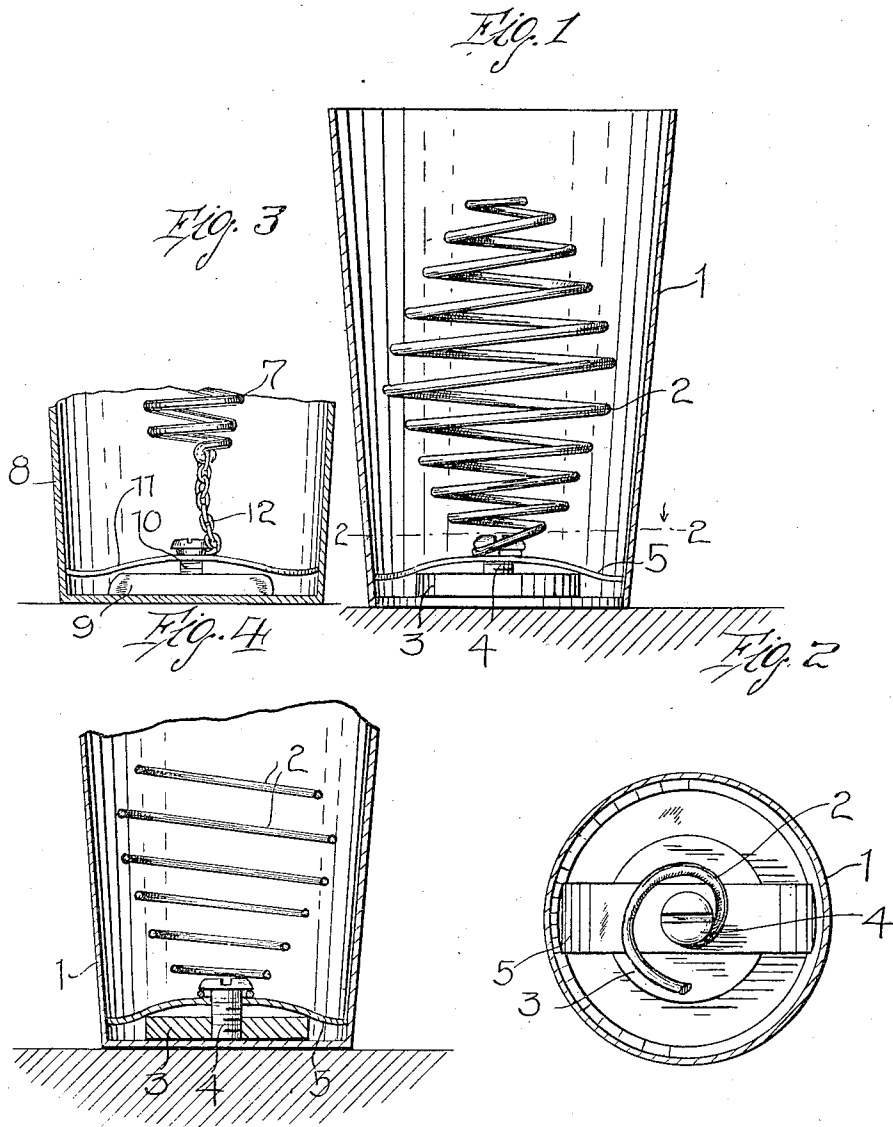


R. BENJAMIN.
MIXING DEVICE.

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1,060,419.

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MIXING DEVICE.

1,060,419.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ROBERT BENJAMIN, a citizen of the United States, residing at McKittrick, in the county of Kern and State of California, have invented certain new and useful Improvements in Mixing Devices, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to new and useful improvements in mixing devices and more particularly to devices used for mixing drinks and beating eggs and the like, and my object is to provide a simple and efficient device of this character which will be most effective in operation, requiring the least amount of energy.

A further object of the invention resides in the provision of a coil spring in a container or other receptacle used for shaking, whereby the product will be mixed, and a still further object resides in providing improved means for the securing of the coil spring in position in the bottom of the container.

Still another object of the invention resides in providing a device which is simple and durable in construction, inexpensive to manufacture and one which will be very efficient and useful in operation.

With these and other objects in view, the invention consists in the novel features of construction, combination and arrangement of parts as will be hereinafter referred to and more particularly pointed out in the specification and claims.

In the accompanying drawing forming a part of this application, Figure 1 is a vertical section through a container or receptacle having my improved shaking device applied to use therein. Fig. 2 is a horizontal section therethrough as seen on line 2—2, of Fig. 1. Fig. 3 is a fragmentary vertical section through a slightly modified form of the invention; and Fig. 4 is a similar view through the form of device shown in Figs. 1 and 2.

In describing my invention, I shall refer to the drawing in which similar reference characters designate corresponding parts throughout the several views and in which—

1 indicates a container or receptacle, designed particularly for shaking and mixing purposes, the same being formed of any desired material, such as metal, or wood. My invention contemplates a means to be

carried in this container or receptacle 1 for mixing the contents of the same and to this end, I provide a duplex conoidal spring 2. I prefer this form of spring, but it will be understood that while it is most effective in use and it is so preferred, other forms of coil springs may be provided. I have provided an improved means for securing this spring 2 to the bottom of the container 1 and to this end, I provide a block 3 of disk-like form which is loosely mounted in the bottom of the receptacle or container 1. Threaded into the upper face of this disk-like block 3, is a screw or bolt 4, the head of which is allowed to project some distance above the upper face of the block and carried on the shank of the screw, between the head thereof and the upper face of the block, is a spring strip or plate 5, which is bowed and has the edges thereof contacting with the sides of said receptacle to retain the block and screw therein. In order to permit the ends of the spring strip 5 to bind against the inner walls of the receptacle, the same are bent slightly outward and in so disposing the same, portions of the strip or plate 5 at the points indicated at 6, contact with the block 3 to retain the latter in a firm position in the bottom of said receptacle. The lowermost coil of the spring 2 is engaged with the shank of the screw 4, immediately below the head thereof and is retained in position thereon by the spring strip 5.

From this construction, it will be seen that after the spring 2 has been disposed in the receptacle or container 1 and properly held therein by the securing means just referred to, the device may be effectively used for mixing purposes with little or no chance of the mixer becoming disengaged. As the receptacle 1 with a cover thereon is shaken with the contents therein, the coil spring 2 will be expanded and contracted, at the same time contacting with the side walls of the receptacle and thereby thoroughly mixing said contents.

In Fig. 3, I have shown a slightly modified form of the invention, wherein a different means is provided for securing the lower end of the coil spring to the retaining device in the receptacle. In this form, a spring 7, similar to the spring 2 in the first mentioned form is provided and disposed in a receptacle 8 and a retaining means, similar to the first mentioned retaining means, is

provided. This retaining means comprises a block 9, a screw 10 and a spring binding plate 11, but instead of engaging the lowermost coil of the spring with the shank of the screw below the head thereof, as in the other form, a flexible connection 12 such as a chain is provided to connect said lowermost coil with the head of the screw. Through this medium, the coil spring 7 has a loose connection with its retaining means, thereby permitting a lateral and rotating movement as well as a vertical reciprocatory movement in the shaking of the receptacle or container. The advantage of this latter construction appears obvious.

From the foregoing it will be seen that I have provided a simple, inexpensive and efficient means for carrying out the objects of the invention and while I have particularly described the elements best adapted to perform the functions set forth, it is obvious that various changes in form, proportion and in the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the principles of the invention.

Having thus described this invention, what I claim is:—

1. A mixing device comprising a shaking receptacle, a coil spring disposed therein, and removable means for securing the lower end of said coil spring in the bottom of said receptacle.

2. A mixing device comprising a shaking

receptacle, a coil spring disposed therein, a block to which the lower end of said coil spring is engaged, and means for removably mounting said block in the bottom of said receptacle.

3. A mixing device comprising a shaking receptacle, a coil spring disposed therein, a block to which the lower end of said coil spring is engaged, and means frictionally engaging the walls of said receptacle for removably retaining said block and correspondingly the spring in position in the receptacle.

4. A mixing device comprising a receptacle, a block loosely mounted in the bottom of said receptacle, a screw engaged with said block, a spring strip carried on the shank of said screw and frictionally binding against the inner walls of said receptacle to retain the block therein, and a yielding dasher member engaged with the head of said screw.

5. A mixing device comprising a receptacle, a coil spring disposed therein, and a flexible connecting means between the lower end of said coil spring and the bottom of said receptacle.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

ROBERT BENJAMIN.

Witnesses:

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