(No Model.)

J. P. MULLIN.

SPLIT GEAR WHEEL.

No. 596,784. Patented Jan. 4, 1898.

Fig. 1.

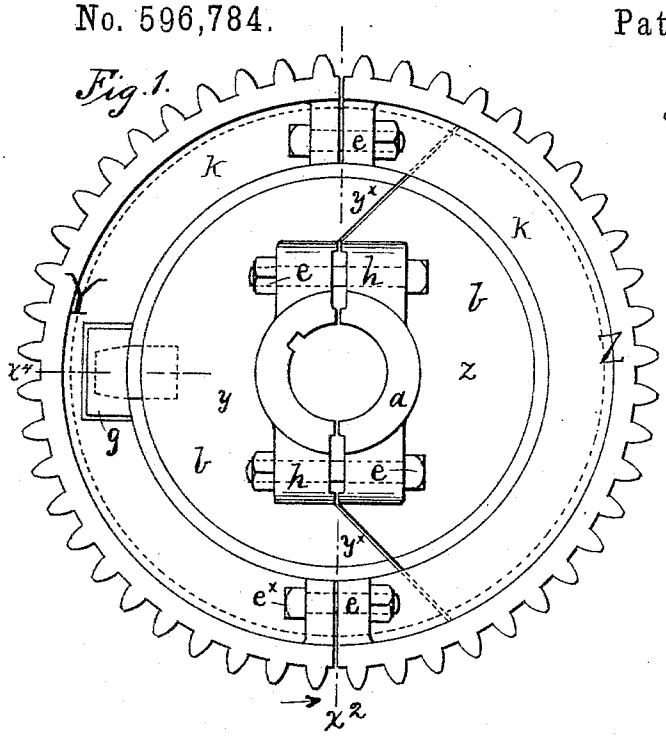


Fig. 2.

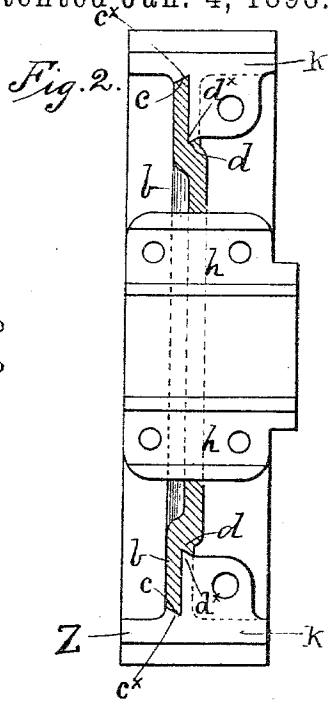


Fig. 3.

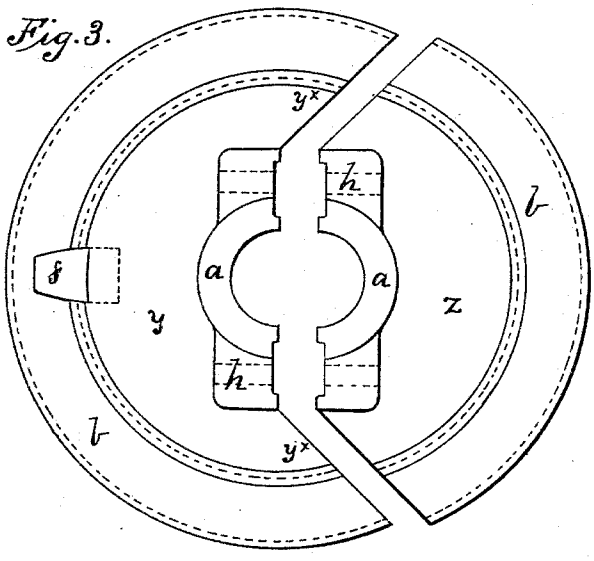
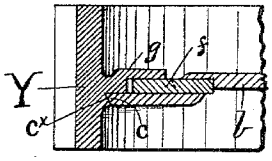


Fig. 4.



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SPLIT GEAR-WHEEL.

SPECIFICATION forming part of Letters Patent No. 596,784, dated January 4, 1898.

Application filed November 5, 1897. Serial No. 657,568. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH P. MULLIN, of Arlington, in the county of Hudson and State of New Jersey, have invented a new and useful Split Gear-Wheel, of which the following is a specification.

This invention relates to the class of split or sectional gear-wheels, pulleys, &c., in which there is a split hub-center detachable from a split rim; and the object is to provide a hub-center on which the sections of the split rim fit frictionally, so that the rim is prevented from rotating on the center wholly by friction, means being employed, preferably a dovetail constructed at the joint, to prevent lateral displacement of the parts, all as will be described more in detail hereinafter with reference to the accompanying drawings, wherein—

Figure 1 is a side elevation of the split wheel. Fig. 2 is a diametrical section of the same in the plane indicated by line x^2 in Fig. 1. Fig. 3 is a side view of the hub-center, showing the sections thereof slightly separated. Fig. 4 is a fragmentary section at line x^4 in Fig. 1, showing the key f in place.

The hub-center consists of two sections y and z, which when fitted together provide the central boss a, bored to fit on a shaft or axle, and a web b, integral with said boss. This web is circular and has a beveled margin c and a dovetailed circumferential groove d, both concentric with the bore in the boss. The latter has lugs h, bored to receive securing-bolts e, for bolting the two sections y and z together after they are fitted on the shaft or axle. The split or line of division of the hub-center does not extend straight through the same diametrically, but after dividing the boss a into two equal sections or halves it passes obliquely through the web b, thus throwing into one of the sections the angular portions marked $y^\times$.

The rim of the wheel is annular and consists of two like halves or sections Y and Z, each of which is furnished with a web k, having a dovetailed circumferential groove $c^\times$ to receive the beveled margin c of the web b and a beveled circumferential inner margin $d^\times$ on it to fit into the groove d of the hub-center. The sections of the wheel-rim have lugs to receive bolts $e^\times$ for securing the rim-sections to each other, these bolts serving to draw the sections of the rim up so tightly onto the web of the hub-sections that one cannot move on the other by reason of the excessive friction, the dovetail joints acting under pressure, so that no bolts are required or employed to secure the sections of the rim to the sections of the hub. However, as a precaution to prevent the movement of the rim about the center, in case the bolts which draw together the sections of the rim should become slack from any cause, a safety-key f may be employed to key the two parts together in a positive manner. This device is best shown in Fig. 4, wherein f is the radially-arranged key driven into registering keyways or sockets g, formed in the adjacent parts.

This split wheel is simple in construction and inexpensive to manufacture. The edge c and groove d may be turned after the sections of the hub-center have been fitted together and bored and the groove $c^\times$ and edge $d^\times$ may be turned after the sections of the rim have been fitted together.

It will be noted that the dovetailed interlocking devices of the rim and hub center fix the parts rigidly together when the sections of the rim are fitted onto the hub-center and drawn up with the bolts $e^\times$, the form and construction of the parts resulting in the inner faces of the webs resting or pressing against each other. Thus the lateral overlap effected by the dovetail serves to prevent lateral displacement of the parts without the aid of extraneous bolts or screws and also to draw or wedge the faces of the webs together.

The object in making the line of division of the web b oblique, so as to throw the excess at $y^\times$ on one of the sections of the hub-center, is to divide the periphery of the hub-center unequally while the rim is divided equally, and the construction thus avoids coincidence between the joints of the rim and hub-center. This feature, however, is not absolutely essential to the invention.

Having thus described my invention, I claim—

1. A split wheel comprising a hub-center and a rim, both sectional, and respectively provided with an interlocking peripheral edge

and groove and with integral means for preventing lateral movement of one on the other, means for securing together the sections of the rim and means for securing together the sections of the hub-center.

2. A split wheel comprising a sectional hub-center with a beveled periphery or edge, a sectional rim having a circumferential groove to receive said edge of the hub-center when the parts are fitted, whereby lateral displacement of one part or the other is prevented, means independent of the center for drawing and securing the sections of the rim together and means independent of the rim, for securing the sections of the hub-center together.

3. A split wheel consisting of a hub-center of circular contour provided with a beveled peripheral edge c, and a dovetail groove d, the rim provided with a circumferential groove $c^{\times}$, and peripheral edge $d^{\times}$, these latter being adapted to fit and interlock with the edge c and groove d on the hub-center, and means for securing together the sections of the hub-center and the sections, of the rim.

4. A split wheel comprising an annular, sectional rim, and a sectional hub-center, said rim and center having circular interlocking parts and laterally-overlapping parts which prevent lateral displacement, the division of said hub-center being unequal, whereby both joints of the hub-section are overlapped by the same section of the rim.

5. A split wheel comprising an annular, sectional rim and a sectional hub-center, said rim and center having circular interlocking parts and lateral overlaps, and being held against relative displacement, the one on the other, and a safety-key f, engaging registering keyways in the respective rim and center sections.

6. A split wheel comprising a sectional, annular rim and a sectional, circular hub-center on which the rim fits and is held, one of said parts having a circumferential groove which receives an edge on the other part and overlaps it at both sides to avoid lateral displacement, means independent of the rim which secure the sections of the center together, and means independent of the center, which draw together the sections of the rim so that it clamps the center tightly.

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