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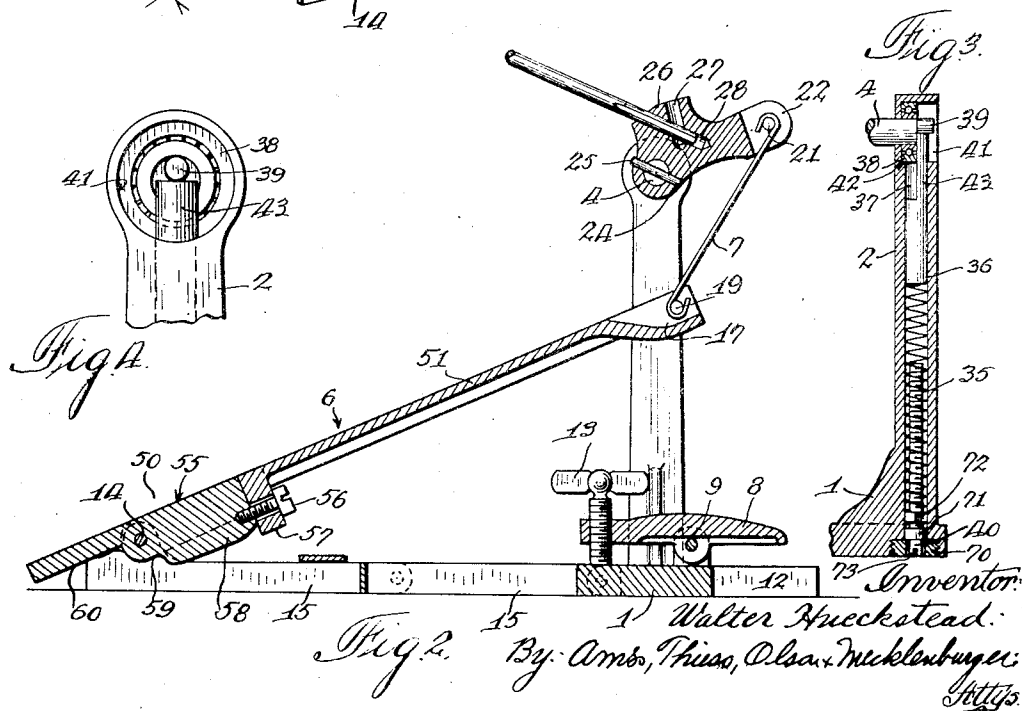
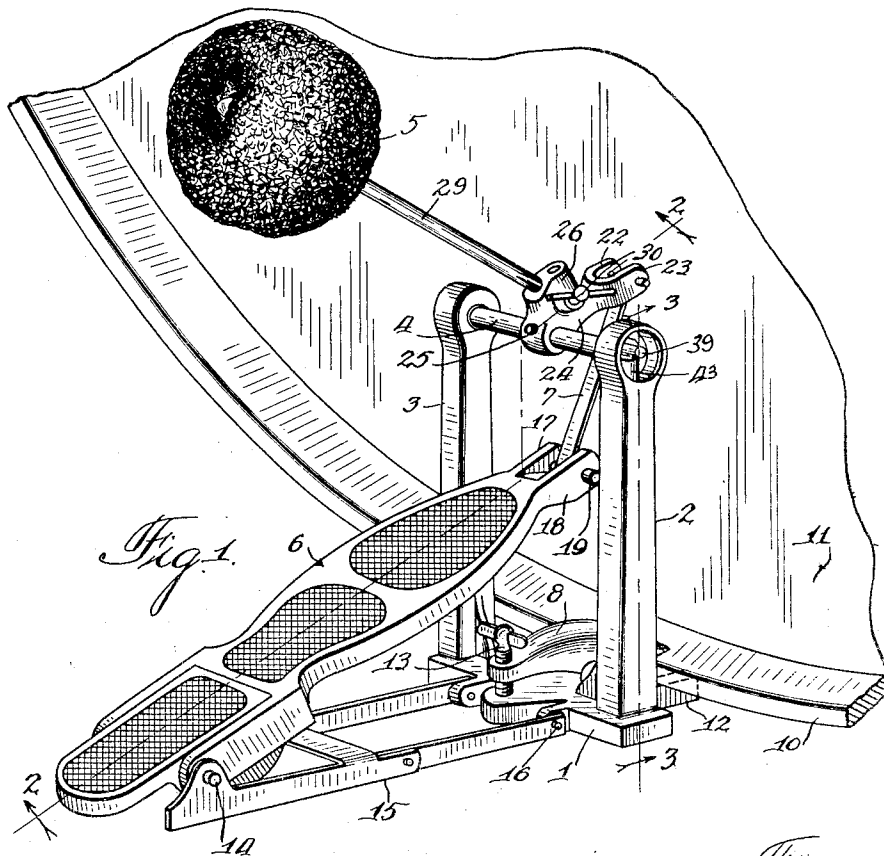
W. HUECKSTEAD

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BASS DRUM BEATER

Filed Nov. 27, 1936

2 Sheets-Sheet 1



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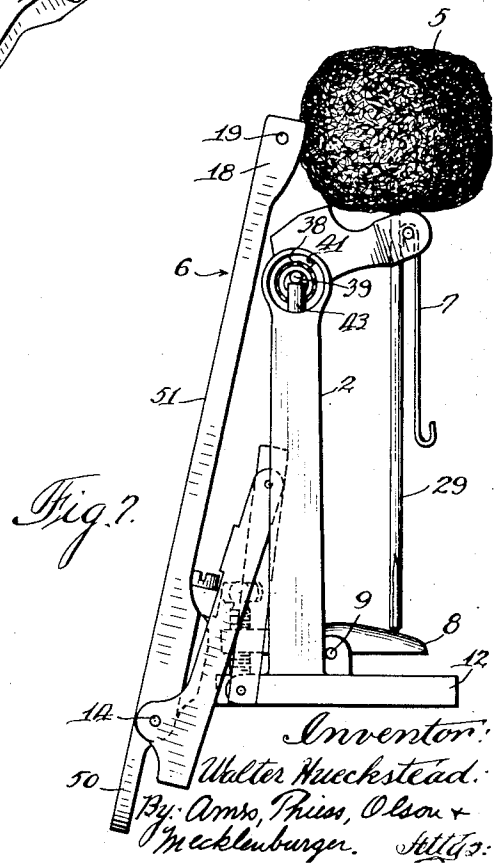
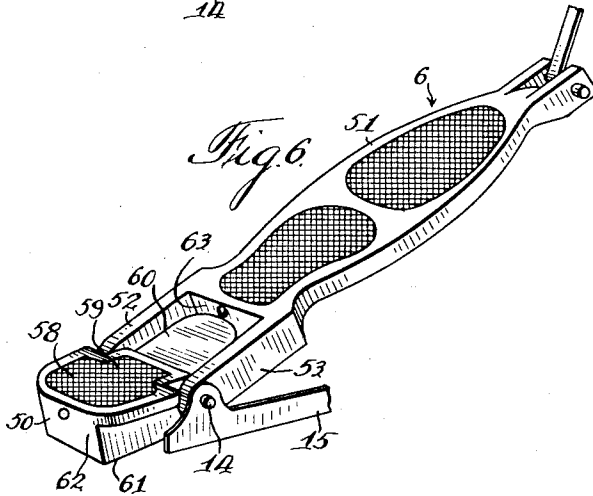
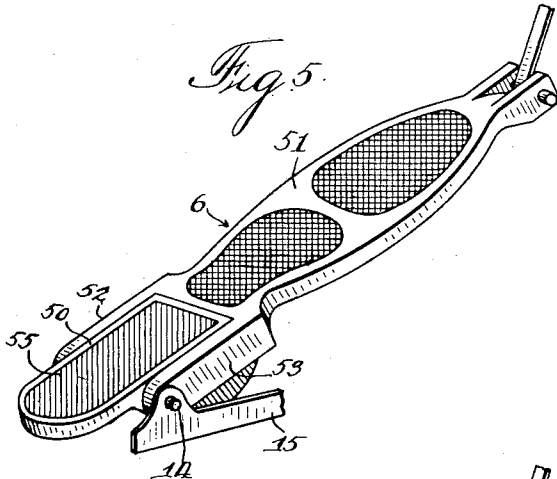
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

2,132,211

BASS DRUM BEATER

Walter Hueckstead, Chicago, Ill.

Application November 27, 1936, Serial No. 112,893

7 Claims. (Cl. 84-422)

This invention relates to a bass drum beater. More particularly, this invention relates to certain improvements in mechanism for effecting a quick return of the beater ball and in the construction of the pedal.

Bass drum beaters have been heretofore provided with a beater ball adapted to be returned by a spring or the like connected to a beater ball bracket and fastened adjacent a supporting post in exposed relation. I have found that locating the spring in this manner is an annoyance, not only in the operation of the foot board, but also in the handling of the device. The spring should not be located in a position to permit accidental engagement by the foot during operation of the foot board, nor should it be located so that it will interfere with the folding of the device or the handling thereof during transportation.

Accordingly, I have devised improved means for overcoming these disadvantages by incorporating this spring in a structure which is not only simple and inexpensive to construct, but which provides a more efficient arrangement of parts and a more rapid return of the beater ball.

One of the objects of the invention is to incorporate this return spring in the supporting posts in concealed relation and to devise an improved type of connection between the spring and rock shaft carrying the beater ball so as to effect a rapid movement of the beater ball when the foot board is actuated.

Another object of the invention is to accomplish these results by a simple and inexpensive structure.

It is also the purpose of the present invention to provide an improved form of foot board that is capable of conversion from a single-piece foot board into a two-piece foot board having separately movable heel and toe portions.

It is found that many individuals prefer a single-piece foot board permitting the entire foot to rest upon and actuate the foot board. On the other hand, many individuals prefer to move only the upper part or toe portion of the foot when actuating the foot board and prefer to rest the heel and use it as a pivot point in the movement of the foot. Accordingly, I have devised an improved form of foot board which may be formed into a single-piece foot board or a two-piece foot board. No tools or implements are required to make the change. The change in form may be quickly made so that the foot board may be converted from one type to the other at will.

Other objects and advantages of the invention will be apparent from the following detailed de-

scription when taken in connection with the accompanying drawings which form a part hereof.

In the drawings:

Figure 1 is a perspective view of a bass drum beater embodying the present invention;

Fig. 2 is a longitudinal sectional view taken on line 2-2 of Fig. 1;

Fig. 3 is a vertical sectional view through one of the supporting posts taken on line 3-3 of Fig. 1;

Fig. 4 is a large detail view illustrating the connection between the rock shaft carrying the foot board and the spring rod;

Fig. 5 is a perspective view of the foot board, illustrating it as a single-piece structure;

Fig. 6 is a similar view, but illustrating the foot board converted into a two-piece structure; and

Fig. 7 illustrates the device folded and ready for transportation.

A bass drum beater embodying the present invention comprises a base 1, supporting posts 2 and 3, a rock shaft 4, a beater ball 5, a foot board 6, and a flexible connection 7 between foot board 6 and beater ball 5. A clamping jaw 8 is pivotally carried at 9 upon base 1, for holding the device to a rim such as 10 of a bass drum 11. Rim 10 of drum 11 is gripped between jaw 8 and one or more feet 12 extending outwardly from base 1, a locking screw 13 being provided to hold clamp 8 in locked position against drum rim 10.

Foot board 6 is pivotally mounted at 14 upon an extensible bracket 15 secured at 16 to base 1. A pair of spaced lugs 17 and 18 at the upper end of foot board 6 receive a pin 19, to which the lower end of leaf spring 7 is hooked. The upper end of leaf spring 7 is hooked to a pin 21 carried by a pair of lugs 22 and 23 formed on a bracket 24 secured to rock shaft 4 by means of a lock pin 25. Bracket 24 is enlarged at 26 and provided with two openings 27 and 28 to receive stem 29 of beater ball 5. Openings 27 and 28 intersect each other as illustrated in section in Fig. 2. At the point of intersection a lock screw 30 is provided so that it will engage and lock the lower end of beater ball stem 29, whether it is inserted in opening 27 or opening 28. The purposes of a plurality of openings 27 and 28 for receiving beater ball stem 29 is well understood in the art. Different occasions require different striking distances for the beater ball. These openings 27 and 28 provide such an adjustment.

Beater ball 5 will swing forwardly to strike the diaphragm of drum 11 when foot board 6 is depressed. Leaf spring 7 acts as a flexible connection between pedal 6 and beater ball bracket

24. Shaft 4 will be rocked in its bearings in the upper end of supporting posts 2 and 3.

In order to effect a quick return of beater ball 5 away from the diaphragm of drum 11 and a quick but smooth return of foot board 6 to its original position after it is depressed, so that it will be ready for another operation as quickly as possible, one or both supporting posts 2 and 3 may be cored so as to receive mechanism that effects said quick return of the beater ball and the foot board. This mechanism is extremely simple and is entirely concealed within one or both supporting posts 2 and 3. The mechanism comprises a spring 35 and a rod 36. Rod 36 is preferably cut at 37 so as to allow sufficient room for a roller bearing 38 carrying the end of rock shaft 4. Rock shaft 4 is provided with an eccentric pin 39 adapted to engage the upper end of rod 36. Spring 35 is preferably an expansion spring and is adjustable at the bottom of the post by a pin 40.

The upper end of each post is preferably cored out into a circular opening as indicated at 41 if said posts are made in the form of castings. The opening 41 permits easy assembly of the ends of rock shaft 4 in the upper ends of posts 2 and 3. Bearing 38 may be inserted upon its seat as indicated at 42 and the end of rock shaft 4 inserted. Rod 36 may then be inserted into the post from the lower end until its reduced portion 43 engages against eccentric pin 39. Spring 35 is then inserted in the post.

Pin 40 may be held in place by a screw plug 70. Collar 71 will rest upon plug 70. The upper part of pin 40 is threaded so that a nut 72 may travel therealong to adjust the tension of spring 35. Spring 35 will bear upon nut 72 sufficiently to cause it to travel along the threaded part of pin 40 when it is turned at its slotted end 73.

It will be observed that the parts described are few and simple and that they are devised to be assembled in a very simple manner.

When foot board 6 is depressed, eccentric pin 39 is brought to bear against the upper end of the reduced portion 43 of spring rod 36. This action depresses spring rod 36 against spring 35. When foot board 6 is released, spring 35 immediately raises rod 36 to lift eccentric pin 39 up so as to translate the lineal movement of rod 36 into rotary movement at rock shaft 4. The action of the spring is instantaneous and returns not only the beater ball 5 away from the diaphragm of drum 11, but also returns foot board 6. Foot board 6 is made smoothly to follow the movement of the foot so that it may be in a position to be depressed instantly whenever desired.

One of the advantages of locating the mechanism for effecting the return of beater ball 5 and foot board 6 will be noted in Fig. 7 which shows the drum beater in folded position ready for transportation. It is essential that a device of this type be readily folded. Musicians are called upon to transport their instruments from one place to another, and it is essential therefore that not only should the device be easily folded in a compact manner, but also it should have its parts constructed to permit easy handling after the device is folded. In the device disclosed herein the spring mechanism is concealed. It is impossible, therefore, to destroy the spring accidentally in handling the device in folded position during transportation, or for the spring to be a constant source of annoyance by reason of being exposed and in the way of the drummer.

It will be understood that each post 2 and 3

may be provided with the mechanism described without complicating the exterior design of the device in any way. If this mechanism is provided in each post, the movement of the foot board 6 and beater ball 5 will be extremely smooth and quick, and will be well balanced. The further advantage resides in the fact that if one of the springs breaks, the spring in the opposite post will be sufficient to operate the device. On the other hand, the device may be operated satisfactorily if the return mechanism above described is provided in one of the posts only.

To permit foot board 6 to be readily converted into a two-piece pedal which many individuals desire in lieu of the single-piece foot board, I have constructed the heel portion 50 in separate relation to the upper or toe portion 51. This latter portion 51 is provided with a pair of spaced lugs 52 and 53 which extend rearwardly to hinge upon pin 14. One side of heel portion 50 is provided as a flat face 55 to allow the heel to rest flatly thereupon with flat face 55 exposed. As illustrated in Figs. 1 and 5, the pedal is adapted to be used as a single-piece foot board. Heel portion 50 is secured to the toe portion 51 by means of a screw 56 disposed underneath the toe portion 51 and carried in a lug 57 formed thereon. The under side of heel portion 50—that is to say, the side opposite to the face 55—is enlarged at 58 and is adapted to receive the end of screw 56 so as to lock heel portion 50 to the toe portion 51 with flat face 55 coextensive with the flat surface of toe portion 51.

However, enlarged portion 58 is a part of the design of the side of heel portion 50 opposite to face 55, that permits the heel of a shoe to readily rest thereupon while the upper or toe portion of the foot engages part 51 of foot board 6 to operate the same about pivot 14. By referring to Fig. 6 it will be observed that enlarged portion 58 is provided with a gentle downward curve as indicated at 59, there being a further depressed face 60 lying between the spaced lugs 52 and 53 as illustrated in Fig. 6. The heel is adapted to rest upon enlarged portion 58. The upper part or toe portion of the foot is adapted to rest upon the toe portion 51 of foot board 6. The heel part 50 will engage at 61 upon the floor and keep the same from pivoting about pin 14 while toe portion 51 is depressed.

Enlarged portion 58 of the heel 50 is provided with a relatively large flat face 62 that fits somewhat closely to face 63 on toe portion 51 between spaced lugs 52 and 53. The close fit between these faces permits the heel portion 50 to be rotated from the position shown in Fig. 6 about pin 14 to the position shown in Fig. 5. The close fit of these faces 62 and 63 allows heel portion 50 to snap into position and remain in this position for normal use. If, however, it is desirable to lock heel portion 50 to the toe portion 51, locking screw 56 may be employed.

It will be apparent that the pedal construction above described may have a wide application, and I do not intend, therefore, to limit the same to bass drum beaters. The construction has an advantage of providing a single-piece or a two-piece pedal at will, without additional expense or complicated design of pedal.

Without further elaboration, the foregoing will so fully explain the gist of my invention that others, by applying current knowledge, may readily adopt the same for use under varying conditions of service without eliminating certain

features which may properly be said to constitute the essential items of novelty involved, which items are intended to be defined and secured to me by the following claims.

5 I claim:

1. A device of the class described comprising a beater ball and a foot board connected thereto for operating the same, a rock shaft for carrying said beater ball adapted to be rocked by depressing said foot board, supporting posts for carrying and housing the ends of said rock shaft, and mechanism in at least one of said posts for effecting a return movement of said rock shaft after said foot board is depressed comprising a spring pressed rod in said post and an eccentric pin, said pin being formed at one end of said rock shaft and bearing against said spring pressed rod.

2. A device of the class described comprising a beater ball and a foot board connected thereto for operating the same, a rock shaft for carrying said beater ball adapted to be rocked by depressing said foot board, supporting posts for said rock shaft, mechanism in said supporting posts for effecting a return movement of said rock shaft after said foot board is depressed, and an eccentric connection between said rock shaft and said mechanism disposed in said supporting posts.

3. A foot board for a drum beater comprising a heel portion and a toe portion, a bracket and a pivotal connection carried thereby for supporting said heel and said toe portion on said bracket with independent pivotal movement with respect to each other and with respect to said bracket, and means for locking said heel portion and said toe portion together to cause said heel portion and said toe portion to swing about said pivotal connection as a unit.

4. A foot board for a drum beater comprising a heel portion having opposed faces and a toe portion, a pivotal connection between said heel portion and said toe portion for supporting said portions thereon with independent pivotal movement whereby said heel portion may be swung independently of said toe portion, one of said faces being substantially flat and adapted to lie in a plane coextensive with the face of said toe portion when said heel portion is swung to bring

said flat face into position for use with said toe portion, the other face of said heel portion being curved to lie in a different plane from the plane of the face of said toe portion when said heel portion is swung to bring said curved face into position for use with said toe portion.

5. A foot board for a drum beater comprising a toe portion, a heel portion having opposed faces adapted for engagement by the heel of the operator, a pivotal connection between said toe portion and said heel portion, a bracket upon which said pivotal connection is mounted, said heel portion being carried by said pivotal connection, and means for locking said heel portion and said toe portion together so that said portions may be actuated as a unit about said pivotal connection when one of said opposed faces of said heel portion is swung outwardly for engagement by the heel.

6. A foot board for a drum beater comprising a toe portion, a heel portion having opposed faces adapted for engagement by the heel of the operator, a pivotal connection between said toe portion and said heel portion, a bracket upon which said pivotal connection is mounted, said heel portion being carried by said pivotal connection, one of said faces being formed to serve as a heel rest when said toe portion is actuated about said pivotal connection independently of said heel portion, the other face being formed to lie coextensive with the face of said toe portion when swung into said position about said pivotal connection, and means for locking said portions together so that said portions may be actuated as a unit about said pivotal connection when said other face is in said position to lie coextensive with the face of said toe portion.

7. A foot board for a drum beater comprising a heel portion and a toe portion, a bracket and a pivotal connection carried thereby for supporting said toe portion and heel portion thereon with independent pivotal movement for said portions, said heel portion having opposed faces, and means for locking said heel portion to said toe portion to nullify their independent pivotal movement when one of said opposed faces is swung into position for use.

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