

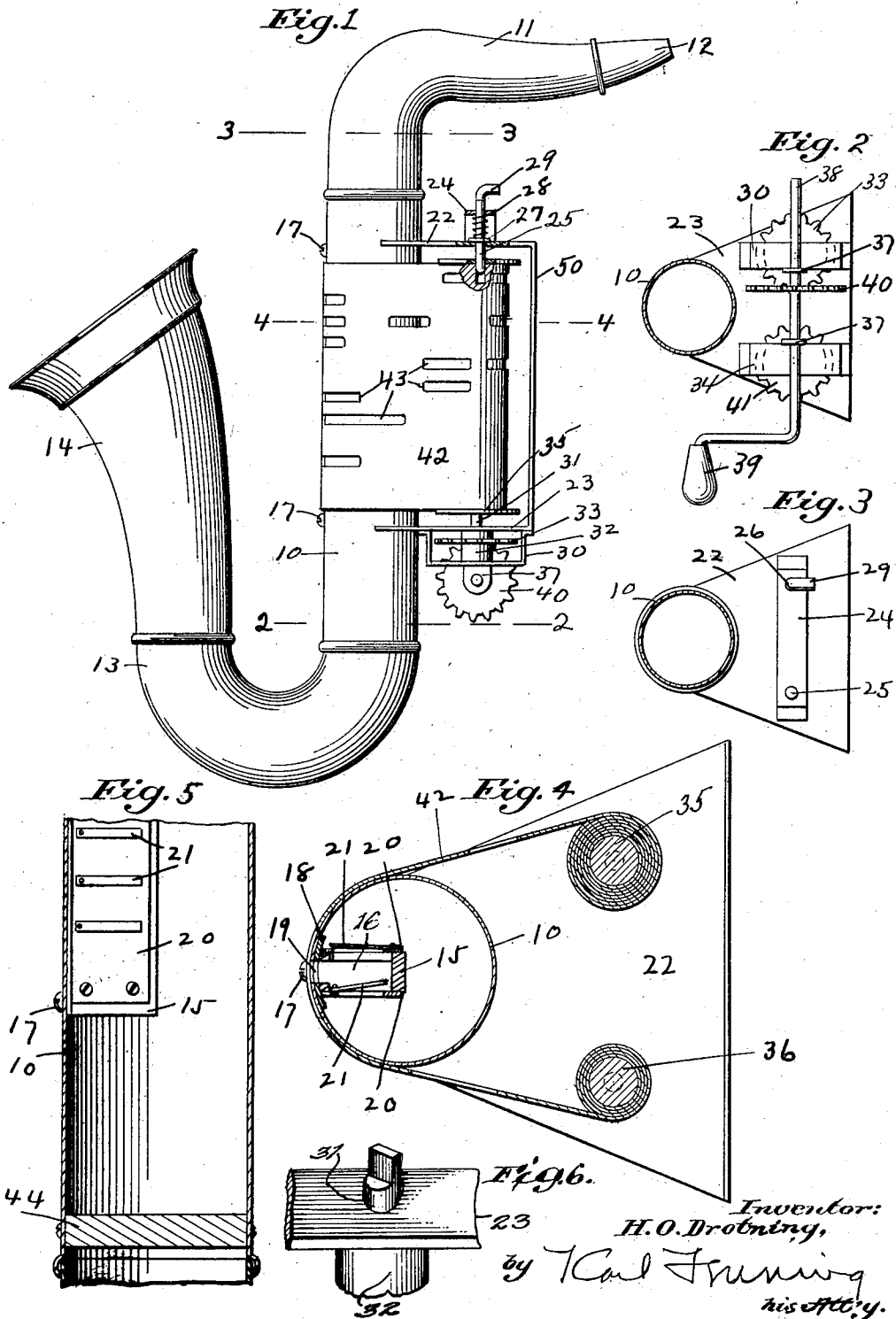
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H. O. DROTNING

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TOY

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Inventor:
H. O. Drotning,
by Carl Fruning
his Atty.

UNITED STATES PATENT OFFICE

HENRY O. DROTNING, OF NEW YORK, N. Y.

TOY

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The present invention relates to a toy simulating the appearance of a musical instrument and in the drawings hereto such a toy is illustrated simulating a saxophone. The toy is intended and adapted to allow a child or a person who has no musical knowledge and no ability to play upon an ordinary musical instrument to produce such sounds and tunes as may be desired by merely blowing into the mouthpiece of the toy and at the same time performing a simple mechanical manipulation. One such mechanical manipulation may be the operation of a crank which in turn may operate a previously prepared film or record or perforated sheet so as to cause it to engage in successive selective way certain portions of the toy.

In the accompanying drawings I have illustrated one specific form the invention may take. This is done for the purpose of clearly and fully explaining my invention. In order to do this I have included specific details of mechanism and shown a specific way of attaching and associating and operating the various parts or elements which go to make up the complete toy. It is to be understood, however, that my invention relates not alone to the specimen illustrated and described, but that numerous changes within the ability of the ordinary mechanic may be made in the various details and that specific elements illustrated may be omitted, eliminated or replaced by other similar or analogous structures or devices.

Bearing this explanation in mind a preferred specific form of the invention is illustrated in Figure 1 which is a side plan view of a toy; Fig. 2 is a horizontal section looking up on the line 2—2 of Fig. 1; Fig. 3 is a horizontal section looking down on the line 3—3 of Fig. 1; Fig. 4 is a horizontal section looking up on the line 4—4 of Fig. 1; and Fig. 5 is a fragmentary vertical section. Fig. 6 is a fragmentary perspective.

The main casing consists of a tube-like structure 10 having at the upper end a curved portion 11 carrying a mouthpiece 12. At the lower end of the tube portion 10 is a curved portion 13 extending in a direction opposite to the portion 11 and carrying a bell-like projection 14, the whole assembly having in general the well known appearance of a saxophone. Within the tube-like portion 10 is a block 15 in which is a series of cells 16. The block 15 is assembled within the main tube portion 10 before the end portions 11 and 13 are put in place and screws 17 pierce the tube member 10 and enter the block 15 holding it in place. Between the block 15 and the tube may be placed a packing member 18 of suitable material. The tube 10 and packing member 18 are provided with a series of registering holes illustrated at 19 in Fig. 4 and the assemblage is such that these holes in the tube and the packing member 18 register with the cells 16. On the sides of the block 15 are placed plates 20 carrying a series of reeds 21 distributed along the sides of the cells 16. On the side of the tube 10 opposite the series of holes 19 is arranged a U-shaped frame 50 the arms of which form a top member 22 and a bottom member 23 which engage and are rigidly fastened to the tube 10. Mounted on the top member 22 is a U-shaped strap 24 through which extend pins 25 and 26. These pins extend downwardly through the top member 22 and each is provided with a collar 27 which normally rests against the top member 22. In order to hold the pins in this position spiral springs 28 are illustrated surrounding each of the pins 25, 26 and resting between the collars 27 and the U-shaped support 24. The pin 26 is provided with an up-turned handle 29 for a purpose to be hereinafter indicated. The pin 25 is illustrated without such handle although it may be provided if desired. The pins 25 and 26 may be held against rotation in the top member 22 or they may rotate therein. Below the bottom member 23 is a U-shaped supporting frame 30 carrying a pin 31 which extends upwardly through the bottom member 23 immediately below the pin 25. An enlarged portion 32 of the pin 31 forms a collar fitting between the U-shaped member 30 and the bottom plate 23 and carried on the collar 32 is a gear wheel 33. A similar pin carrying a gear 41 is supported by the U-shaped member 34 on the bottom member 23 directly below the pin 26. The pins 31 are mounted

to rotate in the bottom member 23 and are irregular or flattened in cross-section at their tips as indicated in Fig. 6 so as to engage corresponding irregular openings in the bottoms of rolls 35 and 36 with which they engage and which they are adapted to rotate. The roll 35 is held in position at its top by the pin 25 which is cylindrical and engages a cylindrical hole in the top of the roll allowing it to rotate. Similarly the roll 36 is held in position at its top by the pin 26 which is cylindrical and engages a cylindrical hole in the top of the roll allowing it to rotate. Downwardly projecting lugs 37 carried by the U-shaped members 30 and 34 rotably support a transversely disposed crank shaft 38 having a handle 39 extending to the right when the toy is in position for use. Rigidly mounted on the shaft 38 is a gear 40 illustrated in Fig. 2 as in engagement with the gear 33 on the pin carrying the roll 35. The shaft 38 is shiftably mounted in its bearings so that when it is moved in the direction toward the bottom of Fig. 2 the gear 40 may be caused to engage the gear 41 which carries the pin engaging the roll 36. By lifting the handle 29 and compressing its spring 28 and retracting the pin 26 a roll 36 carrying a record 42 may be put in place in the frame and put into engagement with the pin 26 and the pin carried by the gear 41. The end of the record 42 may then be carried around the tube 10 past the openings 19 and threaded through the roll 35 which is preferably permanently in place. Proper manipulation of the crank shaft 38 will cause the gear 40 to engage the gear 33 and rotation of the shaft 38 will rotate the roll 35 causing the record to pass across the series of openings 19 and roll up upon the roll 35. While the shaft is being so turned the operator may place his mouth upon the mouthpiece 12 and as the openings 43 in the record 42 selectively register with the respective cells 16 the reeds 21 may be vibrated and the selected tune produced. In order to make more effective the wind of the operator there is provided a plug or closure 44 toward the bottom of the tube member 10. By arranging the cells 16 between the plug or air baffle 44 and the mouthpiece 12 the entrance and exit of air is directed substantially entirely through the openings 43 and the cells 16 thus causing the vibration of the reeds 21 by both the inhaling and the exhaling of the breath to produce the desired tune.

After the record has been passed across the holes 19 it may be rewound on the roll 36 by shifting the shaft 38 to bring the gear 40 into engagement with the gear 41 and rotating the crank shaft 38 in the same direction as when playing the record. The roll 36 containing the record may then be removed by lifting the handle 29 and a new record inserted or the original record may be again

played by shifting the gear 40 into engagement with the gear 33.

The members 11 and 13 are preferably fastened to the tube member 10 in any suitable permanent manner such as by turning and rolling or by soldering. These together with the baffle 44 form closings for both ends of the tube 10 so that when the block 15 has been put in place and its cooperating parts assembled it is removed from tampering. Thus when the device is completed the block 15 cannot be removed or replaced nor is it possible to slide the block or get the cells 16 out of register with the holes 19. This arrangement may be particularly important in a toy to be used largely by inquisitive children who are prone to tamper.

I claim as my invention:

1. In a toy, a casing shaped like a saxophone and having a straight portion in which is a series of aligned holes, a series of cells within the casing having openings registering with the respective holes, reeds in the cells, means for movably supporting a perforated sheet on the casing adjacent the holes, and means operable in one position for moving the sheet to cause the perforations to register with selected holes to allow wind in the casing to vibrate the reeds appurtenant the selected holes and movable in another position for rewinding the sheet.

2. In a toy, a casing shaped like a saxophone and having an intermediate straight portion and a mouthpiece at an angle thereto at one end and a curved portion at the other end on the side of the straight portion opposite to the mouthpiece and provided with a series of aligned holes in the straight portion, a series of cells within the casing having openings registering with the holes in the casing, reeds in sides of the cells, a frame carried by the casing on the side opposite the holes, a top and a bottom to the frame, two oppositely disposed inwardly extending pins on the top one of which is resiliently held, inwardly extending rotatable pins on the bottom registering with the pins on the top, gears carried by the rotatable pins, a slidably mounted crank shaft adjacent the gears, a gear carried by the crank shaft which when in mesh with the gear on the left hand causes a record carried by the pins to proceed in order to play a tune and when in engagement with the gear on the right hand causes the record to be rewound for further use.

3. In a toy, a casing shaped like a saxophone and having an intermediate straight portion and a mouthpiece at an angle thereto at one end and a curved bell-shaped portion at the other end on the side of the straight portion opposite to the mouthpiece and provided with a series of aligned holes in the straight portion, a series of cells within the casing having openings registering with the holes in the casing, reeds in the cells, a

frame carried by the casing on the side opposite the holes, a top and a bottom to the frame, two oppositely disposed inwardly extending pins on the top one of which is resiliently held, inwardly extending rotatable pins on the bottom registering with the pins on the top, rolls mounted on the pins, a perforated record carried by the rolls and traversing the holes in the casing, gears carried by the rotatable pins, a gear on a slidable shaft and extending between the gears on the pins, brackets on the bottom carrying the shaft and allowing it to be shifted and rotated so as to engage selectively either of the gears on the pins, a handle for rotating the shaft to cause the variations in the perforations to open the cells selectively and allow air to vibrate the reeds selectively to produce a tune.

4. In a toy, a casing shaped like a saxophone and having a straight portion in which is a series of aligned holes, a series of cells within the casing having openings registering with the respective holes, reeds in the cells, rolls for movably supporting a perforated sheet on the casing adjacent the holes, gears on the rolls, a slidably mounted crank shaft adjacent the gears, and a gear carried by the crank shaft which when in mesh with the gear on one roll causes the record to proceed in order to play a tune and when in engagement with the gear on the other roll causes the record to be rewound for further use.

5. In a toy, a casing shaped like a saxophone and having an intermediate straight portion and a mouthpiece at an angle thereto at one end and a curved portion at the other end on the side of the straight portion opposite to the mouthpiece and provided with a series of aligned holes in the straight portion, a series of cells within the casing having openings registering with the holes in the casing, reeds in sides of the cells, a frame carried by the casing on the side opposite the holes, a top and a bottom to the frame, two oppositely disposed inwardly extending pins on the top one of which is resiliently held, inwardly extending rotatable pins on the bottom registering with the pins on the top, gears carried by the rotatable pins, a gear on a slidable shaft and extending between the gears on the pins, brackets on the bottom carrying the shaft and allowing it to be shifted and rotated so as to engage selectively either of the gears on the pins so that by rotation in one position the shaft may cause rolls mounted on the pins to rotate and cause a perforated record carried by the rolls to traverse the holes in the casing and by variations in the perforations open the cells selectively and allow air to vibrate the reeds selectively to produce a tune, or by rotation in another position to cause the record to be rewound for use.

6. In a toy, a casing shaped like a saxophone and having a mouthpiece and a straight portion in which is a series of aligned holes, a series of cells within the casing having openings registering with the respective holes, an air baffle in the casing beyond the cells, reeds in the cells, means for movably supporting a perforated sheet on the casing adjacent the holes, and means for moving the sheet to cause the perforations to register with selected holes to allow wind to vibrate the reeds appurtenant the selected holes.

7. In a toy, a casing shaped to simulate a musical instrument and having a straight portion in which is a series of aligned holes, a series of cells within the casing having openings registering with the respective holes, reeds in the cells, rolls for movably supporting a perforated sheet on the casing adjacent the holes, gears on the rolls, a slidably mounted crank shaft adjacent the gears, and a gear carried by the crank shaft which when in mesh with the gear on one roll causes the record to proceed in order to play a tune and when in engagement with the gear on the other roll causes the record to be rewound for further use.

8. In a toy, a casing having a straight cylindrical portion in which is a series of aligned holes, a series of cells within the casing having openings registering with the respective holes, reeds in the cells, rolls for movably supporting a perforated sheet on the casing adjacent the holes, gears on the rolls, a slidably mounted crank shaft adjacent the gears, and a gear carried by the crank shaft which when in mesh with the gear on one roll causes the record to proceed in order to play a tune and when in engagement with the gears on the other roll causes the record to be rewound for further use.

9. In a toy, a casing shaped to simulate a musical instrument and having a mouth piece and a straight portion in which is a series of aligned holes, a series of cells within the casing having openings registering with the respective holes, an air baffle in the casing beyond the cells, reeds in the cells, means for movably supporting a perforated sheet on the casing adjacent the holes, and means for moving the sheet to cause the perforations to register with selected holes to allow wind to vibrate the reeds appurtenant the selected holes.

10. In a toy, a casing having a mouth piece and a straight portion in which is a series of aligned holes, a series of cells within the casing having openings registering with the respective holes, an air baffle in the casing beyond the cells, reeds in the cells, means for movably supporting a perforated sheet on the casing adjacent the holes, and means for moving the sheet to cause the perforations to register with selected holes to allow wind to vi-

brate the reeds appurtenant the selected holes.

11. In a toy, a casing having a straight portion in which is a series of aligned holes, a series of cells within the casing having openings registering with the respective holes, reeds in the cells, means for movably supporting a perforated sheet on the casing adjacent the holes, and means operable in one position for moving the sheet to cause the perforations to register with selected holes to allow wind to vibrate the reeds appurtenant the selected holes and movable in another position for re-winding the sheet.

HENRY O. DROTNING.

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