

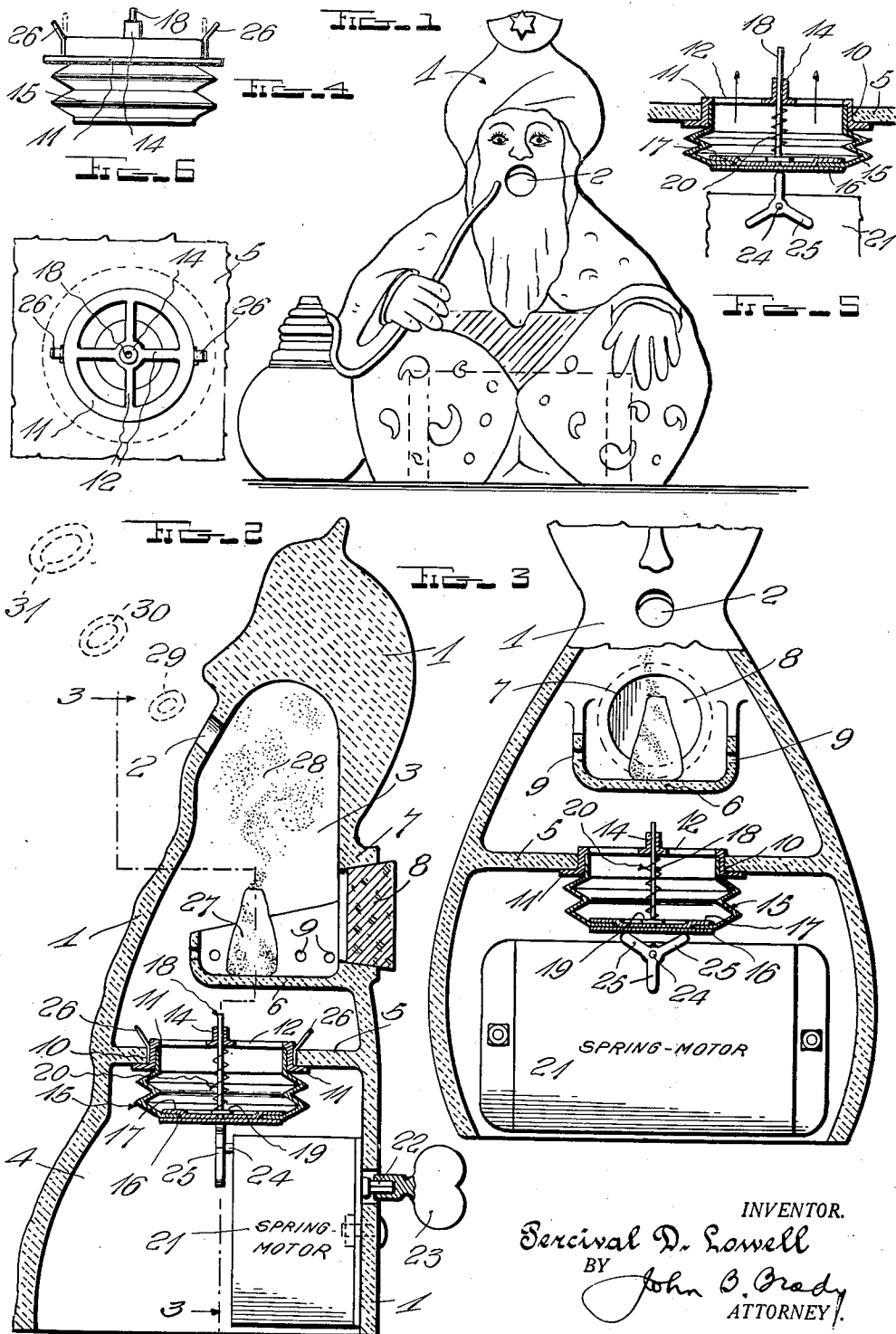
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INCENSE BURNER

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INCENSE BURNER

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4 Claims. (Cl. 167—3)

My invention relates broadly to incense burners and more particularly to a construction of incense burner having means for periodically generating and releasing smoke rings for distribution in the atmosphere.

One of the objects of my invention is to provide a construction of incense burner in the form of an automatic device having means for generating and releasing smoke rings at periodic time intervals for distribution through the atmosphere.

Another object of my invention is to provide a construction of automatic incense burner wherein a mechanical drive device is arranged to operate a compressing mechanism for periodically creating compression and rarefaction effects within the burner for generating and releasing smoke rings which may be distributed through the atmosphere.

Another object of my invention is to provide a simplified construction of incense burner together with automatic means for generating and releasing smoke rings from the burner at periodic time intervals, the device being readily constructed as a mechanical novelty inexpensively on a quantity production scale.

A further object of my invention resides in the construction of compressing mechanism by which smoke rings may be generated in the device and released for distribution at periodic time intervals.

Other and further objects of my invention reside in the construction of an automatic incense burner as set forth more fully in the specification hereinafter following by reference to the accompanying drawing, in which:

Figure 1 is a front view of the incense burner showing the outward appearance of the device in which the automatic mechanism of my invention is housed; Fig. 2 is a vertical sectional view taken through the incense burner of my invention; Fig. 3 is a lateral cross-sectional view taken on line 3—3 of Fig. 2 and showing the arrangement of parts of the compressing mechanism employed in the incense burner; Fig. 4 is a side elevational view showing the compression mechanism employed in the incense burner; Fig. 5 is a cross-sectional view through the compression mechanism in one of its limiting positions in which compression has been reproduced in the inside structure of the incense burner; and Fig. 6 is a plan view of the compression mechanism illustrating the manner in which the compression mechanism is supported in the housing of the incense burner.

The incense burner of my invention has been

designed to provide for the distribution of smoke rings at periodic time intervals. The incense which is generated by the burning of the incense material is released in a chamber within a suitable housing. I provide a mechanism for producing alternate compression and rarefaction effects for releasing from the chamber rings of smoke which are distributed at periodic time intervals from the chamber in which the incense is generated. The compression mechanism comprises a bellows device which is readily installed in the incense chamber and is driven by any suitable form of driving mechanism such as a spring motor or a motor of the induction type operated from the electric light circuit or a connection taken to any suitable socket. The parts of the mechanism of my invention are inexpensive and are capable of manufacture and production inexpensively on a quantity production scale. The assembly of the parts is very simple and the complete device may be retailed at a price which will permit quantity distribution.

Referring to the drawing in more detail, I have illustrated the incense burner of my invention as housed within a casing 1 in the form of a statuette. Any form of casing or housing may be employed and the statuette shown in the drawing has merely been adopted for purposes of explaining the principles of my invention. The casing is shown as having an outlet 2 through which the smoke rings are periodically released. The casing includes an incense chamber indicated at 3 and a lower chamber 4 which houses the driving mechanism. The casing is divided into the incense chamber 3 and the driving mechanism chamber 4 by the lateral partition shown at 5. The incense chamber 3 has a laterally extending shelf 6 in the upper portion thereof and immediately below the rear entrance port 7. The rear entrance port 7 is closed by a plug 8 which may be inserted or removed to permit a fresh piece of incense to be placed upon the shelf 6 as shown at 27. The shelf 6 is provided with ports 9 to permit the entrance of air under pressure created by the air compressing mechanism which is disposed below the shelf 6. The air compressing mechanism is inserted in the partition 5 through a port 10 therein. The air compressing mechanism is constituted by an annular frame member 11 having laterally extending portions 12. The intersection of the frame member 12 provides means for guiding the central stem 18 forming part of the air compressing mechanism. I have shown the sleeve 14 as integral with the diametrically extending frame members 12. Sleeve 14

provides a guide for the stem 18 which stem is provided with a head 19 which is secured to the disc 17. Disc 17 is fastened to disc 16. These discs jointly provide a base member for the compression mechanism, which, in the form of my invention as illustrated, is a bellows device 15. The bellows device 15 is supported by the interior of the annular rim 11 and depends downwardly into the lower chamber 4 of the casing 1. The bellows 15 is constructed of flexible material such as leather or heavy paper and is capable of being reciprocated vertically in the direction of the central stem 18 and against the pressure of coil spring 20. The compression mechanism is periodically operated from the cam 25 carried by drive shaft 24 which extends from the driving motor 21. The cam 25 is in the form of a star or device having actuating members disposed at 120° displacement one with respect to the other. This cam driven from shaft 24 operated by spring motor 21 serves to impart vertical movement to the bellows 15 as each cam passes beneath the disc 16. The spring motor 21 has its winding device extending from the casing 1 as indicated at 22 to which may be attached the winding key 23 as shown. In lieu of the spring motor, I may employ an induction motor driven from the electric light circuit. The compression mechanism is secured in the aperture 10 in an extremely simple manner. The annular rim 11 has a pair of spring clips 26 extending vertically therefrom at diametrically opposite portions of the rim 11 as shown more clearly in Fig. 4. The rim 11 may, therefore, be projected upwardly from beneath the chamber 4 in a manner in which the spring fingers 26 are permitted to pass through the aperture 10 according to the dotted line showing in Fig. 4. After the annular rim 11 has been passed through the partition 5, the spring fingers 26 assume the full line position as shown in Fig. 4 and thus tend to grip the compressing mechanism in a position 6 to the partition 5 as clearly shown in Fig. 2. This manner of attaching the compressing mechanism to the partition 5 facilitates the assembly of the device and permits the structure to be made inexpensively on a quantity production basis. The incense which is generated by the burning of the incense stick 27 is released in the chamber 3 as represented generally at 28. The compression effect produced by the upward movement of the bellows 15 in the position shown in Fig. 5 tends to force the incense through the discharge port 2 in a manner by which a smoke ring is formed for liberation through the atmosphere. The rarefaction which is produced as the bellows 15 is shifted in the opposite direction under the action of spring 20 tends to prepare the incense in the chamber 3 for the succeeding ejection process. The alternate production of compression and partial vacuum in chamber 3 operates to release the incense from chamber 3 in such manner that the smoke rings are formed. The periodic operation of the compression mechanism results in the generation and release of smoke rings at spaced intervals as represented at 29, 30 and 31 in Fig. 2. The incense burner will operate indefinitely so long as a charge of

incense is provided on the shelf 6. The incense may be renewed from time to time by opening plug 8 and inserting a fresh charge for the continued operation of the incense burner. The rate of discharge of the smoke rings may be increased by modifying the construction of the cam 25 thereby providing a more rapid reciprocatory movement of the compression mechanism and allowing distribution of the smoke rings through the atmosphere in quick succession. Various forms of governor devices may be applied to the spring motor for adjustably controlling the rates of discharge of the smoke rings. Other and further modifications may be made in the structure of my invention, and by illustrating my invention in one of its preferred embodiments, I desire that it be understood that modifications of my invention may be made within the scope of the appended claims without departing from the spirit of my invention.

What I claim as new and desire to secure by Letters Patent of the United States is as follows:

1. An incense burner comprising a statuette having a discharge aperture therein for smoke rings, a bellows device for producing periodic compressions and rarefactions of the atmosphere within said statuette, spring means for attaching said bellows to said statuette, and means for reciprocating said bellows for formulating smoke rings and forcing said rings through said discharge aperture.

2. An incense burner comprising a statuette having a discharge aperture therein for smoke rings, a diaphragm device, spring means for attaching said diaphragm device to said statuette, means for periodically displacing said diaphragm device for producing alternate compressions and rarefactions of the atmosphere within said statuette for generating smoke rings and effecting the discharge thereof through said discharge aperture.

3. An incense burner comprising a statuette having a discharge aperture therein for smoke rings, a frame structure, a pair of spring fingers connected with said frame structure and engageable with said statuette for maintaining said frame structure in position within said statuette, a bellows depending from said frame structure, and means for reciprocating said bellows for forcing smoke through said discharge aperture whereby rings are formed.

4. An incense burner comprising a statuette having a discharge aperture therein for smoke rings, a frame structure, means for maintaining said frame structure in position within said statuette, a bellows depending from said frame structure, a head member in said bellows, a control rod extending from said head member and projecting through said frame structure, spring means between said head member and said frame structure for normally maintaining said bellows in expanded position, and means for reciprocating said bellows for forcing smoke through said discharge aperture whereby rings are formed.

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