(No Model.)

H. H. E. BERY.

FIFTH WHEEL.

No. 300,196. Patented June 10, 1884.

Fig: 1

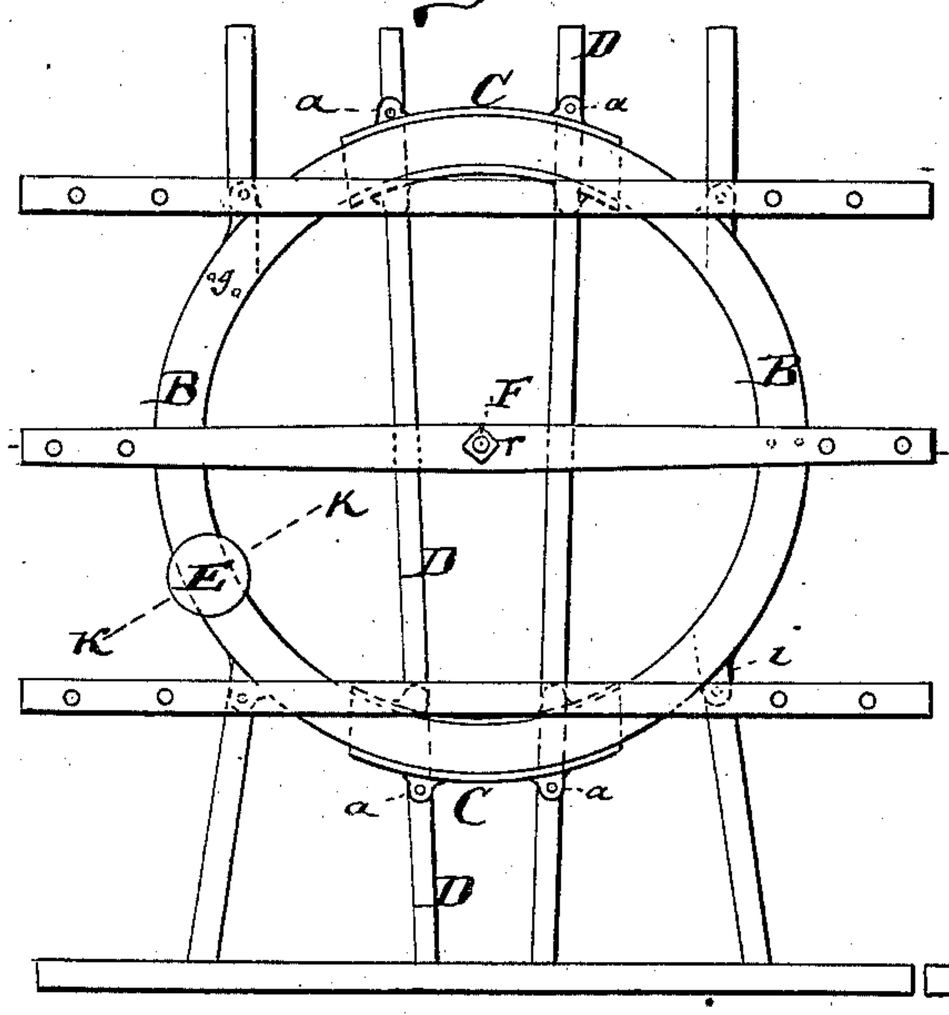

Fig: 2

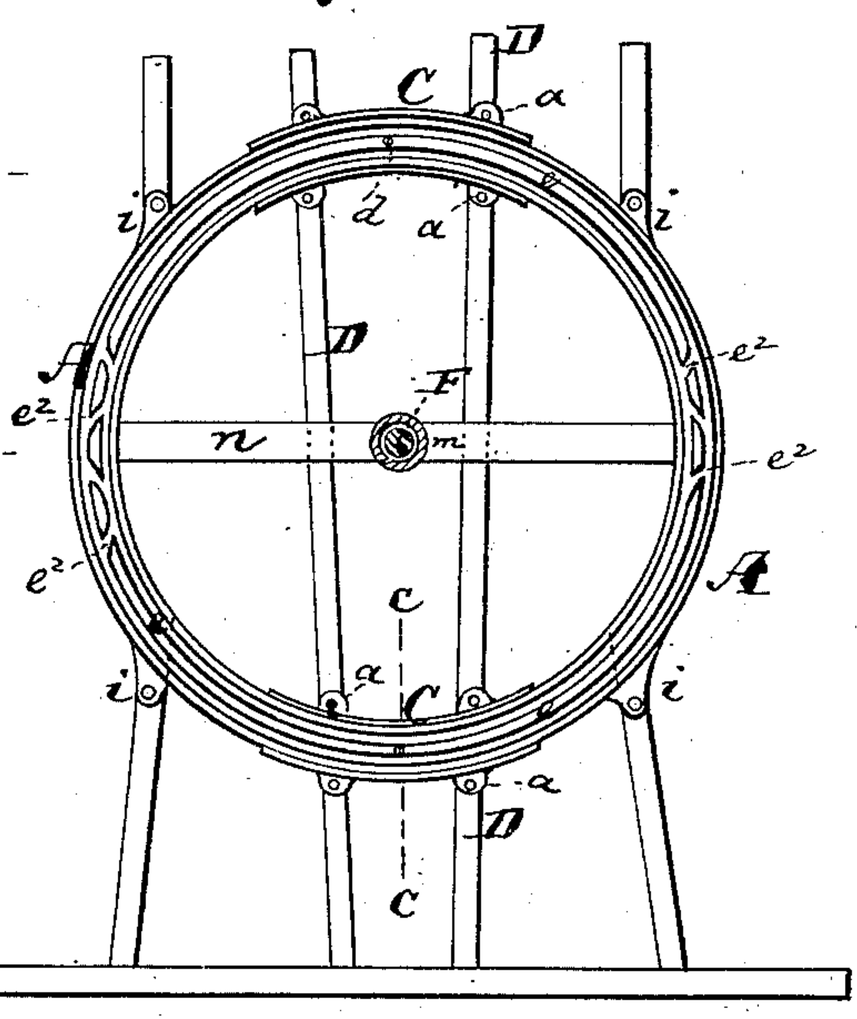

Fig: 3

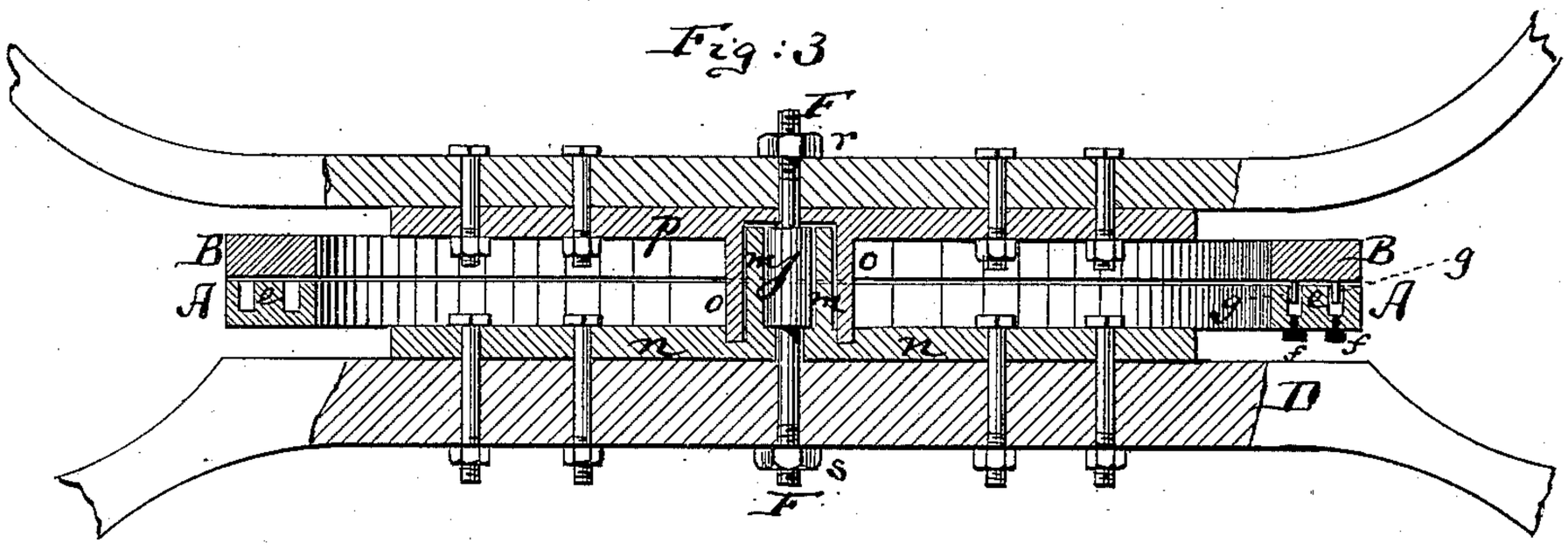

Fig: 4

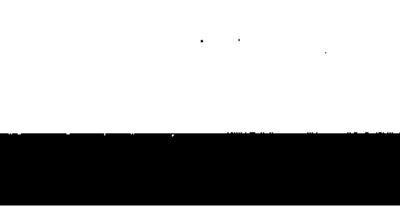

Fig: 5

Fig: 6

Fig: 7

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FIFTH-WHEEL.

SPECIFICATION forming part of Letters Patent No. 300,196, dated June 10, 1884.

Application filed January 30, 1884. (No model.)

To all whom it may concern:

Be it known that I, HANS H. E. BERY, a resident of Brooklyn, in the county of Kings and State of New York, have invented an Improved Fifth-Wheel for Wagons and Carriages, of which the following is a full, clear, and exact description, reference being made to the accompanying drawings, in which—

Figure 1 is a plan or top view of the fifth-wheel. Fig. 2 is a top view of the same with the upper ring removed. Fig. 3 is an enlarged vertical central section of the same. Figs. 4, 5, 6, and 7 are detailed views, hereinafter more fully referred to.

This invention relates to a self-lubricating fifth-wheel for wagons or carriages; and it consists in the novel construction of the parts that enter into the fifth-wheel, as will be hereinafter more fully specified.

In the drawings, the letter A represents the lower ring, and the letter B the upper ring or annulus, of the fifth-wheel. The lower ring is fastened to the gear beneath by means of curved troughs C C, of which one is shown in top view, Fig. 4. These troughs are, by means of bolts *b*, that pass through ears *a*, that extend from said troughs, secured to the gear D beneath, as is more clearly indicated in Fig. 5, which is a section on the plane of the line *c c*, Fig. 2, and in which said fastening-bolts are shown at *b*. In these curved troughs portions of the lower ring, A, are fully embedded, as is shown in Fig. 5, and as is also indicated in Fig. 2. The lower ring, A, is secured in these troughs by screw or screws *d*, that pass through the bottom of the ring A, part way into, but not wholly through, the bottom of the trough C beneath, as is shown in Fig. 5. The walls of the trough C also extend upward to partly embrace and guide and steady the upper ring, B, as shown in Fig. 5. The lower ring, A, is made in form of a continuous channel—that is to say, with vertical walls, between which a passage is formed for the reception of oil. There may be also an interior wall or walls, *e*, in said ring, which gives strength to it, adds to the support of the upper plate, B, and reduces the quantity of oil which must necessarily be carried. Where such an inner wall or partition, *e*, is used, it should at sundry places be interrupted, as is indicated at e^2 in Fig. 2, to allow the oil to circulate in the channels of the plate A. The upper ring, B, which rests on the ring A, as is indicated in Fig. 3, has its under surface lubricated, whenever the vehicle is in motion, by the oil splashing up against its under side, and the oil which thus reaches the lower face of the ring B will also find its way between the contact-faces of the rings A and B. When the channel in the plate A is to be cleaned, the oil contained in it may be let out by bottom apertures, *f*, which normally are closed by appropriate plugs. Pins *g* may project downward from the lower face of the top plate, B, into the channel or channels of the plate A, for the purpose of disturbing the oil and cutting through any film that may form on top of the oil while the vehicle is at rest.

The oil is supplied to the channels in the ring A by a lubricator, E, which is screwed or otherwise fastened to the upper ring, B, and which has a suitable valve, *h*, by which the flow of oil into the channels of the lower ring, A, can be regulated. This lubricator E can be unscrewed, when desired, after having performed its duty, and the hole which received it filled by a suitable plug until more oil is to be let into the fifth-wheel, when it can be reattached. Fig. 7 shows this lubricator, said figure being a section on the line *k k*, Fig. 1.

In addition to the trough C for fastening the lower ring, A, to the gear D, the ring A is provided with projecting lugs *i*, which receive bolts or screws that also secure the lower ring to the gear D. The king-bolt F, which is located in the center of these rings A and B, is made with a central enlargement, *j*, which is received in an upwardly-projecting tube, *m*, of the plate *n*, that is directly beneath the ring A, and around which tube *m* extends a downwardly-projecting tube, *o*, from the bar or plate *p*, which is directly beneath the upper ring, B, and secured to the wagon-body, or to parts rigidly connected therewith. Fig. 3 clearly shows this arrangement of parts; and it will be perceived that, although the king-bolt F is provided at the upper and lower ends with nuts *r* and *s*, respectively, nevertheless, if these nuts should be lost, the king-bolt will retain its place, and that when the wagon-body is to be lifted off the lower gear

the king-bolt will not have to be dropped out, but may be retained in place. The rings or tubes *m* and *o* relieve the king-bolt of undue strain, and serve, furthermore, to hold the plates A and B in their proper relative position.

I claim—

1. The combination of the lower ring, A, of a fifth-wheel with the supporting-trough C, having lugs *a*, and with the fastening-screw *d*, substantially as and for the purpose described.

2. In the fifth-wheel, the bottom plate, A, having interior channel and inner broken wall, *e*, within said channel, combined with the upper ring, B, substantially as and for the purpose described.

3. The fifth-wheel ring A, made with oil-channel and provided with discharge opening or openings *f*, substantially as described.

4. The combination of the lower fifth-wheel ring, A, having channel or channels, with the upper fifth-wheel ring, B, covering the said channels, and with the pins *g*, that extend downward from said upper ring into said channel, substantially as described.

5. The combination of the trough C with the lower ring, A, of the fifth-wheel, and with the upper ring, B, of said fifth-wheel, both said rings being contained within said trough, substantially as described.

6. The combination of the lower ring, A, of the fifth-wheel, with the projecting lugs *i*, and with the sustaining-troughs C C, substantially as described.

7. The king-bolt F, made with central enlargement, *j*, in combination with the tubes *m* and *o*, which embrace it, and with the rings A and B of the fifth-wheel, substantially as herein shown and described.

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