

(No Model.)

F. M. ROOTS.
HOUSING FOR COG WHEELS.

No. 349,364.

Patented Sept. 21, 1886.

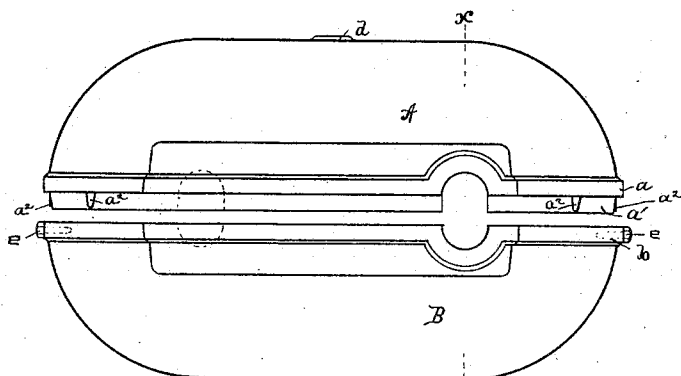


Fig. 1.

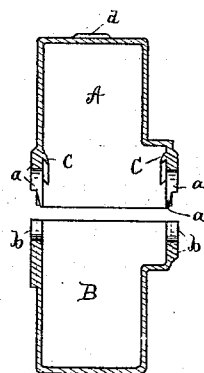


Fig. 2.

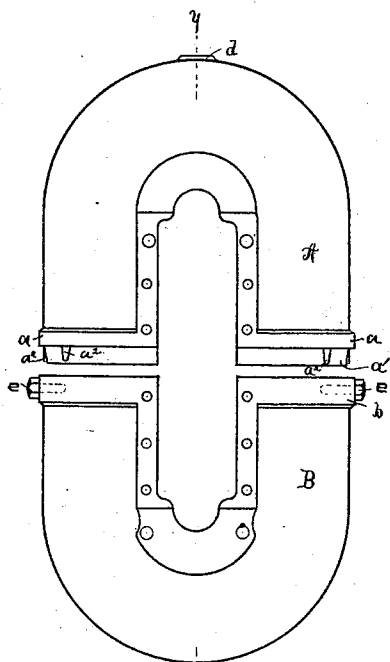


Fig. 3.

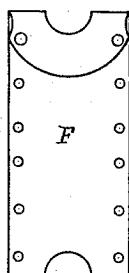


Fig. 5.

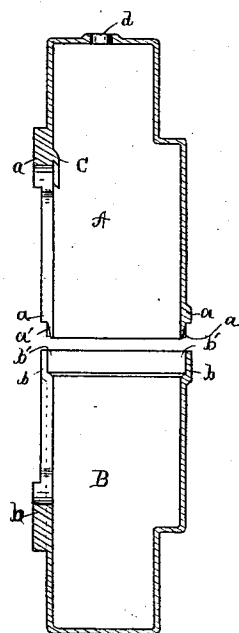


Fig. 4.

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FRANCIS M. ROOTS, OF CONNERSVILLE, INDIANA.

HOUSING FOR COG-WHEELS.

SPECIFICATION forming part of Letters Patent No. 349,364, dated September 21, 1886.

Application filed January 19, 1886. Serial No. 189,060. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS M. ROOTS, a citizen of the United States, and a resident of Connorsville, in the county of Fayette and State of Indiana, have invented a certain new and useful Improvement in Housings for Cog-Wheels, of which the following is a specification.

The object of my invention is to provide an improved housing for cog-wheels that is simple and cheap in its construction, and can be made oil-tight without the necessity of planing or packing the joints.

The invention will be first fully described in connection with the accompanying drawings, and then particularly referred to and pointed out in the claims.

In the drawings forming part of this specification, in which like parts are indicated by similar reference-letters wherever they occur throughout the various views, Figure 1 is a side elevation of my improved housing for cog-wheels which are arranged to run side by side, the upper and lower half of the housing being separated to more clearly illustrate the construction. Fig. 2 is a transverse vertical section of the same, taken through line *x x* of Fig. 1. Fig. 3 is a side elevation of a housing for cog-wheels when the wheels are arranged one above the other. Fig. 4 is a central vertical section through the same, taken in line *y y*. Fig. 5 is a removable plate to close the opening in the side of the housing, Figs. 3 and 4. It is shown in both of these views removed.

A is the upper half of the housing. It has a molding, *a*, running around it, which rests on the edge of a corresponding molding, *b*, in the lower half of the housing B. The upper half of the housing has a tongue, *a'*, extending around it, which fits into a rabbet, *b'*, within the molding *b*.

*a*² are projections cast upon the tongue *a'* to keep the tongue separate from the walls of the rabbet in the lower part of the housing, so as to form an air-space between the walls, and thus prevent the oil from working through the joints by capillary attraction. These projections *a*² also serve as "chipping-strips" in case the parts need fitting together. They are cast large enough to rest snugly against the

inner wall or rabbet of the molding *b*, so as to steady the parts. In the inside of the upper section, A, are cast projections C, immediately over the shaft-openings. The lower edges of these are undercut, so as to shed the oil that is splashed up against the sides of the housing and return it into the lower half, B. The oil-opening *d* in the upper half of the housing may be closed in any suitable manner after the oil is introduced, to prevent dust or extraneous matter from entering the housing. The two parts of the housing are secured together by cap-screws *e*. When the cog-wheels are run one above the other and separated, as shown between the shafts, it is necessary to employ a removable plate, F, Fig. 5. When this form is used, the housing is first secured in position around the cog-wheels, and plate F placed in position against the side of the housing and secured to it by screws passing through the perforations shown.

It will be seen that my improved housing requires no fitting whatever, except to tighten up the cap-screws when it is set in position, and screw on the plate F when the vertical form, Figs. 3 and 4, is used, and careful tests made by myself have demonstrated the fact that no oil will work out through the joints, even when the cog-wheels are running in oil and at a very high speed.

It is obvious that the projections *a*² upon the tongue *a'* may be dispensed with and the parts A and B held in proper relation to each other by the set-screws *e*. As the purpose of the projections is simply to separate the interlocking walls of the tongue and rabbet, the set-screws will of course keep them properly separated; but if the projections are dispensed with it would require more care in setting the screws to retain the proper relation between the parts, and would not make so secure and firm a job.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a housing for cog-wheels, the combination of the section A, having a downwardly-projecting tongue, *a'*, and the lower section, B, having a rabbet to receive said tongue, the perimeter of the tongue being small enough to allow a space between it and the wall of the rabbet, for the purpose set forth.

2. A two-part housing for cog-wheels, matched together by tongue and rabbet, the interlocking parts being separated by projections upon the adjacent face of one or other of said parts, and the parts secured together substantially as shown and described.

3. The two-part housing A B, the one having a tongue and the other a rabbet to receive it, with the projections a^2 , to separate the interlocking parts, and the projections C, overhanging the shaft-openings on the inside wall of the upper section, for the purpose set forth.

4. The combination, substantially as specified, of the upper section, A, having the molding a , the tongue a' , and projections a^2 , with the lower section, B, having the molding b , rabbet b' , and set-screws c , to secure the sections together, leaving an air-space between the adjacent walls of the interlocking parts.

FRANCIS M. ROOTS.

Witnesses:

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EDGAR O'HAIR.