Apr. 17, 1923. 1,452,141

E. A. BAXTER

HEN'S NEST

Filed Sept. 9, 1922 4 Sheets-Sheet 1

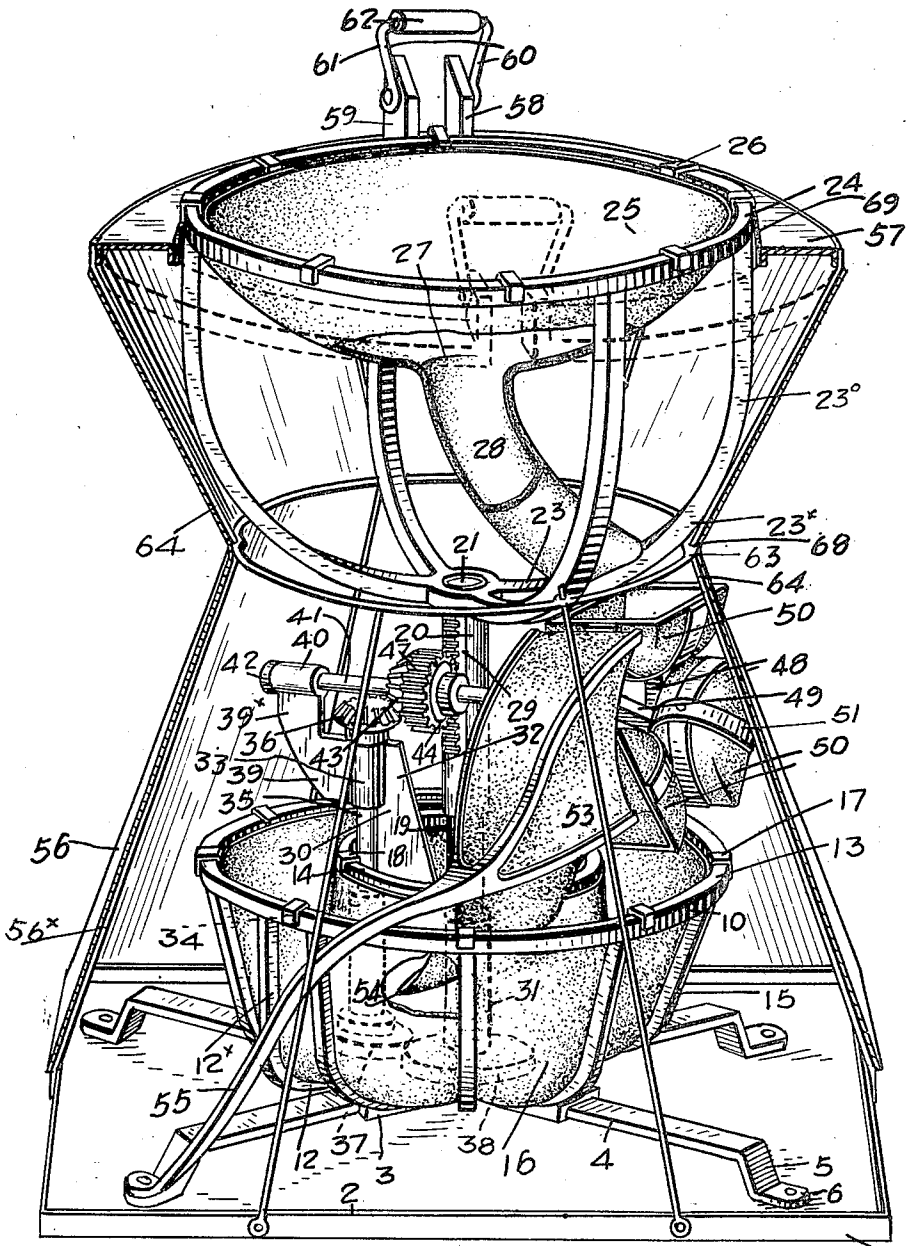


FIG. 1.

Inventor,
E A BAXTER.
By Fetherstonhaugh & Co.
Attys.

Apr. 17, 1923. 1,452,141

E. A. BAXTER

HEN'S NEST

Filed Sept. 9, 1922 4 Sheets-Sheet 2

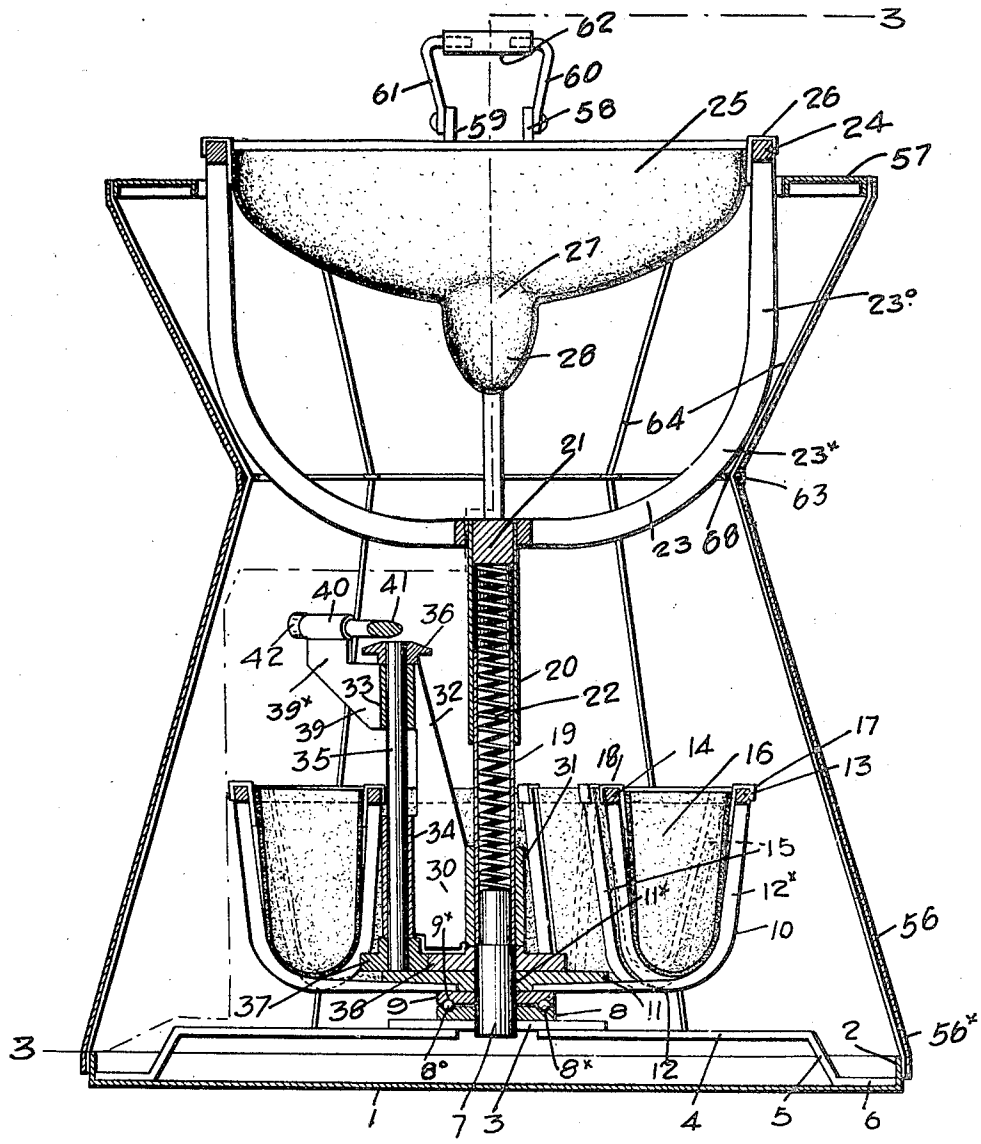


FIG. 2.

Inventor,
E. A. BAXTER.
By Fetherstonhaugh & Co.
Attys.

Apr. 17, 1923.

1,452,141

E. A. BAXTER

HEN'S NEST

Filed Sept. 9, 1922

4 Sheets-Sheet 3

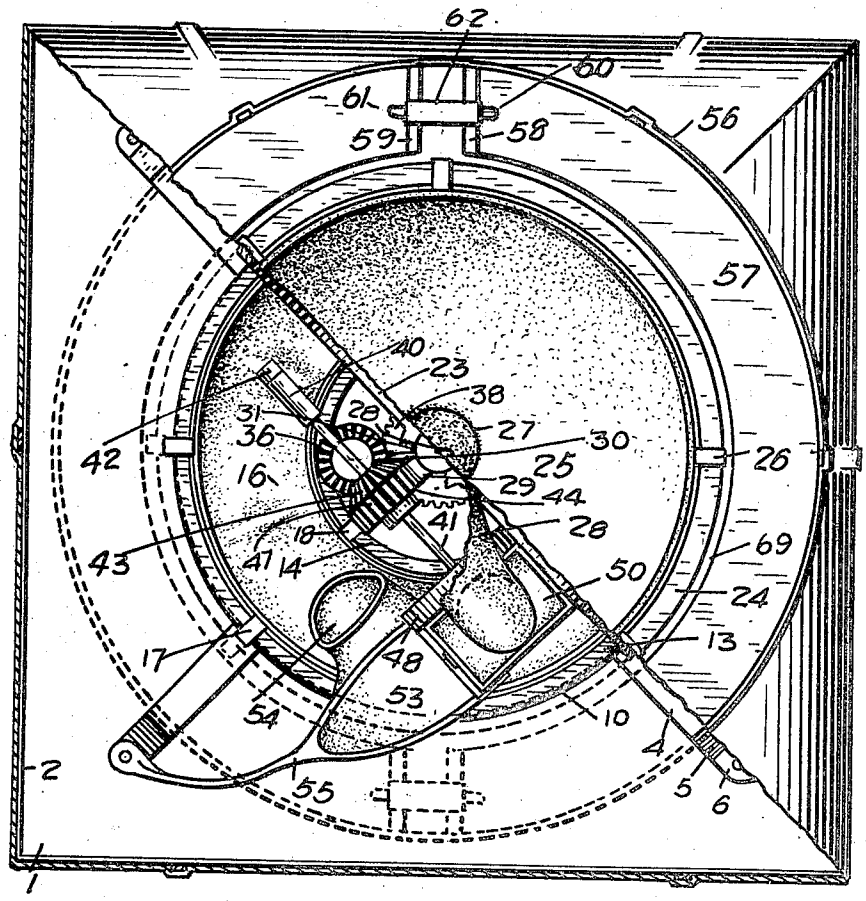


FIG.3.

Inventor,
E. A. BAXTER.
By Fetherstonhaugh & Co.
Attys.

Apr. 17, 1923.

E. A. BAXTER

1,452,141

HEN'S NEST

Filed Sept. 9, 1922

4 Sheets-Sheet 4

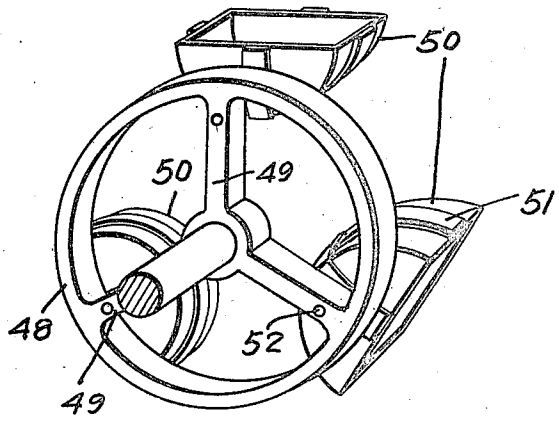


FIG. 4.

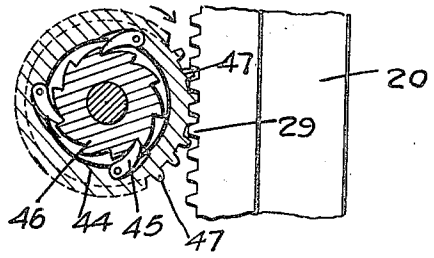


FIG. 5.

Inventor,
E. A. BAXTER.
By Fetherstonhaugh & Co.
Attys.

Patented Apr. 17, 1923. 1,452,141

UNITED STATES PATENT OFFICE.

ERNEST ARTHUR BAXTER, OF ST. PAUL'S, ONTARIO, CANADA.

HEN'S NEST.

Application filed September 9, 1922. Serial No. 587,128.

To all whom it may concern:

Be it known that I, ERNEST ARTHUR BAXTER, a subject of the King of Great Britain, and a resident of the village of St. Paul's, in the county of Perth, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Hens' Nests, of which the following is the specification.

My invention relates to improvements in hens' nests and the object of the invention is to devise simple means for preventing the breaking or eating of the eggs by the hen or the eggs becoming damaged and it consists essentially of the following arrangement and construction of parts as hereinafter more particularly explained.

Fig. 1 is a perspective view of my hens' nest, the front portion of the casing being removed so as to exhibit the interior construction of the nest.

Fig. 2 is a sectional view through Fig. 1.

Fig. 3 is a plan view partially in section taken on line 3—3, Fig. 2, one half of the casing being removed.

Fig. 4 is an enlarged perspective detail of the egg transferring cups and the carrying wheel thereof.

Fig. 5 is a sectional detail of the clutch mechanism and coacting rack.

In the drawings like characters of reference indicate corresponding parts in each figure.

1 indicates a base which is in the form of a tray provided with surrounding flanges 2. The base is preferably rectangular in form. 3 is a centre spider provided with radiating legs 4 having down-turned portions 5 terminating in feet 6 which are secured to the base 1. 7 is a stud extending upward from the spider 3. 8 and 9 are ball bearing members, the member 8 being secured to the spider 3 provided with a ball race 8^x in which are located balls 8^0. 10 is an egg receiver comprising a centre plate 11.

12 are arms which extend radially from the plate 11. The arms 12 are provided with up-turned ends 12^x connected together by an annular member 13. 14 is an annular member located within the member 13 concentrically therewith and with the centre of the stud 7. 15 are depending loop members extending between the members 13 and 14. 16 is an annular pocket formed of suitable flexible fabric, the edges of which are provided with hooks 17 and 18 adapted to respectively hook over the annular members 13 and 14 to hold the annular pocket 16 in a depending position.

The pocket 16 rests at intervals upon the base portion of the loop members 15 sagging therebetween so as to form cup-shaped depressions adapted to receive the eggs and hold them separately. The spider 11 is provided with a central aperture 11^x through which the stud 7 freely extends.

The bearing member 9 is provided with a ball race 9^x opposing the ball race 8^x and into which the balls 8^0 extend. The spider 11 is connected to the ball race 9 so as to revolve therewith.

It will thus be seen that the egg receiver 10 rotates freely around the stud 7. 19 is a tube which is carried by the stud 7 so as to extend vertically upward therefrom. 20 is a tube which is slidable vertically upon the tube 19, such tubes fitting telescopically one within the other.

The tube 20 is provided at its upper end with a closing plug 21. 22 is a compression spring located within the tubes 19 and 20 and extending between the upper end of the stud 7 and the lower end of the plug 21. 23 are arms which extend outward in a radial direction from the upper end of the tube 20, the intermediate portion 23^x being curved upward so as to merge into a vertical portion 23^0.

24 is an annular member connecting the upper ends of the arms 23 together thereby forming a cup-shaped frame construction forming a nest receiver. 25 is the nest proper which is formed of suitable fabric dished downward, its upper edges being connected by means of hooks 26 extending over the annular member 24 so as to support the nest within the nest receiver.

27 is an orifice formed in the centre of the nest at the bottom from which depends a tube 28 which is formed of comparatively stiff fabric such as reinforced canvas. 29 is a vertical rack secured to or forming part of the tube 20. 30 is a bracket provided with a sleeve-like portion 31 surrounding the tube 19 and secured thereto.

32 is a web extending upward from the sleeve 31 in a substantially radial position. The web 32 is provided with upper and

lower sleeve bearings 33 and 34 in which is journalled a vertical shaft 35. 36 is a bevel gear secured to the upper end of the shaft 35 and 37 is a gear pinion secured to the lower end of the shaft 35. 38 is a gear secured to the spider 11. 39 is a web extension extending outward from the sleeve 35 and provided at its outer end with an upwardly extending portion 39× carrying a horizontal bearing sleeve 40. 41 is a shaft journalled in the sleeve 40 and provided at its outer end with an enlargement 42 preventing the longitudinal movement of the shaft 41 in an inward direction.

43 is a bevel gear meshing with the bevel gear 36 and carried upon the shaft 41. The gear 43 is provided with a cylindrical body 44 forming an outer clutch member in which are carried pawls 45. 46 is a ratchet gear forming an inner clutch member located within the member 44 and with which the pawls 45 coact. 47 is a gear secured to or formed integral with the cylindrical member 44. The gear 47 and rack 29 are held in mesh so that by the vertical movement of the rack the gear 47 is revolved. 48 is a wheel secured to the shaft 41 provided with radial arms 49 forming the spokes of the wheel and 50 are egg receiving cups which are preferably formed of leather carried in a resilient metal frame 51.

The cups 50 are riveted or otherwise suitably secured as indicated at 52 to the arms 49. 53 is an egg director which is cowl-shaped, the tubular portion 54 thereof depending between the annular members 13 and 14 so as to direct the eggs into the annular egg receiving pocket 16.

The cowl-shaped director 53 is supported upon a standard frame 55 which is connected to the base 1 by any suitable means. 56 is the outer casing of my nest. The casing 56 is provided at the top with an annular member 57 divided into two halves provided with upwardly extending opposing lugs 58 and 59 upon which are swung arms 60 and 61 forming the sides of the handle. The upper ends of the arms 60 and 61 are inturned and provided with threaded portions and 62 is an internally threaded sleeve engaging such threaded portions so as to draw the arms 60 and 61 together as desired.

63 is an annular member located intermediately of the height of the nest and 64 are rods secured at their upper ends to the member 57 from which they incline inward and pass through orifices 68 formed in the annular member 63 and from thence incline downwardly and outwardly being secured at their lower ends to the flange 2 of the base 1.

Sheeting formed of tin or other suitable material 56× is suitably secured to the rods 64 so that the mechanism of the nest is completely housed therein. 69 is a strip of flexible material such as leather which is secured at its outer edge to the periphery of the annular member 57 and at its inner edge to the annular member 24.

Having described the principal parts involved in my invention I will briefly describe the operation of the same.

The hen, when it desires to lay, flies onto the outer portion formed by the annular member 57 of the nest and then steps into the nest. The weight of the hen depresses the nest so that the nest receiver and the tubular member 20 are forced downward against the pressure of the spring 22 compressing such spring.

The rack 29, meshing with the gear 47, rotates the gear in the direction of arrow (see Fig. 5) carrying the pawls 45 freely around the ratchet wheel 46. The egg when laid passes down from the nest through the tube 28 into one of the cup receivers 50 and is temporarily held within such cup.

When the hen passes off the nest and the nest receiver is relieved of the weight of the hen the spring 22 forces the tubular member 20 upward carrying the nest receiver back to its normal position.

By this means vertical upward movement is given to the gear 29 so as to rotate the gear 47 in the opposite direction to arrow and thereby rotate the shaft 41 in the same direction by means of the pawls 45 and ratchet gear 46.

The rotation of the shaft 41 turns the cup member 50 in which the egg is held so as to bring it opposite the mouth of the cowl 53 to discharge the egg thereinto. The egg passing through the cowl drops through the tubular portion 54 into the egg receiver 10.

Simultaneously with the aforesaid operation the egg receiver 10 is turned one space so that the eggs as they are dropped fall into successive cup-shaped depressions in the annular pocket 16.

From this description it will be seen that I have devised a very simple device whereby the eggs immediately they are laid are transferred from the nest out of the reach of the hen so that they cannot be destroyed either by the hen pecking at the eggs or by their rubbing one against the other which often fractures the shell when the egg shells are soft or very brittle.

What I claim as my invention is:

1. A hen's nest comprising a vertical stud, a nest proper having a central egg discharge orifice, means for resiliently supporting the nest proper upon the aforesaid stud, an annular egg receiver, means for rotating the receiver by a step by step movement by each depression of the nest upon the stud, and means for depositing the eggs transferred from the nest proper so as to fall successively into the egg receiver.

2. A hen's nest comprising a nest proper having a discharge orifice in the bottom, a

supporting frame for the nest proper, a tubular member depending from the frame, a base, a stud extending upward therefrom into the aforesaid tubular member, a compression spring located within the tubular member so as to bear against the upper end of the stud, an annular egg receiver rotatably carried upon the stud, means operated by the depression of the tubular member upon the stud for imparting a step by step movement to the receiver, and means for transferring each egg as it is laid into the receiver after each step by step movement.

3. A hen's nest comprising a nest proper having an egg discharge orifice at the bottom, a carrier member in which the nest is supported, a member depending from such carrier member, a rack formed integral with such member, a resilient support for the member, an egg receiver rotatably mounted to revolve around said support, a vertical countershaft, a geared connection between the countershaft and the egg receiver, a horizontal shaft, a gear connection between the countershaft and the horizontal shaft, and a gear connection between the horizontal shaft and vertical nest support.

4. A hen's nest comprising a nest proper having an egg discharge orifice at the bottom, a carrier member in which the nest is supported, a member depending from such carrier member, a rack formed integral with such member, a resilient support for the member, an egg receiver rotatably mounted to revolve around said support, a vertical countershaft, a geared connection between the countershaft and the egg receiver, a horizontal shaft, a geared connection between the countershaft and the horizontal shaft, a gear connection between the horizontal shaft and vertical nest support, a series of cup receivers carried by the horizontal shaft into which the eggs are successively discharged, and means for directing the eggs therefrom into the egg receiver as the horizontal shaft is turned.

ERNEST ARTHUR BAXTER.