

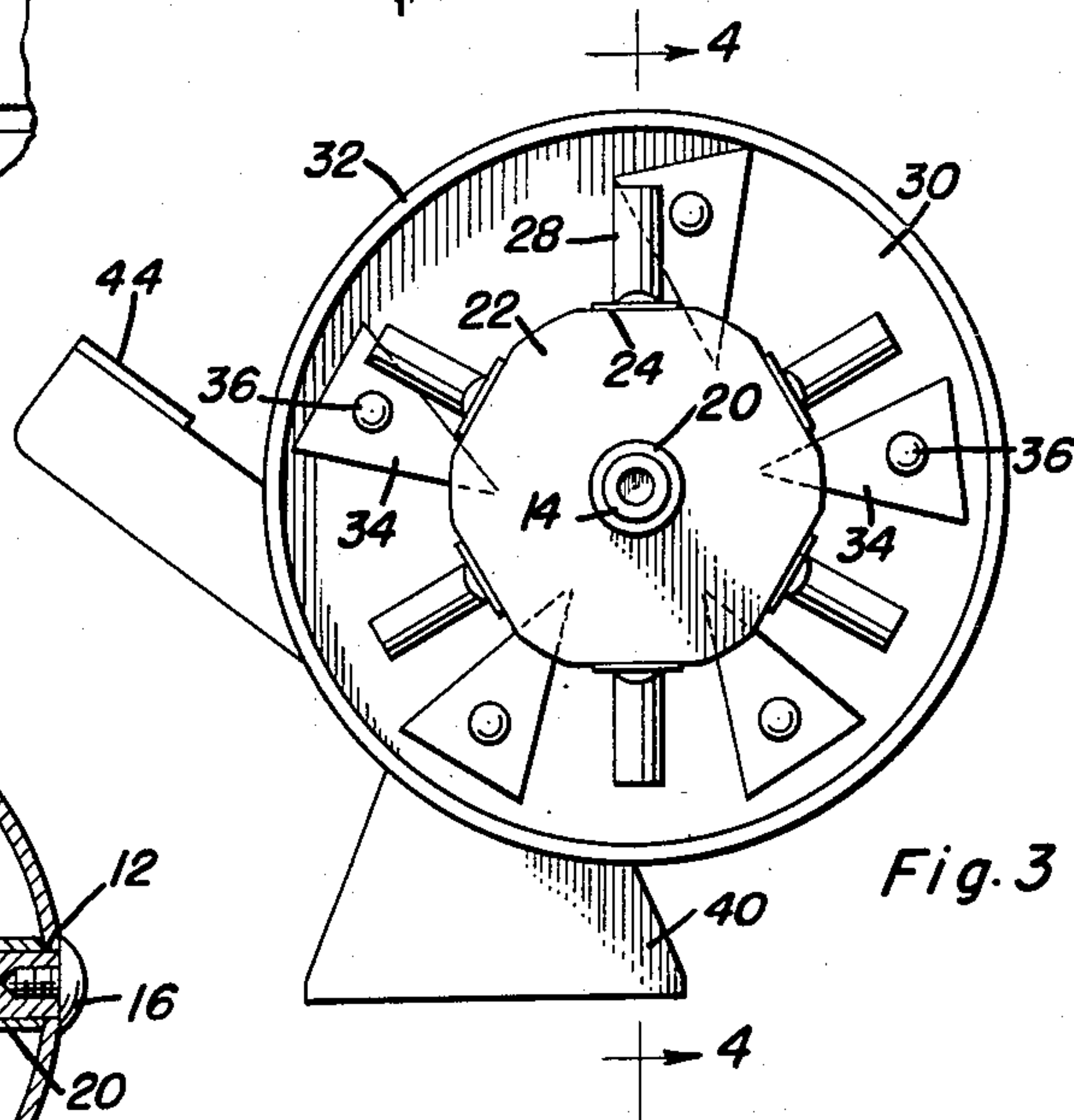
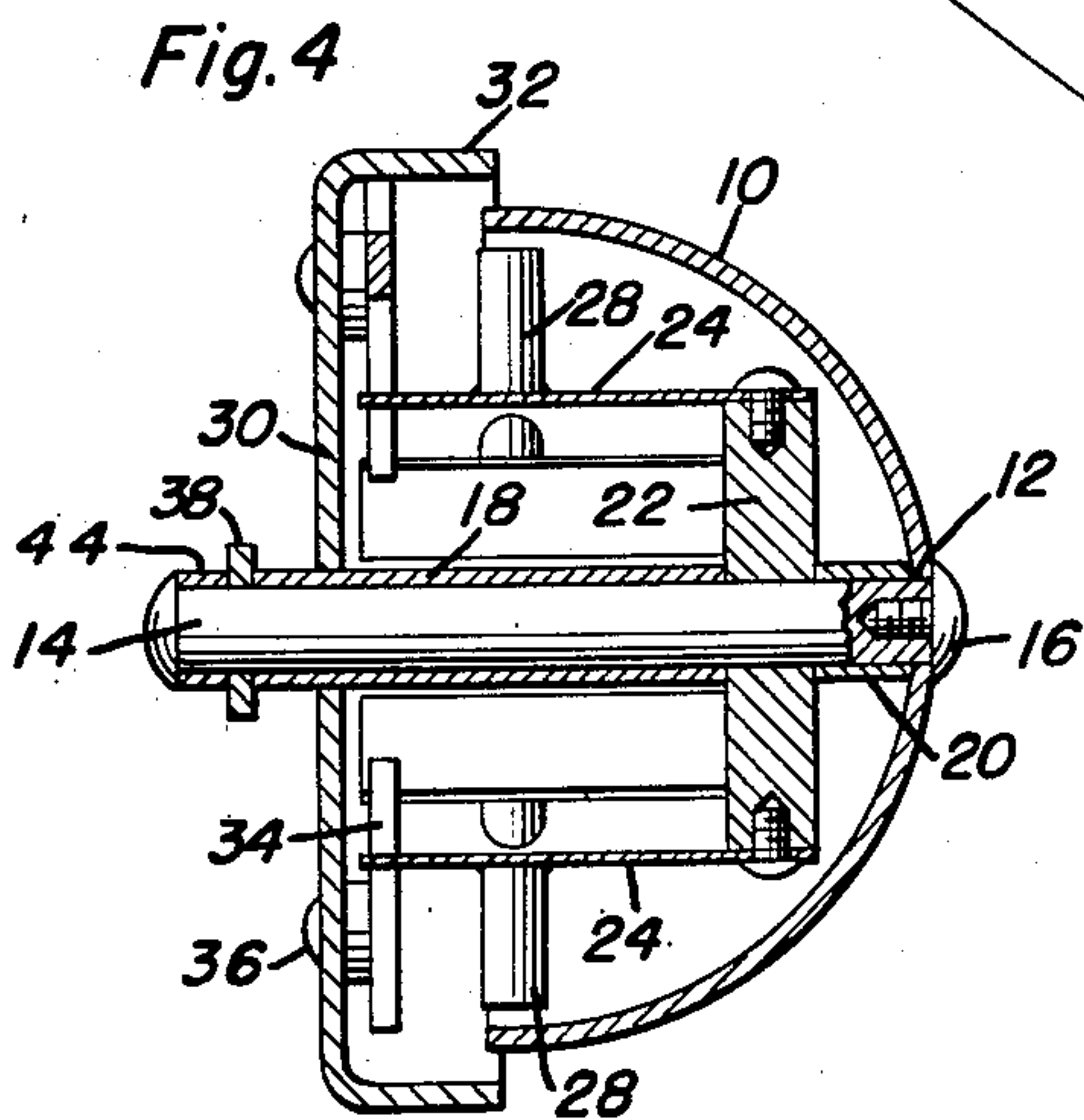
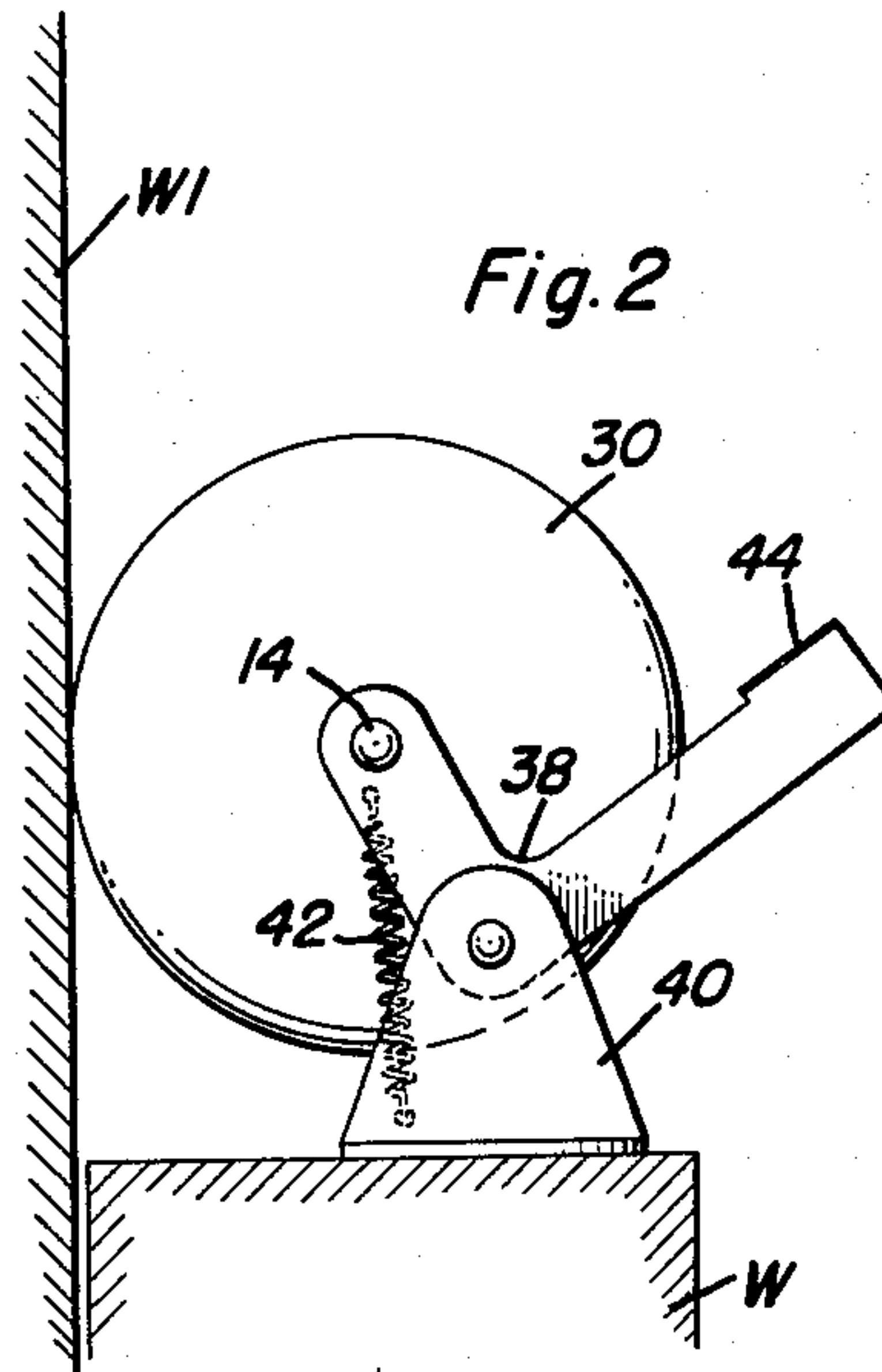
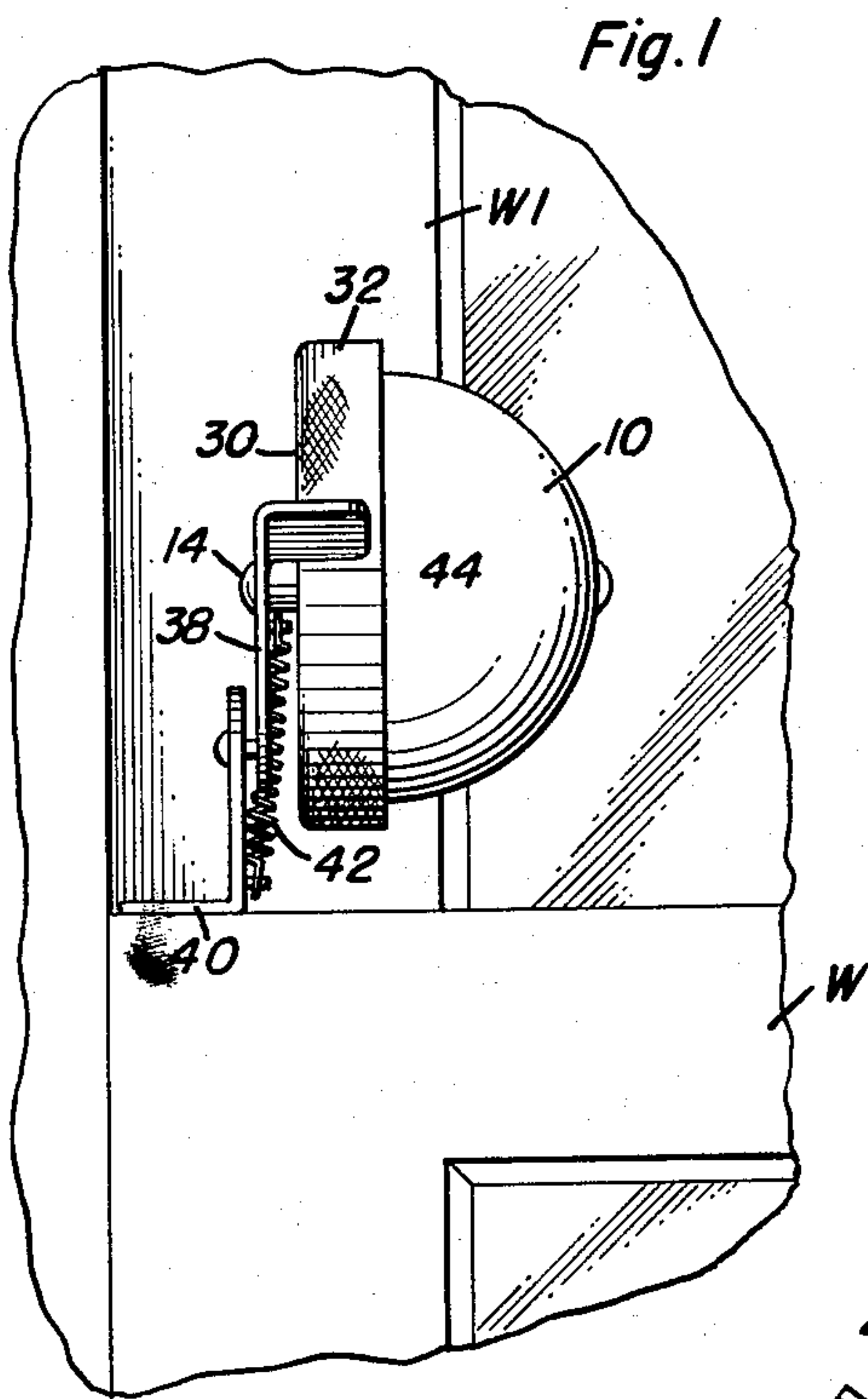
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A. HOEHN

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WINDOW ALARM

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## UNITED STATES PATENT OFFICE

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## WINDOW ALARM

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5 Claims. (Cl. 116—90)

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This invention relates to new and useful improvements in burglar alarms and the primary object of the present invention is to provide a novel and improved bell structure.

Another important object of the present invention is to provide a bell structure including a rotatable casing supporting a plurality of pivotal striker elements, a bell-cup having a plurality of spring arms mounted therein forming actuators for the strikers and urging the strikers against the casing as the latter rotates.

A further object of the present invention is to provide a bell structure of the aforementioned character wherein the spring arms support hammers that will engage the bell-cup when the spring arms are released after they have been flexed by the strikers.

A still further aim of the present invention is to provide a window alarm that is quickly and readily applied to or removed from a double sash window and which alarm is simple and practical in construction, efficient and reliable in use, inexpensive to manufacture, and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a fragmentary inside elevational view of a double sash window and showing the present invention mounted thereon;

Figure 2 is a vertical sectional view through the window shown in Figure 1 and illustrating the present invention in side elevation;

Figure 3 is a side elevational view of the present invention with the bell-cup removed; and,

Figure 4 is a vertical sectional view taken substantially on the plane of section line 4—4 of Figure 3.

Referring now to the drawings in detail, wherein for the purpose of illustration, there is disclosed a preferred embodiment of the present invention, the numeral 10 represents a bell-cup or metallic shell having a central opening 12 that receives one end of a shaft 14. A headed fastener 16 is threaded in the end of the shaft received in the opening 12 and its head abuts the convex surface of the bell-cup 10.

A pair of sleeves 18 and 20 embrace the shaft 14 and receive therebetween a multi-sided block 22 having a central opening that receives the shaft 14. A plurality of spring arms 24 are secured at one of their ends to the sides of the

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block 22 by fasteners 26 and the free end portions of the arms 24 support hammers or striker cylinders 28 that extend radially of the shaft 14. The arms 24 are spaced parallel to the shaft 14, as shown best in Figure 4.

A casing 30 is rotatably supported on the sleeve 18 and includes a peripheral cylindrical wall 32. A plurality of circumferentially spaced triangular strikers or trippers 34 are pivoted intermediate their ends to the end wall of the casing 30 by pivots 36 so that the strikers may pivot against the peripheral wall 32 to flex spring arms 24.

The free ends of the spring arms 24 extend into the casing 30 and past the strikers 34 to engage and impart pivotal movement to the strikers as the casing is rotated.

The apex of a bell-crank 38 is pivoted to a bracket 40 and one end of the bell-crank 38 is secured to the shaft 14. A spring 42 connects the bell-crank 38 to the bracket 40 and yieldingly urges the casing 30 toward the bracket 40.

A collar 44 embraces the shaft 14 adjacent its head. As the fastener 16 is tightened, the block 22 is clamped between the sleeves 18 and 20, the bell-cup is clamped between the head of the screw 16 and the sleeve 20 and the bell-crank 38 is clamped between the collar 44 and the sleeve 18.

In practical use of the present invention, the bracket 40 is mounted upon the upper end of a lower sash W and the spring 42 urges the cylindrical wall 32 tangentially against the upper sash W1.

As the upper or lower sashes are moved, the casing 30 will be rotated causing the strikers 34 to ride over the free ends of the spring arms 24. As the strikers 34 ride over the spring arms the strikers will be urged against the cylindrical wall 32. Also, the spring arms 24 will be flexed and as they spring back, the hammers 28 will engage the bell-cup to produce a sound.

When a finger grip 44 at the outer end of the bell-crank is depressed, the casing is moved away from the sash W1 to permit raising and lowering of the sashes without rotating of the casing.

It is preferred that the outer surface of the cylindrical wall 32 be knurled to provide a more desirable gripping surface whereby the bell-cup will rotate, without slippage, during the raising of the window.

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

1. A bell structure comprising a bell-cup, a casing, a shaft carried by the bell-cup and rotatably supporting the casing, a plurality of



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strikers pivoted to and within the casing for engaging the wall of the casing, a plurality of spring arms mounted within said bell-cup, and hammers carried by said spring arms for the bell-cup, said spring arms extending into the casing and past the strikers to impart pivotal movement to the strikers sufficiently to cause the strikers to engage the casing and sound an alarm as the casing rotates on the shaft, said spring arms being flexed as the strikers engage the spring arm so that after the strikers have engaged the spring arms the latter will move the hammers against the bell-cup.

2. A bell structure comprising a bell-cup, a supporting shaft secured at one end centrally to the bell-cup, a casing rotatably mounted on the shaft and having a peripheral wall, a plurality of circumferentially spaced flat substantially triangular strikers pivotally carried by the casing for engaging the peripheral wall of said casing, and means mounted in said bell-cup for engaging and pivoting the strikers against the peripheral wall of the casing as the casing rotates on the shaft.

3. A bell structure comprising a bell-cup, a shaft secured at one end to the bell-cup, a casing rotatably mounted on the shaft and including a cylindrical wall and an end wall, a plurality of circumferentially spaced strikers pivoted to said end wall for engaging the cylindrical wall, and means supported on the shaft and disposed within

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the bell-cup forming abutments for the strikers whereby the strikers will be urged against the cylindrical wall as the casing rotates on the shaft.

4. The combination of claim 3 wherein said means includes a plurality of spring arms paralleling the shaft.

5. A bell structure comprising a bell-cup, a shaft secured at one end to the bell-cup, a casing rotatably mounted on the shaft and including a cylindrical wall and an end wall, a plurality of circumferentially spaced strikers pivoted to said end wall for engaging the cylindrical wall, a plurality of spring arms mounted in said bell-cup and paralleling said shaft, said spring arms entering the casing and forming abutments for the strikers whereby the strikers will be urged against the cylindrical wall as the casing rotates on the shaft, and hammers on the spring arms for striking the bell as the spring arms are flexed by the strikers as the casing rotates on the shaft.

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The following references are of record in the file of this patent:

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