July 1, 1930. J. PIGNOCCO 1,769,712

DRUM BEATER

Filed Feb. 6, 1928 2 Sheets-Sheet 1

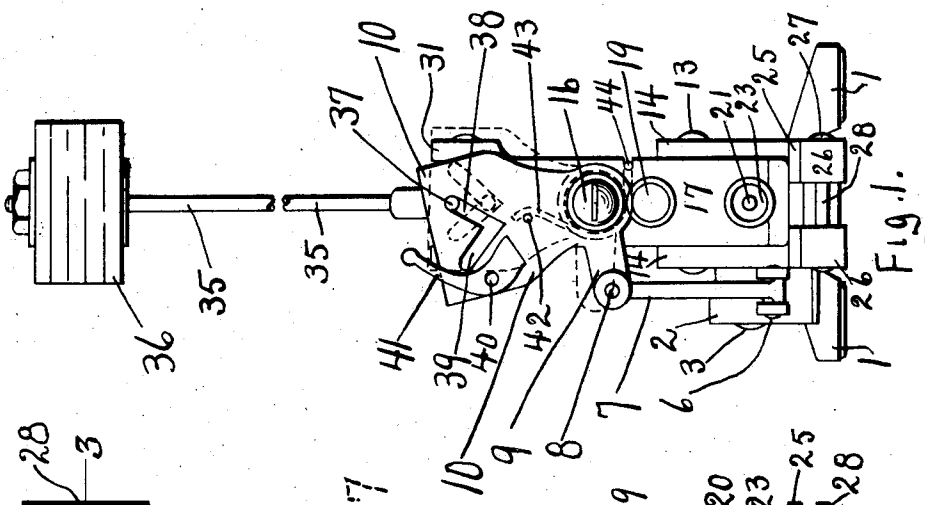


Fig. 1.

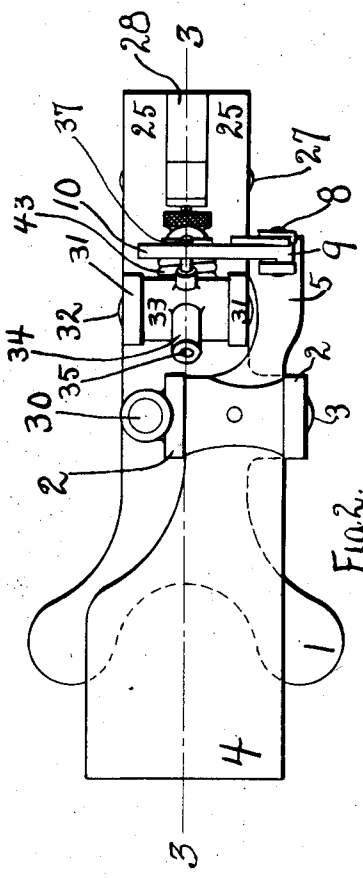


Fig. 2.

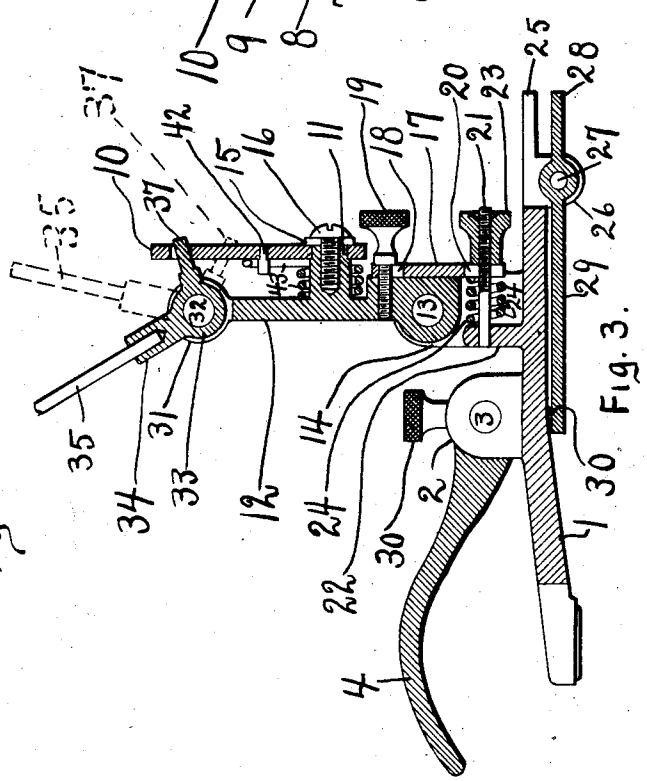


Fig. 3.

INVENTOR.
John Pignocco.
BY
Andrew & Meurenther
ATTORNEYS.

July 1, 1930. J. PIGNOCCO 1,769,712

DRUM BEATER

Filed Feb. 6, 1928 2 Sheets-Sheet 2

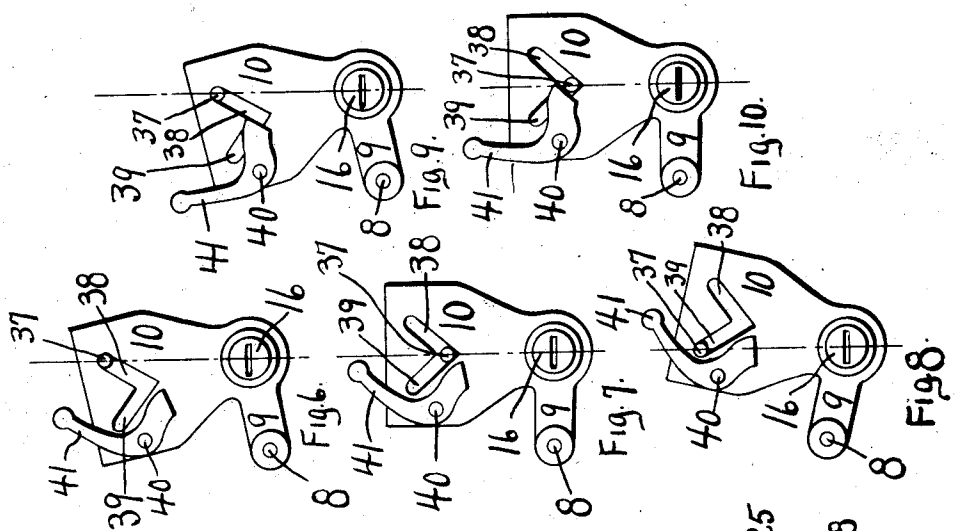


Fig. 6. Fig. 7. Fig. 8. Fig. 9. Fig. 10.

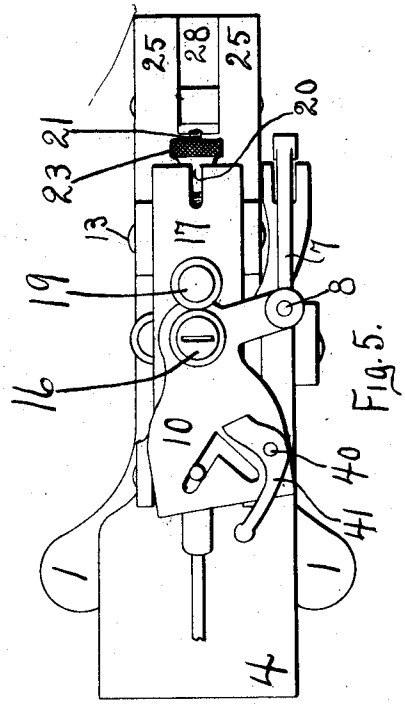


Fig. 5.

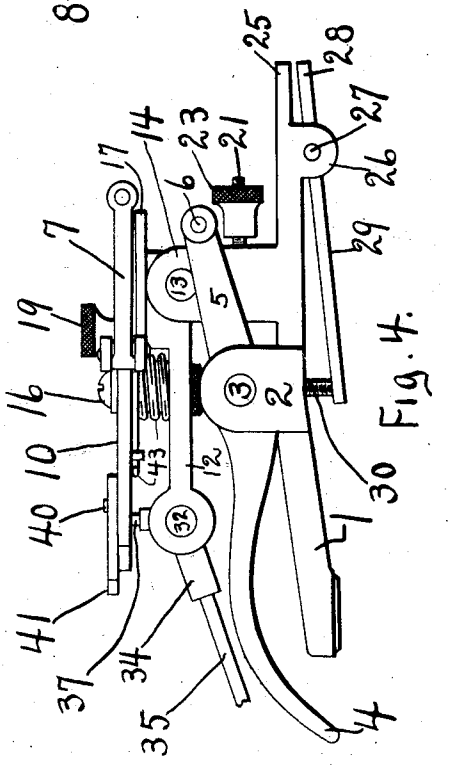


Fig. 4.

INVENTOR.
John Pignocco
BY
Andrew Meurenther
ATTORNEYS.

Patented July 1, 1930 1,769,712

UNITED STATES PATENT OFFICE

JOHN PIGNOCCO, OF OGLESBY, ILLINOIS, ASSIGNOR OF ONE-HALF TO GEORGE A. GROSSKREUTZ, OF LA SALLE, ILLINOIS

DRUM BEATER

Application filed February 6, 1928. Serial No. 252,335.

My invention relates to drum beaters and has for its object the production of a drum beater in which the drum is struck two times for each downward movement of the beater foot treadle, the times of striking being completely controlled by the operator's foot, the drum being struck once when the foot treadle is forced down and again when the foot treadle is automatically returned to its normal position which can also be regulated by merely properly releasing the pressure of the foot on the foot treadle and thus enable the operator to strike the drum in an extremely rapid succession not possible with the foot drum beaters made before my invention, or in the regulated rhythm in exact requirement of the music when written in slower tempo.

A further object is the production of a drum beater which can readily be converted from one making the double beat above described for the extremely fast tempo to one making the single beat for the moderate and slower tempos.

A further object is the production of such a drum beater that is extremely fast and effective in operation and yet exceedingly simple and inexpensive to construct.

A further object is the production of such a drum beater so constructed that it is collapsible and can be readily folded so that it will occupy only a very small space when not in use.

I accomplish these objects by the means shown in the accompanying drawings in which:

Fig. 1 is a front view of my drum beater.

Fig. 2 is a top view of my drum beater.

Fig. 3 is a cross sectional view of my drum beater along a line 3—3 of Figure 2.

Fig. 4 is a side view showing my drum beater folded up when not in use.

Fig. 5 is a top view of my drum beater folded as shown in Figure 4.

Fig. 6 shows the position of the cam plate in its normal position (at extreme left) which is in the same position as shown in Figure 1 with the beater head farthest from the drum.

Fig. 7 shows the position of the cam plate in its mid position when the beater head is striking the drum.

Fig. 8 shows the position of the cam plate in its extreme right position ready to be automatically returned to its position shown in Figures 7 and 6 to strike the drum the second time.

Fig. 9 shows the position of the cam plate same as shown in Figure 6 but with the converting lever so positioned as to change the double drum beater to give only a single beat for each depression of the foot treadle.

Fig. 10 shows the position of the cam plate with the converting lever set for the single beat at the time the beater head is striking the drum.

Similar parts are indicated by the same numeral throughout the several views.

In the drawings 1 represents the base of my drum beater. Attached to 1 are projections 2 each having an aperture into which is fitted a pin 3, which pin 3 is rotatably fitted into an aperture of the foot treadle 4 which has a projection 5 beyond said pin 3. Projection 5 has a bifurcated end having apertures as shown into which is fitted a pin 6 on which is pivotally mounted one end of a link 7 the other end of which is pivotally or universally mounted on a pin 8 fastened to the bifurcated end of a lever 9 which projects from the cam plate 10 which cam plate is journaled on a cylindrical part 11 formed on a member 12 which is pivotally mounted on a pin 13 fastened into the ears 14 mounted on the base 1 as shown. Cam plate 10 is held in position on part 11 by means of the washer 15 and machine screw 16. Member 12 is held in the vertical position by means of a plate 17 which has an elongated aperture 18 at its upper end through which passes the thumb nut 19 whose threaded part fits into a threaded aperture on part 12 as shown making the plate 17 adjustably fastened to the member 12. Plate 17 has a slot 20 on its lower end through which passes a bolt 21 one end of which is fastened in a projection 22 on base 1. On the threaded end of bolt 21 is a thumb nut 23 by means of which the vertical posi-

tion of the member 12 is adjusted, the spring 24 positioned on the bolt 21 and located between the plate 17 and the part 22 acting as an adjusting buffer to assist in positioning the member 12 and is the means whereby the beater head is properly adjusted to strike the drum.

The beater is attached to the drum by means of the end 25 of base 1 being clamped on to the rim of the drum by means of the end 28 of the clamping lever 29 which is pivotally connected to projections 26 on base 1 by means of a pin 27 the clamp being forcibly closed by means of the thumb nut 30 which passes through the threaded aperture in base 1 and presses the left end of clamping lever 29.

Formed on the upper part of member 12 are the projecting parts 31 having apertures in which is fastened a pin 32 on which is pivotally mounted a beater saddle 33 which is constrained sidewise by being placed between the parts 31 as shown (see Figure 2). Saddle 33 has a projection 34 having an aperture in which is fastened the stem 35 on which is mounted the beater head 36. The saddle 33 has another projecting part 37 which passes through the slots 38 and 39 in the cam plate 10, which slots are placed in angular relation to each other and whose lower parts register as shown permitting part 37 to pass freely from slot 38 to slot 39 and vice versa.

Frictionally mounted and pivoted on cam plate 10 adjacent to slot 39 by means of a rivet 40 is the beat converting trigger 41 which when moved to cover the slot 39 as shown in Figures 9 and 10 will not permit the part 37 to enter the slot 39 thus keeping it entirely under the action of the slot 38. If the cam plate 10 is rotated in a clockwise direction (the top of the cam plate 10 is moved to the right) (see Figure 1) which it is evident is done by pressing down the left hand end of the foot treadle 4 which it is evident raises the right hand end 5 of lever 4 which causes the link 7 to push up the arm 9 of the cam plate 10, the part 37 passes downwardly until it reaches the junction of the slots 38 and 39 as shown in the dotted lines in Figure 1 which is the central or mid position of cam plate 10 as well as in Figures 7 and 10. As the downward motion of the foot treadle 4 is continued and cam plate 10 continues its motion in the clockwise direction the part 37 will travel upwardly in the slot 39 until it reaches the position shown in Figure 8 which is exactly the same position of 37 as is shown in Figures 1–6 and 9 so that during this operation the beater head 36 has moved from the position of rest or starting to striking the drum and returning the beater head to the starting position again same having been accomplished by merely pressing the foot treadle 4 down to its lower position. Fastened to cam plate 10 is a pin 42 which acts against a spring 43 which is coiled around the cylindrical part 11 and whose opposite end is fastened to part 12 at 44 and said spring 43 has sufficient tension to rotate the cam plate 10 in the counter clockwise direction as the foot pressure is released from the foot treadle 4 and thus bring the part 37 back to its mid position causing the beater head to again strike the drum and then return the beater head back to its starting position shown in Figures 1–6 and 9 ready to repeat the operation of pressing down the foot treadle 4. Should the beater converting trigger be moved to cover the slot 39 as shown in Figures 9 and 10 the part 37 will be confined entirely to slot 38 so that the beater head can only strike the drum once and be returned by means of the spring 43 to its starting point position and the foot treadle 4 can only move through one half of its downward motion and the drum beater is thus readily converted from a double beater into a single beater.

My drum beater can be folded by simply removing the pin 6 and turning the adjusting thumb nut 23 out until the slotted end 20 of plate 17 will clear the left hand end of said nut 23 when the member 12 will turn to the left on its pin 13 to foot treadle 4 thus folding my drum beater into a narrow compact mass so it can be readily carried about. By using the usual expedient of a ball and socket or other universal joint in the place of pin 8 on 9 and on link 7 it will not be necessary to remove the pin 6 in order to fold my drum beater.

From the above description it is evident that my drum beater head will strike the drum twice for each downward motion of the foot treadle thereby meeting the fastest tempo with the greatest ease on the part of the operator and can be immediately and easily adjusted to give the single beat for the same motion, and that it can be readily folded to occupy only a small space and that it is extremely simple and inexpensive to produce.

It will be understood, of course, that while I have here shown one form of my invention I do not wish to limit myself to the exact form shown but desire to have it taken in a sense illustrative of any or all the forms of my invention that come fairly within the scope of my claims.

I claim:

1. In a drum beater, a base, a foot treadle pivotally mounted on said base, a member adjustably mounted on said base, a plate having cam surfaces associated therewith journalled on said member and rotated in one direction by said foot treadle, resilient means attached to said plate to return it to its starting position, a saddle pivotally mounted in said member actuated by said cam surfaces

and a beater head mounted on said saddle.

2. In a drum beater, a base having clamping means associated therewith, a foot treadle journalled on said base, a member pivotally and adjustably mounted on said base, a plate having cam surfaces associated therewith journalled on said member, a link pivotally connecting said plate to said foot treadle, resilient means attached to said plate and said member, a saddle pivotally mounted on said member and actuated by said cam surfaces and a beater head mounted on said saddle.

3. In a drum beater, a base, a foot treadle pivotally mounted on said base, a member pivotally and adjustably mounted on said base, a saddle pivotally mounted on said member, a beater head fastened on said saddle, means journalled on said member pivotally connected with and actuated in one direction by said foot treadle giving said beater head a striking motion, a spring co-acting with said means to give the beater head a second striking motion.

4. In a drum beater, a base, a foot treadle journalled on said base, a member adjustably mounted on said base, a plate journalled on said member, a link pivotally connecting said plate to said foot treadle, a plurality of surfaces associated with said cam plate, adjustable means on said plate for covering one of said cam surfaces, a saddle pivotally mounted on said member, a projection from said saddle engaging said cam surfaces, a beater head fastened to said saddle and resilient means fastened to said plate co-acting with said foot treadle.

5. In a drum beater, a base, a foot treadle journalled on said base, a member adjustably mounted on said base, a cam plate journalled on said member and actuated by said foot treadle, a beater head pivotally mounted on said member adjacent to said cam plate and adjustable means on said cam plate for giving the beater head a double striking action or a single striking action for each downward motion of the foot treadle.

6. In a drum beater, a base, a foot treadle associated with said base, a member adjustably mounted on said base, a plate journaled on said member and rotated in one direction by said foot treadle, resilient means associated with said plate to return it to its starting position, cam surfaces associated with said plate, a saddle pivotally mounted on said member actuated by said cam surfaces and a beater head mounted on said saddle.

7. In a drum beater, a base having clamping means associated therewith, a foot treadle associated with said base, a member adjustably mounted on said base, a plate journaled on said member and rotated in one direction by said foot treadle, resilient means associated with said plate, cam surfaces on said plate, covering means associated with said cam surfaces, a saddle pivotally mounted on said member actuated by cam surfaces and a beater head mounted on said saddle.

JOHN PIGNOCCO.