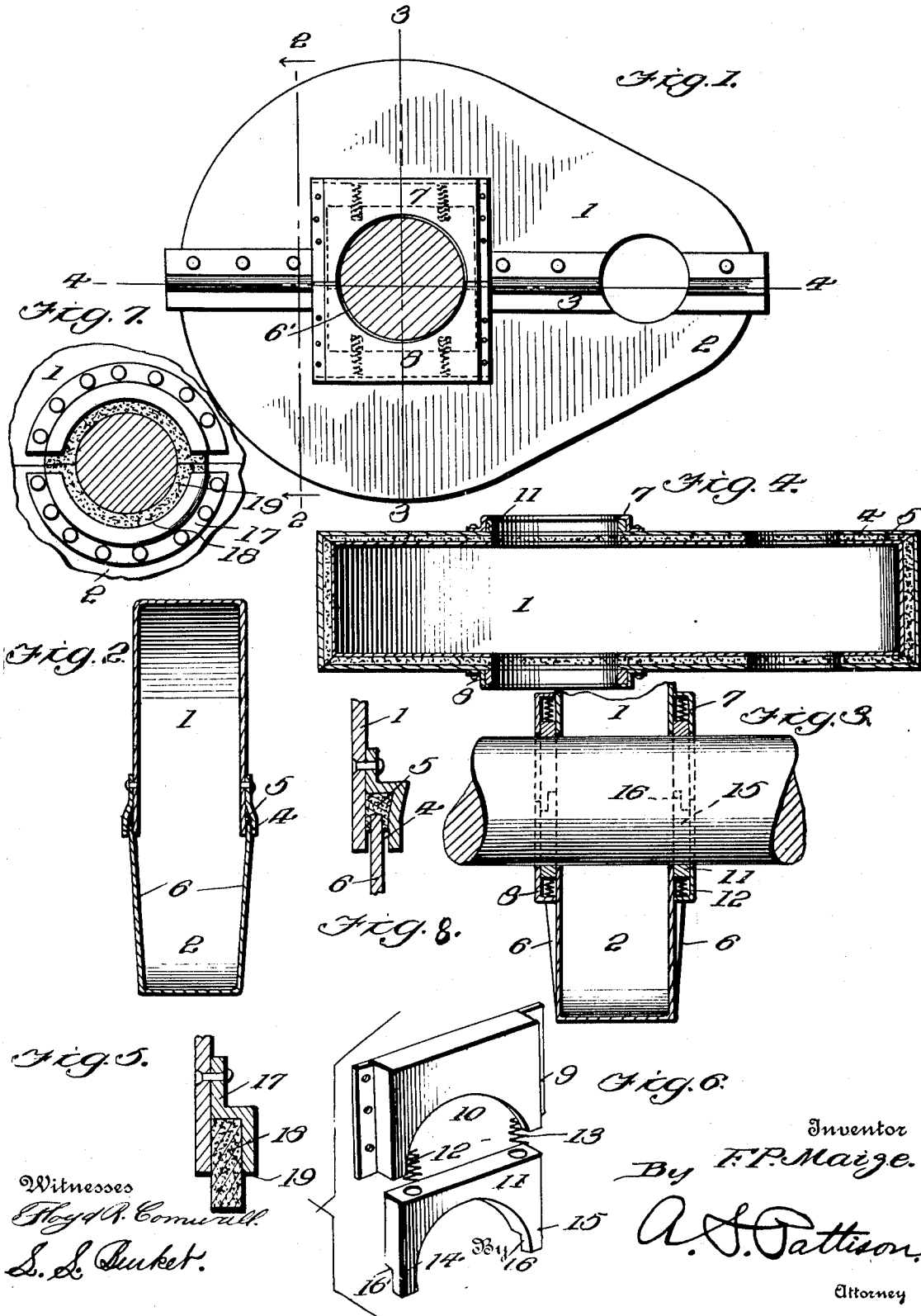


F. P. MAIZE.
GEAR CASE.
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1,048,328.

Patented Dec. 24, 1912.



Witnesses
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UNITED STATES PATENT OFFICE.

FRANK PALMER MAIZE, OF NEWARK, NEW JERSEY.

GEAR-CASE.

1,048,328.

Specification of Letters Patent.

Patented Dec. 24, 1912.

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To all whom it may concern:

Be it known that I, FRANK P. MAIZE, citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Gear-Cases, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to improvements in gear cases.

The object of my invention is to provide a gear case of this character in which the joints between the two sections are so packed that practically no dust can enter the case and at the same time allowing of the ready separation of the sections.

Another object of my invention is to provide means whereby a tight joint is made between the casing and the shaft to prevent any dust from entering the case and at the same time causing as little friction as possible on the shaft and providing means for taking up the wear on the packing engaging the shaft.

In the accompanying drawings—Figure 1 is a side elevation of my improved gear case, Fig. 2 is a vertical transverse sectional view, taken on the line 2—2, Fig. 1. Fig. 3 is a transverse sectional view taken on the line 3—3, Fig. 1. Fig. 4 is a horizontal sectional view taken on the line 4—4, Fig. 1. Fig. 5 is a vertical sectional view of a modified form of packing used around the shaft. Fig. 6 is an enlarged detached view of the spring pressed follower and the plates for forming the guides for carrying the same. Fig. 7 is a side elevation of the modified form of shaft packing, as shown in Fig. 5. Fig. 8 is an enlarged sectional view showing the means of holding the packing in the casing.

Referring now to the drawings, 1 represents the upper section and 2 the lower section of my improved casing, which when combined form a casing for an electric motor or other gearing. The upper section 1 is provided on the outside around its entire edge with the outwardly extending flange 3, which is riveted or otherwise formed thereon, and which forms the packing receiving pocket 4. This pocket, as shown, is slightly tapering and wider at its inner end than at the outer end so that the packing 5 when compressed will be retained therein.

The lower section of the casing, as shown in Fig. 2, has its walls 6 sloping outwardly so that the upper ends thereof will enter the pocket. The two sections 1 and 2 are secured together in any desired manner and when tightly drawn together the upper edges of the lower section 2 are embedded in the packing and this forms a tight joint between the two sections and prevents any dust from entering the casing.

In order to prevent any dust entering the casing around the shaft passing through the opening 6', I provide both the upper and lower sections 1 and 2, on each side, with the pockets 7 and 8, they being identical in structure and therefore, I will only describe one of these pockets and its follower.

Secured to the sides of the sections is a plate 9 forming a pocket 10 in which fits the follower 11. This follower is formed of wood and is normally held in its outward position by means of the springs 12 and 13 whereby a close contact is maintained with the shaft. The depending arms 14 and 15 of these followers are halved or cut away as indicated at 16, so that they overlap and form a tight joint so that any dust cannot possibly pass between the abutting ends of the followers. This arrangement allows of the slight movement of the followers independent of each other.

In the modification shown in Fig. 5, of the sections, 1 and 2 surrounding the cylindrical shaft openings 6, I provide the sections with the semi-circular plates 17, which are riveted or otherwise formed on the sections and forming the pockets 18, which have their inner ends larger than the outer ends and in which the packing 19 is securely fastened. The said packing extends out beyond the edge of the sections and engages the shaft and forms a tight joint therewith.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. A casing of the character described, comprising an upper section having a pocket formed on the outside at its lower end and said pocket having a contracted mouth, a packing in said pocket, and a lower section having its walls diverging outwardly and adapted to enter said pocket, substantially as described.

2. A casing of the character described,
comprising an upper section having a pocket
formed around its lower edge and said
pocket having a contracted mouth adapted
5 to retain the packing and a lower section
having its upper edge adapted to enter said
pocket.

In testimony whereof I hereunto affix my
signature in the presence of two witnesses.

FRANK PALMER MAIZE.

Witnesses:

OLIVER H. PERRY,
WILLIAM WACHENFELD.