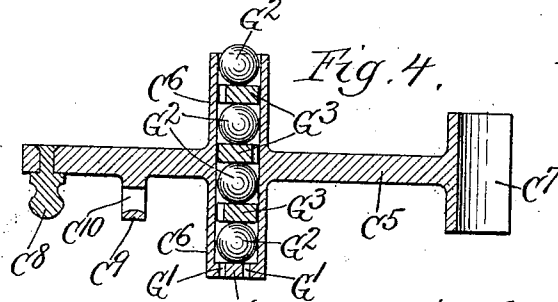
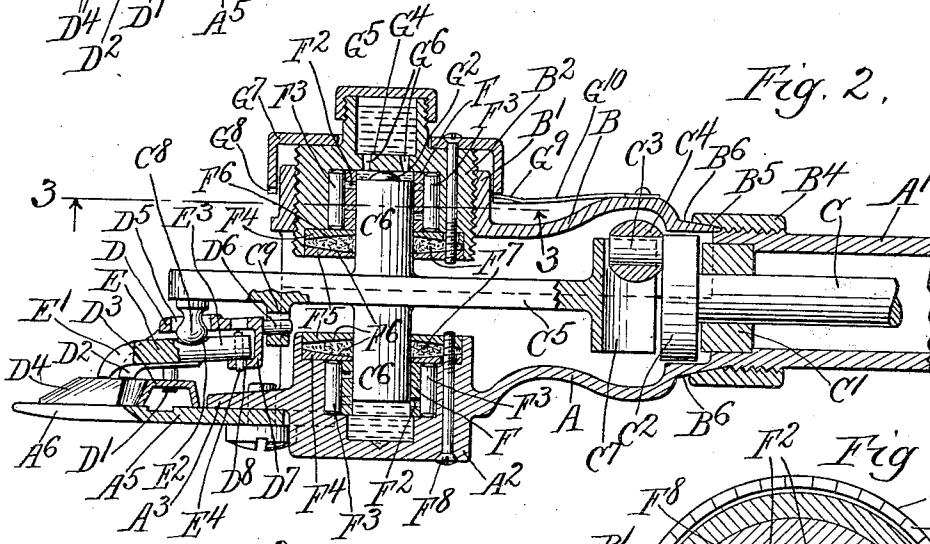
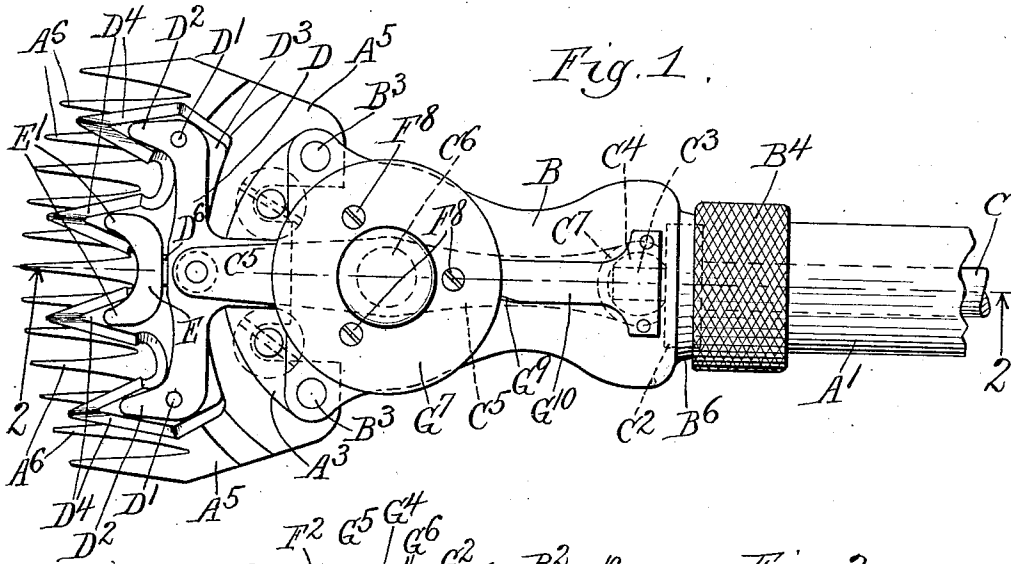


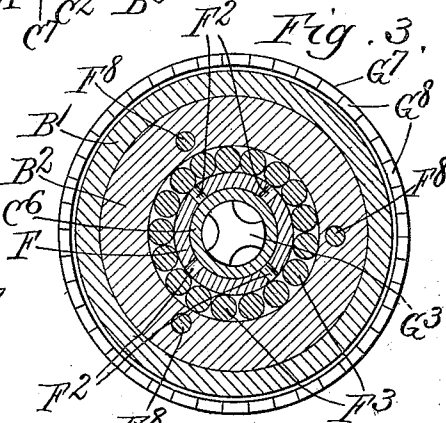
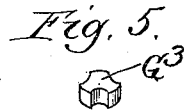
W. M. CAHILL.
ANIMAL SHEARS.
APPLICATION FILED MAY 31, 1910.

1,053,972.

Patented Feb. 25, 1913.



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UNITED STATES PATENT OFFICE.

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ANIMAL-SHEARS.

1,053,972.

Specification of Letters Patent.

Patented Feb. 25, 1913.

Application filed May 31, 1910. Serial No. 564,077.

To all whom it may concern:

Be it known that I, WALTER M. CAHILL, a citizen of the United States, residing at Winona, in the county of Winona and State of Minnesota, have invented a certain new and useful Improvement in Animal-Shears, of which the following is a specification.

My invention relates to improvements in animal shears and has for its object to provide an improved bearing for such shears.

It is illustrated in the accompanying drawings, wherein—

Figure 1 is a plan view of the device; Fig. 2, a section along the line 2—2 of Fig. 1; Fig. 3, a section along the line 3—3 of Fig. 2 on a large scale; Fig. 4, a longitudinal section through the rocker arm; Fig. 5, a detail of one of the spacing members.

Like letters refer to like parts throughout the several drawings.

The shell A is integral with and mounted upon the cylindrical handle A¹ and carries the hub A² which has the forwardly extending flange A³, the comb-plate A⁵ having the teeth A⁶. The cover B having the collar B¹ within which is screw threaded thereto the plug B², is held upon the shell A by the screws B³ and the collar B⁴ which is screw threaded upon the handle A¹ and has the conical surface B⁵ to engage the corresponding conical surface B⁶ upon the cover B and the shell A. The drive shaft C is carried in the bearing C¹ within the handle A¹ and has at its end the crank disk C² carrying the crank C³ upon which is rotatably mounted the ball C⁴. The rocker arm C⁵ which is mounted upon the shaft C⁶ has at one end the cylindrical part C⁷ partially inclosing the ball C⁴ and at the other has the downwardly extending ball bearing C⁸ and intermediate it and the shaft C⁶, the downwardly extending lug C⁹ perforated at C¹⁰. The yoke D having the bosses D¹ and fingers D² in contact respectively with the cutter plate D³ and outer cutting blades thereof D⁴ is perforated at D⁵ to permit the passage of the ball C⁸ and has the rearwardly extending cylindrical lug D⁶ within the perforation C¹⁰ in the lug C⁹ and has the downwardly extending hanger D⁷ which is perforated at D⁸. The yoke E having the fingers E¹ in contact with the inner cutting teeth of the plate D³ is provided with the socket bearing E² to engage the ball C⁸ and has the rearwardly projecting part E³ resting upon the hanger D⁷ and carrying the

pin E⁴ which engages the perforation D⁸ in the hanger D⁷. The shaft C⁶ is mounted at either end within bearings in the hub A² and plug B² respectively. The description of one will suffice for both. The cylindrical collar F perforated at F² surrounds the end of the shaft and is mounted within the roller cage F³ within the body of the hub. The annular washers F⁴ F⁵ which surround the shaft C⁶ have the concaved surfaces F⁶ to inclose the packing F⁷, the pressure upon which may be adjusted by means of the screw F⁸ to provide an oil-tight dust-proof chamber or casing for the bearings. The perforated shaft C⁶ which is hollow and has one end closed by the diaphragm G perforated at G¹ contains the balls G² separated by the spacing members G³ and provides an oil-tight dust-proof connection or passage between the bearing or chamber. The upper ball within the shaft projects above the end of it and is in contact with the web G⁴ which forms the bottom of the oil cup G⁵ and is perforated at G⁶. The cap G⁷ is rigidly attached to the plug B² and has the corrugations G⁸ thereabout which are engaged by the projection G⁹ upon the spring G¹⁰ to hold the plug B² in position.

It will be evident that while I have shown in my drawings an operative device, still numerous changes might be made in the size, shape and arrangement of parts without departing materially from the spirit of my invention.

The use and operation of my invention are as follows: I provide animal shears driven by a rotating shaft having a rocker arm to oscillate cutting knives in opposition to stationary cutting knives, said rocker arm being mounted upon a rock shaft. I provide a bearing for said rock shaft comprising a cylindrical collar within which said rock shaft is rotatably mounted, a roller bearing about said collar and packing means about said shaft to prevent the ingress of dust into the bearings. I provide a ball bearing in the end of the shaft in order that pressure may be brought through the shaft and the rocker arm upon the cutting teeth without undue friction. I provide a hollow rock shaft and an oil cup at one end of said shaft with passage through said shaft from the oil cup to each of the bearings. By this means, I am enabled to have a continuous oil chamber connecting the two bearings, preventing the admission of dust

or dirt and preventing the loss of the lubricant.

I claim:—

1. In an animal shears, a hollow rock
5 shaft, a perforated plug in one end of said
shaft, a plurality of balls within said shaft,
one of said balls extending beyond the end
of the shaft.
2. In an animal shears, a rocker arm, rock
10 shaft upon which said arm is mounted, anti-
friction bearings at either end of said shaft
and an oil passage between said bearings,
anti-friction bearings upon each end of such
bearings, said bearings comprising a cylin-
15 drical collar and a roller cage.
3. In an animal shears, a rocker arm, rock
shaft upon which said arm is mounted, anti-
friction bearings at either end of said shaft
and an oil passage between said bearings,
20 anti-friction bearings upon each end of such
bearings, said bearings comprising a cylin-
drical collar and a roller cage.
4. In an animal shears, a rocker arm and
rock shaft upon which said arm is mounted,
25 anti-friction bearings at either end of said
shaft comprising a cylinder having per-

forated walls and inclosing the shaft and a
roller cage about said cylinder, a connection
through said shaft between said bearings
and a ball in one end of said shaft in en- 30
gagement with a flat surface at the end of
one of said bearings.

5. In an animal shears, a rocker arm and
rock shaft upon which said arm is mount-
ed, anti-friction bearings at either end of 35
said shaft comprising a cylinder having per-
forated walls and inclosing the shaft and a
roller cage about said cylinder, a connection
through said shaft between said bearings
and a ball in one end of said shaft in en- 40
gagement with a flat surface at the end of
one of said bearings, and a plurality of con-
cave washers about said shaft in engagement
with said bearings, means for holding said
washers in juxta-positions one to the other 45
to form a packing containing cavity about
the shaft.

WALTER M. CAHILL.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."