

H. WELCH.  
XYLOPHONE.

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1,021,345.

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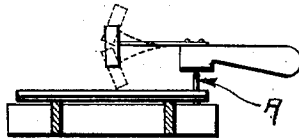
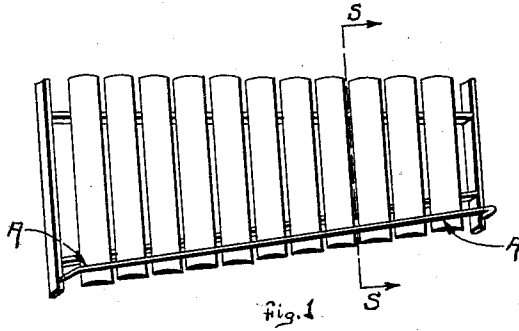


Fig. 2

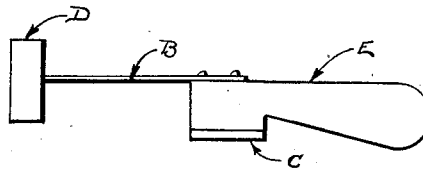


Fig. 3

WITNESSES:  
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# UNITED STATES PATENT OFFICE.

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## XYLOPHONE.

1,021,345.

Specification of Letters Patent.

Patented Mar. 26, 1912.

Application filed January 7, 1911. Serial No. 601,487.

*To all whom it may concern:*

Be it known that I, HENRY WELCH, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Xylophones, of which the following is a specification.

My invention relates to xylophones and has for its primary object the provision of means enabling the player to produce a trill when the hammer is brought in contact with the instrument and the head of the hammer is moved toward the sounding bars thereof, thus enabling a novice playing upon the instrument to produce the same effect a professional player obtains by the proper manipulation of the hammer and by wrist movement, which however cannot be acquired without lengthy practice and special adaptation.

My invention consists in providing the xylophone with a yielding rail associated with a hammer having a spring supported hammer-head, and it further consists in the construction and arrangement of parts to be hereinafter described and more particularly pointed out in the subjoined claim.

In the drawings,—Figure 1 is a perspective view of a representative form of xylophone equipped with part of my invention and adapted for association with another or second part to be manipulated by the player. Fig. 2 is a transverse section taken on line s—s, Fig. 1, the hammer being shown in contact with the hammer rest rail in the position it assumes after being forcibly brought in contact with said rail to cause the head thereof to vibrate. Fig. 3 is a side elevation of my improved hammer.

The xylophone is of the usual construction having a frame work or supporting member on which rest the sounding-bars tuned to scale.

The reference letter A designates a hammer rest rail which is preferably made of spring wire extending along one of the ends of the sounding-bars and having downwardly turned ends secured in any suitable manner to the frame or support of the xylophone. The rest rail is therefore unsupported between its ends and springs or yields under slight pressure or slight force of contact thereagainst by another object.

Associated with the yielding hammer rest rail is my improved hammer, by means of which and the coöperation therewith of said rest rail the desired professional trill can be produced by any player. This hammer comprises a handle E of any suitable shape and material having on its underside a facing of felt cloth and at its upper side having secured thereto a spring shank or arm B, preferably made of thin spring steel, at the free end of which the hammer-head D is secured in any suitable manner. This hammer-head may be of any suitable shape, size and material and is adapted to be brought in contact with the sounding-bars with a vibratory motion produced with a single movement of the hammer handle.

In the use of my invention, the player grasps the handle of the hammer and with a quick motion brings the felt covered portion thereof in contact with the hammer rest rail in line with the sounding-bar which it is desirous to strike. After having brought the handle in contact with said rest rail the hammer may be tilted, with the rail as its fulcrum so that the head will be brought in contact with the sounding-bar by short vibratory movements which gradually diminish in range, and during such gradually diminishing vibrations the player swings the hammer so that the head will strike the sounding-bars with practically the same force during almost the entire vibratory movement of the spring B. By the use of the felt facing on the hammer handle, the hammer may be brought forcibly, yet silently, against the hammer rest rail and in addition, the blow of the hammer against said rail is cushioned, which action assisted by the yielding motion of the rest rail serves to increase the vibratory action of the spring and the frequency of the vibrations of the hammer-head. In addition to assisting the vibratory motion of the hammer-head, the rest rail also allows the hammer-head to properly strike against the sounding-bars when the players exert pressure against the rest rail during the vibratory motion of the hammer, so that between the flexibility of the hammer rest rail and the flexibility of the hammer-head, the "professional trill" can be produced by a novice without practice.

Having thus described my invention, what I claim is,—

A xylophone or the like having a hammer rest-rail extending along the sounding-bars; 5 combined with a hammer comprising a handle adapted to be held in the hand of the player and a head supported from the handle by an elastic shank, said hammer having a

cushion on the handle adapted to engage said rest-rail when said sounding-bars are being 10 struck.

HENRY WELCH.

Witnesses:

CHAS. H. GUTHRIE,  
H. SCHANZLIN.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

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