(No Model.)

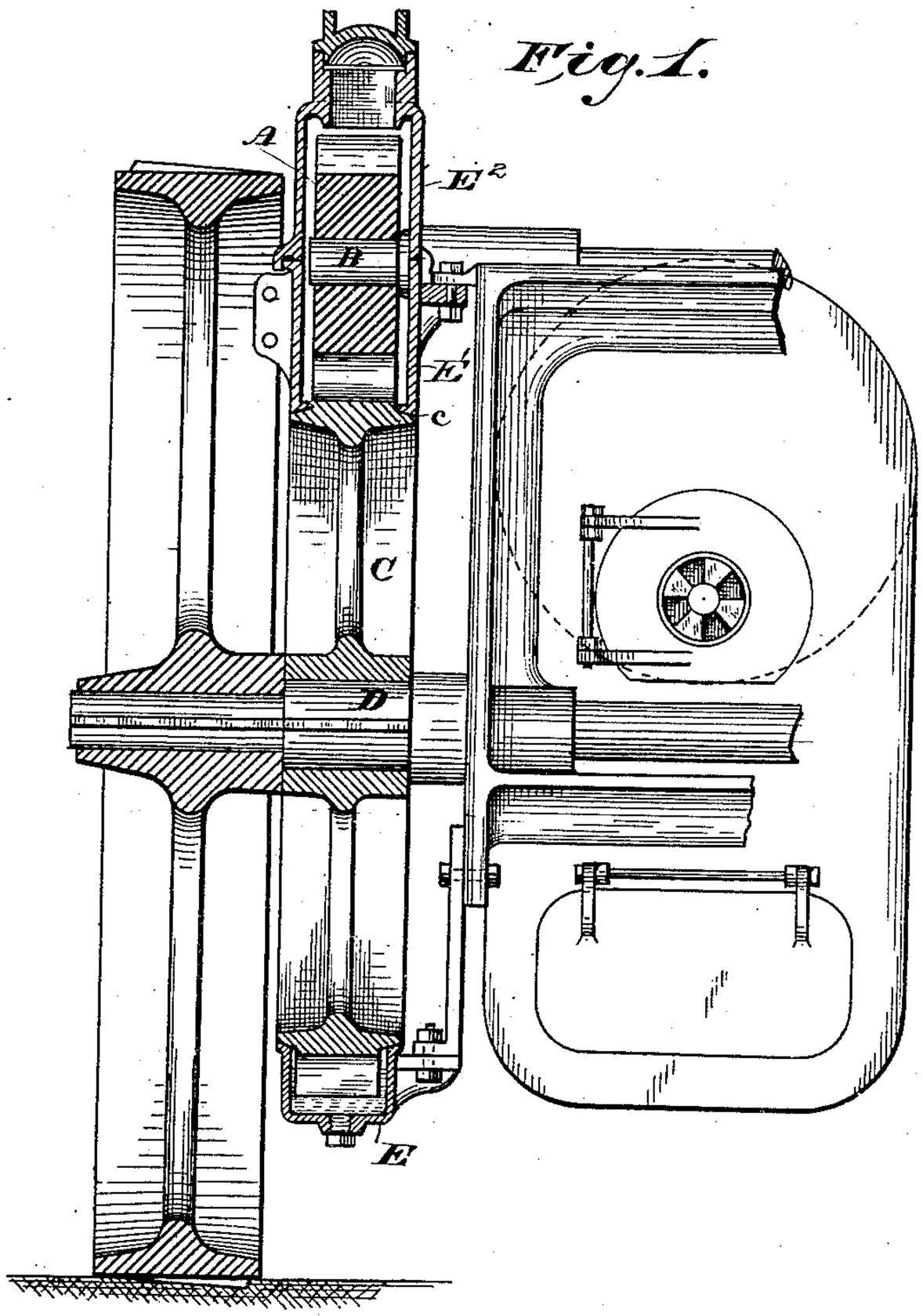
2 Sheets—Sheet 1.

E. PENNEY.

INCASED GEARING.

No. 333,542. Patented Jan. 5, 1886.

Fig. 1.



Witnesses,
E. J. Walker
Wm. E. Dyre.

Inventor:
Edgar Penney
by his attorney
P. J. Bird

(No Model.) 2 Sheets—Sheet 2.

E. PENNEY.

INCASED GEARING.

No. 333,542. Patented Jan. 5, 1886.

Fig. 4.

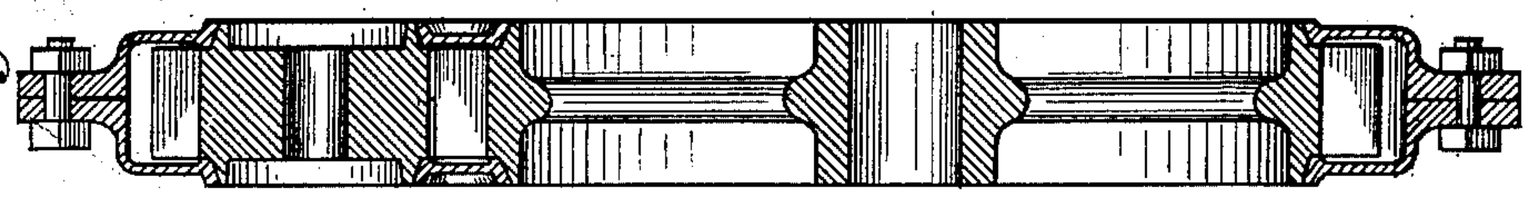


Fig. 3.

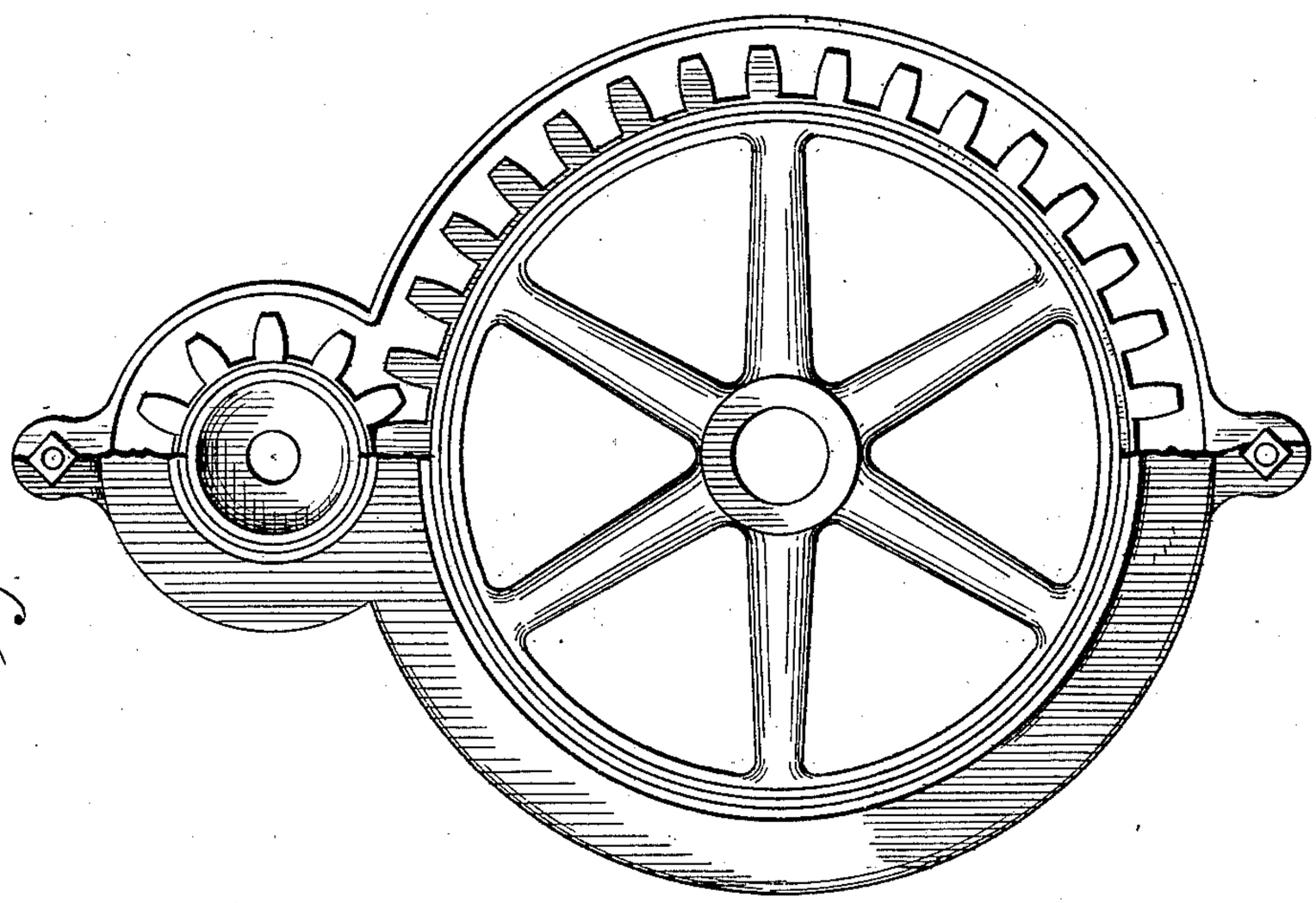
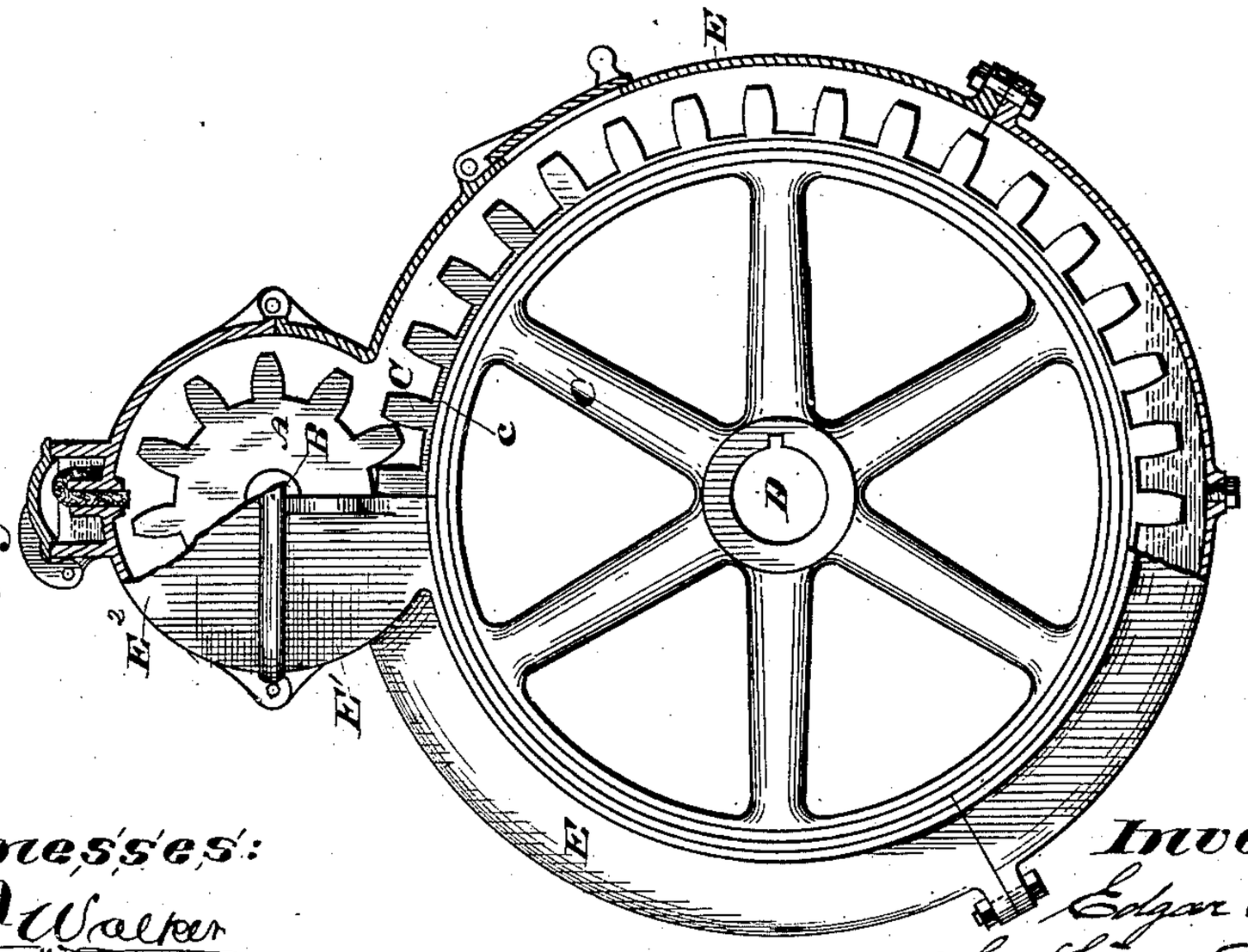


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

EDGAR PENNEY, OF WAYNESBOROUGH, PENNSYLVANIA.

INCASED GEARING.

SPECIFICATION forming part of Letters Patent No. 333,542, dated January 5, 1886.

Application filed November 11, 1885. Serial No. 182,450. (No model.)

To all whom it may concern:

Be it known that I, EDGAR PENNEY, a citizen of the United States, residing at Waynesborough, in the county of Franklin and State of Pennsylvania, have invented certain new and useful Improvements in Incased Gearing; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to incased gearing, and my improvement was designed with more special reference to its application to traction-engines; but it may be applied to all kinds of machinery, especially agricultural machinery, and wherever gearing is liable to be clogged by flying dirt and dust.

My improvement consists in covering a pair of toothed wheels by means of a casing composed of a channel-ring which covers the toothed rim only of one of the wheels, and a wing on said channel-ring for covering the other wheel.

Figure 1 represents an end elevation of a portion of a traction-engine, showing the traction-wheel and the incased gearing in section. Fig. 2 represents a face view of the incased gearing, part of the casing being broken away. Figs. 3 and 4 illustrate a modification of the casing, which will be explained after the description of the construction shown in Figs. 1 and 2.

A refers to the spur-pinion, which is fixed on the counter-shaft B of the traction-engine, and drives the spur-wheel C, fixed on the axle D of the traction-wheels. The casing is composed of a channel-ring, E, which incloses the toothed rim of spur-wheel C, and a projecting flat semi-cylindrical throat, E′, which, in conjunction with a flat semi-cylindrical cover, E^2, forms a cylindrical wing on the channel-ring, for so inclosing the spur-pinion that its teeth may mesh with the teeth of the spur-wheel. The toothed rim of the spur-wheel C has a narrow laterally-projecting ring-flange, *c*, on each face, and the inclosing channel-ring E is fitted snugly to these ring-flanges, so as to prevent dirt or dust from reaching the teeth of the spur-wheel.

For convenience of application, the channel-ring with its throat is made in three pieces, as shown in Fig. 2, one radial division being made at the middle of its throat. The cover E^2 is hinged to the throat E′, so that said cover may be thrown back to expose the spur-pinion for inspection or removal. The cover is also provided with an oil-cup, the oil from which is delivered by a wick upon the teeth of the spur-pinion. The channel-ring may also be supplied with oil to constantly lubricate the spur-wheel. A screw-plug is put in the bottom of the channel-ring, as shown, on removal of which the oil may be drawn from the channel-ring. At a convenient point the channel-ring has an opening covered by a hinged flap, which can be thrown back to permit of an inspection of the spur-wheel. The casing thus constructed is provided with suitable flanges to secure it permanently to a fixed part of the traction-engine.

According to the modification shown in Figs. 3 and 4, the toothed rim only of the pinion is inclosed, and the casing is therefore composed of a channel-ring for inclosing the toothed rim of the spur-wheel, and a wing thereon for inclosing the toothed rim of the spur-pinion, which wing also has the form of a channel-ring. This casing is divided so that its two halves may be applied facewise to the wheels. The channel-ring which covers the toothed rim of the spur-pinion is also fitted on ring-flanges on said rim like the channel-ring which covers the toothed rim of the spur-wheel, so that this casing is supported and held in proper position by the wheels, and requires no other support.

I claim as my invention—

1. The combination, substantially as before set forth, with a pair of intermeshed toothed wheels, of a casing composed of a channel-ring for covering the toothed rim of one of the said wheels, and a wing on said channel-ring for covering the other wheel.

2. The combination, substantially as before set forth, with a pair of intermeshed toothed wheels, of a casing composed of a channel-ring which covers and is fitted on ring-flanges of the toothed rim of one of the wheels, and a wing on said channel-ring for covering the other wheel.

3. The combination, substantially as before

set forth, with a pair of intermeshed toothed wheels, of a casing composed of a channel-ring which covers and is fitted on ring-flanges of the toothed rim of one of the wheels, and a wing on said channel-ring, which covers the other wheel and carries an oil-cup for lubricating the wheels.

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

EDGAR PENNEY.

Witnesses:
GEO. H. RUSSELL,
ALF. N. RUSSELL.