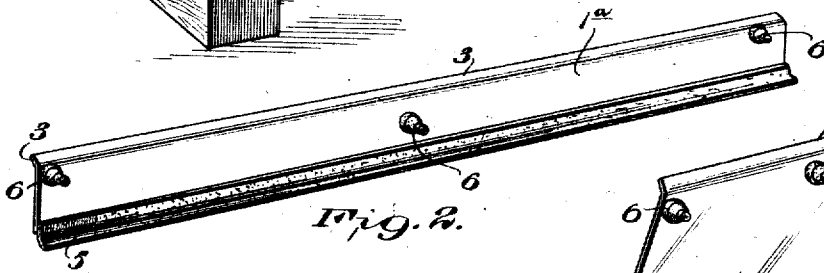


Fig. 2.

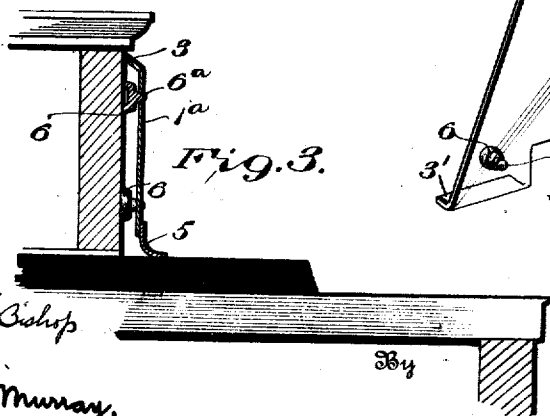


Fig. 3.

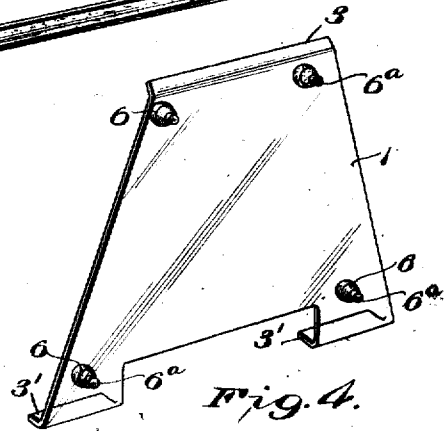


Fig. 4.

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PIANO-SHIELD.

1,017,288.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES W. GRAVES, a citizen of the United States, residing at Logansport, in the county of Cass and State of Indiana, have invented new and useful Improvements in Piano-Shields, of which the following is a specification.

My invention relates to shielding devices which may be readily attached to the highly polished surfaces of pianos, to protect them from injury and disfigurement from bruises, such as result from contact with the feet of the operator, or scratches and marks from the fingers.

The object of my invention is to provide a shield which may be readily attached or detached directly to the highly polished surfaces of the piano, organ, player-piano, or like object, without injury to the surface and which shall remain in position without additional supporting means; and further to provide a shield which shall not disfigure or mar the appearance of the instrument when it is so applied.

This and other objects will be apparent from the following description in connection with the accompanying drawings, in which—

Figure 1 is a perspective view of a piano, showing shields embodying my invention in position to protect the surface adjacent the pedals from contact with the feet and the surface back of the key-board from scratches or marks due to contact with the fingers; Fig. 2 is an enlarged perspective view of the shield adapted to be applied directly above the key-board; Fig. 3 is a vertical cross-section of the same in position; and Fig. 4 is an enlarged perspective view of the shield adapted to protect the surface about the pedals of a piano.

In devising a shield of the character above described, it was desirable that the body of the shield should be transparent, so that the paneling, carvings, decorations, or inscriptions, and color and grain of the wood of the piano or other object should not be obstructed from view and thus not detract from the appearance or in fact attract particular attention, as would be the case if an opaque substance were employed. Again it was essential that the material should be flexible, and elastic or more or less yielding when struck by the feet, as when used to protect the portion of a piano adjacent the pedals from being kicked by

children or those just beginning to play the instrument. This is a very important use of my invention, as will be appreciated by musicians or teachers of music. I therefore prefer to construct the shields of celluloid, which is both transparent and resilient.

The main body 1 of the shield is shaped to conform to the part of the surface to be protected. A suitable configuration for covering a portion of the bottom panel and pedal strip of a piano is shown in Fig. 4, and in position upon the instrument in Fig. 1. The bottom part is cut out or recessed for the passage of the pedals. The top and bottom edges are preferably provided with integral inwardly projecting flanges 3, 3', which are adapted to bear against the surface of the piano case and form supports or stiffening edges. The upper flange 3, also serves to form a dust-guard, fitting tightly against the surface of the case and deflecting any dust particles that would otherwise pass behind the shield.

In Figs. 2 and 3, I have illustrated a form of my shield which is especially adapted as a covering for the fall-board and key strip of the piano which, by reason of their location just back of the keys, are constantly receiving scratches from the fingers and nails of the performers. This is also shown mounted in position in Fig. 1. The stiffening flange and dust-guard 3 may be employed, and, if desired, bottom flanges such as shown at 3' in Fig. 4, may also be used. I also preferably secure to the lower edge of this fall-board shield, a bottom strip 5 of fabric which engages the key-strip. This fabric may be made of cloth or ribbon and of any desirable color, and may be attached to the celluloid by stitching through a series of holes provided in the lower edge or in any other suitable manner, and serves to fit into irregular shaped parts which the main body of the shield will not cover.

In order to attach the shields to the polished surfaces readily and without injury thereto, I secure a plurality of rubber vacuum or suction-cups 6 to the rear side of the body of the shield. I have found it convenient to form the cups with a projecting button 6', which may be forced through holes in the shield in a manner to form a tight fit, as illustrated in the sectional view shown in Fig. 3.

To attach the shield to the surface to be

protected, it is only necessary to exert a slight pressure upon the suction-cups sufficient to spread the flexible periphery of the cups which project beyond the flanges 3, thereby deflating or collapsing them and exhausting the air entrapped between the cup and the smooth polished surface. As is well known, the resiliency of the walls of the cup will restore it to its shape as soon as the pressure thereon is released, and in so doing will cause a vacuum thereunder which will cause it to adhere firmly and support the shield. This function of the vacuum-cup is, however, well known, and is not claimed by me as novel *per se*. In order to cause a closer adherence or union between the peripheral edge of the suction-cups, I preferably moisten the edges with glycerin. I believe I am the first, however, to provide shields of the character described, and also the first to devise shields which may be attached without separate securing or supporting devices and by means which will not injure or mar the surfaces of the delicately finished cases of pianos or other musical instruments.

The many advantages to be derived from the use of my invention will now be appreciated, especially by musical teachers and others who use or deal in musical instruments.

While I have only described two forms of my shield for purposes of illustration, it is evident that I may embody it in forms suitable to protect other parts, such as the front panel against which the music books and sheet music rest, or for covering the top edge and side of the lock strip of the piano which, being located directly in front of the performer and under the wrists and hands, is liable to receive many scratches. It is also evident that my shields are adapted to protect the highly polished surfaces, not only of upright, square, and grand pianos, and

organs, but also of player-pianos, music boxes, and other musical instruments having delicately finished cases which are liable to be scratched or injured by contact with the users.

I am aware that many changes may be made in the structure of my surface-protecting shields without departing from the spirit of my invention or the scope of my claims.

Having now described my invention and the manner of embodying and using the same, I claim as new and desire to protect by Letters Patent—

1. A surface-protecting shield for pianos and other instruments, comprising a transparent flexible sheet having inwardly-directed peripheral bearing flanges and suction or vacuum attaching means secured thereto.

2. A surface-protecting shield for pianos and other instruments, comprising a transparent sheet having a lateral stiffening flange and pneumatic attaching means secured thereto.

3. A surface-protecting shield for pianos and other instruments, comprising a transparent sheet having a lateral stiffening flange along one edge, a woven fabric strip secured to the opposite edge, and pneumatic attaching means secured to the rear of the sheet.

4. A surface-protecting shield for pianos and other instruments, comprising a transparent flexible sheet provided with a plurality of apertures and pneumatic flexible attaching devices having projecting buttons secured in said apertures.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CHARLES W. GRAVES.

Witnesses:

CLARENCE E. MERRYMAN,
EDITH MILLIRON.