No. 627,766. Patented June 27, 1899.

# G. WILKEN.

## DRUM.

(Application filed Apr. 1, 1899.)

(No Model.)

Fig. 1.

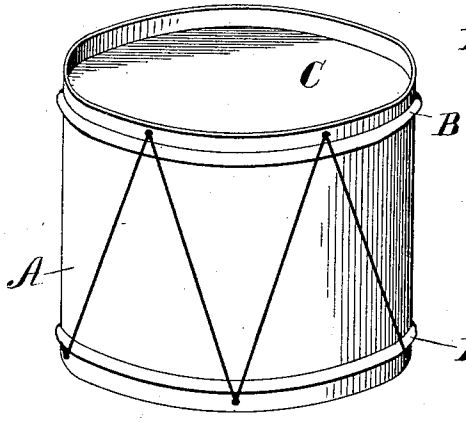



Fig. 2.

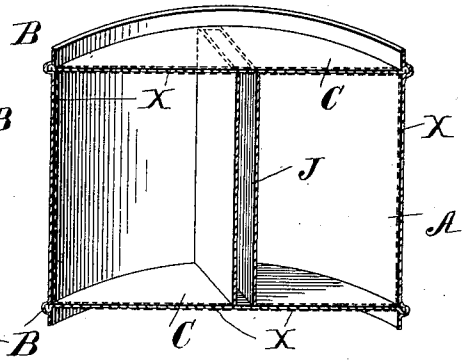



Fig. 3.

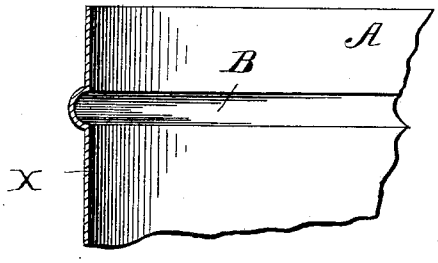
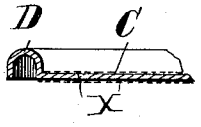



Fig. 4.




Witnesses.
Vincent P. Lynott.
Bruno W. Doherty

Inventor.
George Wilken
by his attorney
Chas. F. Wilken.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

# UNITED STATES PATENT OFFICE.

GEORGE WILKEN, OF NEW YORK, N. Y.

## DRUM.

SPECIFICATION forming part of Letters Patent No. 627,766, dated June 27, 1899.

Application filed April 1, 1899. Serial No. 711,433. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE WILKEN, a citizen of the United States, residing in the borough of Manhattan, city and State of New York, have invented certain new and useful Improvements in Drums, of which the following is a specification.

My improvement relates to drums, and particularly to toy drums, in which it is desirable to combine a fair amount of resonant qualities with considerable cheapness and strength of construction.

My invention consists in a drum of sheet metal so constructed and treated that it can be readily assembled and that when assembled will be strong, durable, and have the requisite resonant qualities. To this end I form the shell of the drum of a single sheet of metal bent in cylindrical form. Near each end the shell is formed with outwardly-projecting beads, the inner surfaces of which afford lodgment for the drum-heads. The drum-heads are made of flat sheets of metal with their edges turned to engage the grooves of the shell.

I have found it essential in getting a good resonant effect with metallic heads to cause the two drum-heads to vibrate together, and I connect them, therefore, mechanically by a diaphragm, preferably made in the form of an open-ended rectangular box, which fits diametrically in the shell of the drum and extends from head to head thereof. I have further found that the metallic ring of such a drum is destroyed by coating not only the inside of the shell, but both the inside and the outside of the heads with a plastic composition, as hereinafter described.

In the accompanying drawings, which form a part of this specification, Figure 1 is a perspective view of my improved drum. Fig. 2 is a sectional perspective view of the same. Fig. 3 is a sectional view, to a larger scale, of a part of the shell; and Fig. 4 is a similar view of a part of one of the heads.

The shell is shown at A and is made of one piece of metal, preferably of sheet-steel, covered with tin or aluminium and bent in cylindrical shape and having its ends or edges turned over inward to give a smooth finish. Near the ends the shell is beaded outwardly, so as to form inside grooves or supports B for the drum-heads C.

The drum-heads C are flat sheets of metal, preferably of tempered steel and of the usual circular shape. They are of such diameter as to fit snugly in the grooves B when the drum is assembled. To this end they are made with a circumferential bead or rounded portion D, which is of such shape as to engage the rounded face of the grooves B and to have some spring action when the shell is tightened upon the drum-heads, so as to insure a tight and firm support of the heads upon the shell.

J is a rectangular diaphragm, preferably made hollow, as shown, and open at each end where adjacent to the heads. It is preferably made of some light non-resonant material, such as straw or jute board, and when in position fits snugly the inside of the shell and against the drum-heads, so that any vibration of one head will be transmitted to the other and so that each head will be supported upon the other and so be prevented from being dislodged by an inward blow. By the use of the rectangular diaphragm J the tone of the drum is greatly mellowed and improved.

I have found that a drum of this kind can be given substantially the resonant qualities of a skin drum by coating the inside of the shell and both inside and outside of the drum-heads with a plastic composition X, and I am thus enabled to have the strength and cheapness of the metallic drum, combined with the resonant qualities of a high-class drum having skin heads. For the inside both of the shell and the heads I prefer a coating of metallic paint, which is made especially thick and heavy, so as to deaden the metallic sound. To the exterior of the drum-heads I apply a thinner coating of similar plastic composition, which may be of such color as to resemble the pebbled or grained appearance of an ordinary skin head. This plastic composition may be prepared in any way, and I do not, therefore, describe it more fully. It must adhere tightly to the metal of the drum when dry and form a thick and non-resonant coating therefor.

In assembling the drum I place the diaphragm and the heads in position in the shell

while the edges of the shell are still unsoldered. The shell is then tightened upon the heads and its edges soldered together, and I thus produce a tight, rigid, and durable structure in a very economical manner.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. As an article of manufacture, a drum having in combination with a shell composed of a single sheet of metal beaded near each end to form interior grooves, two flat sheet-metal drum-heads having turned ends engaging said grooves and an interior diametrically-arranged diaphragm held by the shell and engaging each head, substantially as set forth.

2. As an article of manufacture, a drum having in combination with a shell composed of a single sheet of metal bent in cylindrical shape and provided with beads to form interior grooves near each end, two sheet-metal drum-heads having turned edges engaging said grooves and a plastic composition applied to the inside of said heads and the said shell, substantially as set forth.

3. As an article of manufacture, a drum having in combination a shell composed of a single sheet of metal bent in cylindrical shape and having beads near each end to form interior grooves, heads having turned edges engaging said grooves, a non-resonant diaphragm diametrically arranged in the shell and engaging each head and a plastic composition for coating both the interior of the shell and interior and exterior of the drum-heads, substantially as and for the purposes set forth.

In witness whereof I have hereunto set my hand this 31st day of March, 1899.

GEORGE WILKEN.

Witnesses:
VINCENT P. LYNOTT,
R. EMMET DOHERTY.