J. H. SUTLIVE.

BATON, STAFF, OR CANE.

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1,081,168. Patented Dec. 9, 1913.

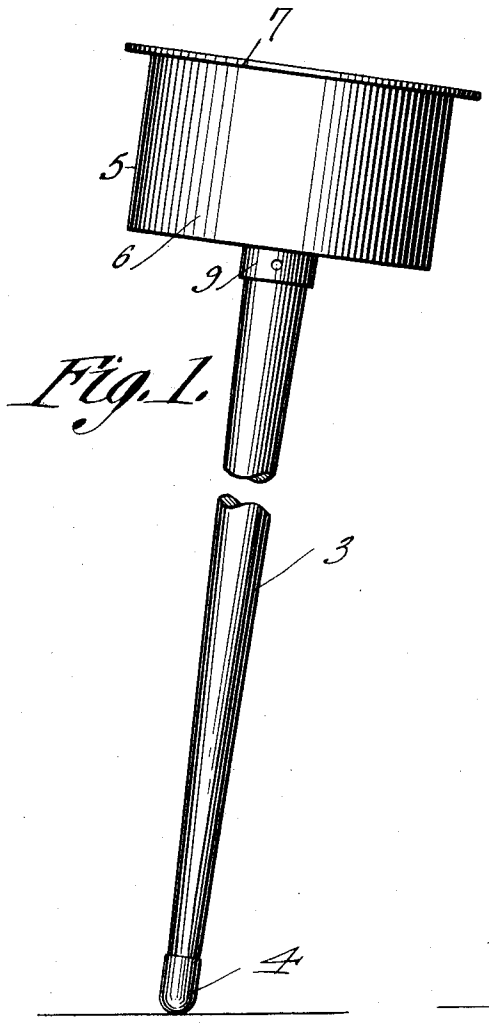


Fig. 1.

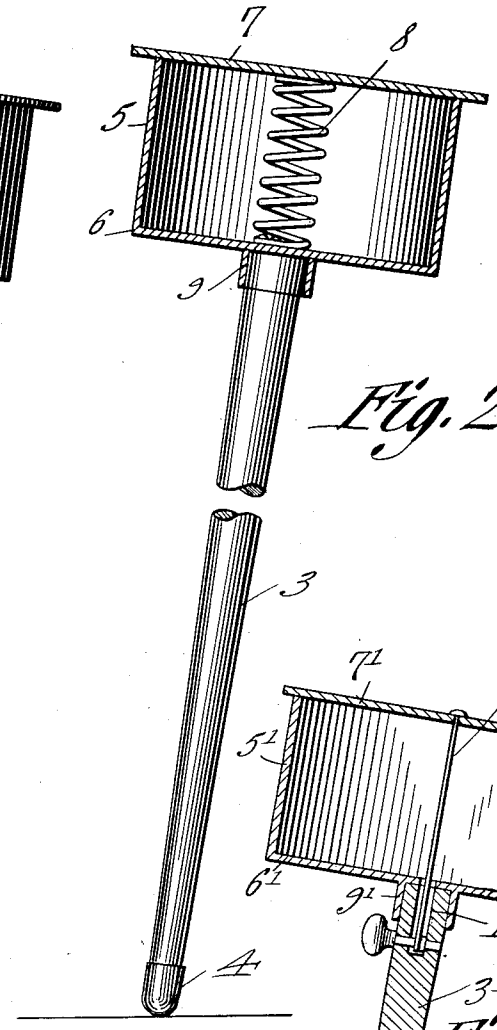


Fig. 2.

Fig. 3.

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JAMES H. SUTLIVE, OF KEOKUK, IOWA.

BATON, STAFF, OR CANE.

1,081,168. Specification of Letters Patent. Patented Dec. 9, 1913.

Application filed December 7, 1912. Serial No. 735,565.

To all whom it may concern:

Be it known that I, JAMES H. SUTLIVE, a citizen of the United States, residing at Keokuk, in the county of Lee and State of Iowa, have invented a new and useful Baton, Staff, or Cane, of which the following is a specification.

The present invention appertains generally to instruments of percussion, and aims primarily to provide a staff, one end of which is adapted to be slid over a surface to set the staff in vibration, in connection with an instrument of percussion carried by the staff to be set into motion by the vibration of the staff.

It is also the object of the present invention to provide a device of the character indicated which shall be in the form of a baton, cane or the like, to be carried by the hand, in order that the tip of the baton, staff or the like, may be brought into contact with the sidewalk, pavement, or other surface, in order to set the same into vibration and thus set the instrument of percussion into operation.

Another object of the invention is to provide an instrument of the character indicated, which when brought into operation will produce a repeated clamorous sound or clatter, resembling the sound of a snare drum.

The present invention also contemplates the provision of the instrument of the character specified, which shall be simple, substantial, durable and inexpensive in construction, which shall be convenient, practical and efficient in its use, and which may be readily manipulated by the hand.

To the above and other ends which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

The preferred embodiment of the invention has been illustrated in the accompanying drawing, wherein—

Figure 1 is a side elevation of the device, part of the staff being broken away. Fig. 2 is a central longitudinal section of the device, the staff being shown in full and being partly broken away. Fig. 3 is a fragmental section of a variation of the device.

Referring specifically to the drawing, the numeral 3 designates the staff, which may be fashioned from wood or any other material possessing the proper timbre. This staff may be provided with a ferrule 4 at its lower end or tip if desired in order to eliminate the wear of the staff and in order to provide a more effective vibratory action of the staff, as hereinafter set forth. The instrument of percussion is carried by the other or upper end of the staff and has been designated generally by the numeral 5. This instrument of percussion embodies a sound box 6 providing a resonance chamber, the said sound box being in the form of a drum or cylinder having its top or upper end open. A diaphragm 7 is set on the upper end or edge of the sound box in order to close the same, and the said diaphragm is yieldably held against the sound box by means of a contractile spring 8 connecting a central point of the diaphragm and the central point of the bottom or lower end of the sounding box. The sound box is conveniently secured on the upper end of the staff by means of a collar or socket 9 depending from the bottom or lower end of the sound box and engaged over the end of the staff, although it is understood that the sound box may be secured to the staff in any desirable manner. The sound box and diaphragm are constructed of any suitable material so as to produce a proper timbre and in order to promote resonance.

In the use of the device, the staff 3, is held or grasped in the hand in any convenient manner so as to be carried as a cane, walking stick, baton or the like. When it is desired to bring the instrument of percussion into action, the lower end of the staff is brought into contact with the sidewalk, pavement, or other surface, so that the staff stands at an angle with the surface, and then by sliding the end of the staff over the surface, the staff will be set into longitudinal vibration. This vibratory motion is transmitted to the sound box, and as a result, the diaphragm 7 will be vibrated on the edge of the sound box. This vibratory motion of the diaphragm will produce a repeated clamorous sound or clatter resembling that of a snare drum, the sound being magnified or amplified by the sound box or resonance chamber.

This device may be employed in various manners and for divers purposes, the same being desirable as a noise producer for campaigns, or for various other occasions. It will also be manifest that the objects aimed at have been carried out in a satisfactory manner, and that the present device is susceptible of alterations or deviations in its details within the scope of the appended claims without departing from the spirit of the invention.

In the variation or modification illustrated in Fig. 3, the instrument of percussion 5′ secured on the staff 3′ comprises a square or rectangular casing or sound box 6′ closed by similarly shaped diaphragm 7′, the sound box being secured to the end of the staff by means of the collar 9′ projecting from the bottom of the sound box. With this form, the "tension" is employed, the same consisting of a flexible cord 8′ resembling a violin string, the same being secured centrally to the diaphragm and passing into an opening or socket 10 provided in the end of the staff and being wound upon a key 11 journaled through the socket. Thus, by rotating the key 11, the tension of the cord 8′ may be adjusted in order to permit of the proper operation or vibration of the diaphragm when the staff is slid over a surface as above described. It will thus be noted that the sound box may be of any convenient contour, and that any suitable means may be employed for retaining the diaphragm in position so that the edges may vibrate on the edges of the sound box.

Having thus described the invention, what is claimed as new is:—

1. In a device of the character specified, a staff, and an instrument of percussion carried thereby embodying a vibratory member to be set into motion by the vibration of the staff.

2. In a device of the character specified, a staff, an instrument of percussion carried thereby and embodying an open resonance chamber, a vibratory diaphragm closing said chamber, and means for holding the diaphragm in position, the diaphragm being designed to be set into vibratory motion by the vibration of the staff.

3. In a device of the character specified, a staff, and an instrument of percussion carried thereby and embodying an open resonance chamber and a diaphragm yieldably held over the opening of the resonance chamber and designed to be set into vibratory motion by the vibration of the staff.

4. In a device of the character specified, a staff, and an instrument of percussion carried thereby and embodying an open resonance chamber, a diaphragm fitting over the said opening, and a contractile spring connecting the diaphragm and the bottom of the resonance chamber.

5. In a device of the character specified, a staff, a sounding box having one end open, the other end being secured to one end of the staff, and a diaphragm yieldably held on the edge of the sounding box over the opening.

6. In a device of the class described, a staff, a sounding box having one end open, the other end being secured to one end of the staff, a diaphragm seated on the edge of the sounding box over the opening, and a contractile spring connecting the diaphragm and the latter end of the sounding box.

7. In a device of the class specified, a staff, and an instrument of percussion carried thereby and embodying an open resonance chamber, a diaphragm fitting over the opening, and tension means for retaining the diaphragm in position.

8. In a device of the character specified, a staff, an open sounding box carried thereby, a diaphragm fitting over the opening of the sounding box, and a tension device connected centrally to the diaphragm for retaining same in position.

9. In a device of the class specified, a staff, a sounding box having one end open, the other end being secured to one end of the staff, a diaphragm seated on the edge of the sounding box over the opening, and a tension device connected centrally to the diaphragm for retaining same to position and for permitting the edges thereof to vibrate on the edge of the sounding box.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JAMES H. SUTLIVE.

Witnesses:
B. E. SUTLIVE,
S. H. CHESNUT.

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