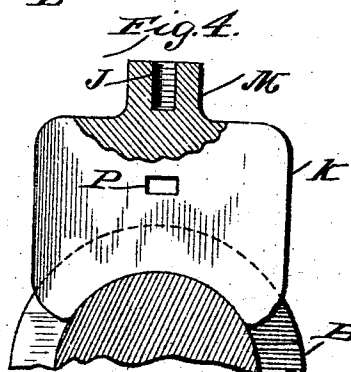
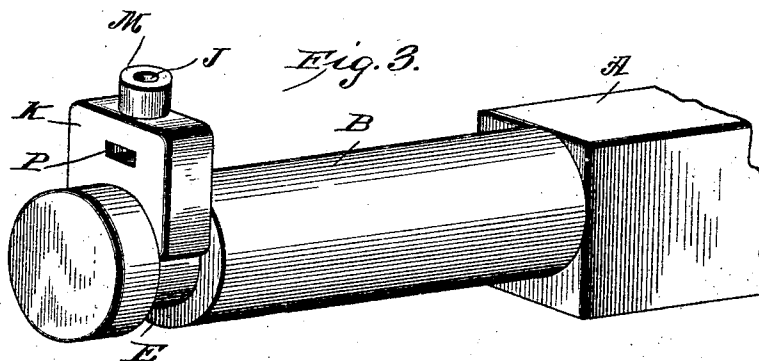
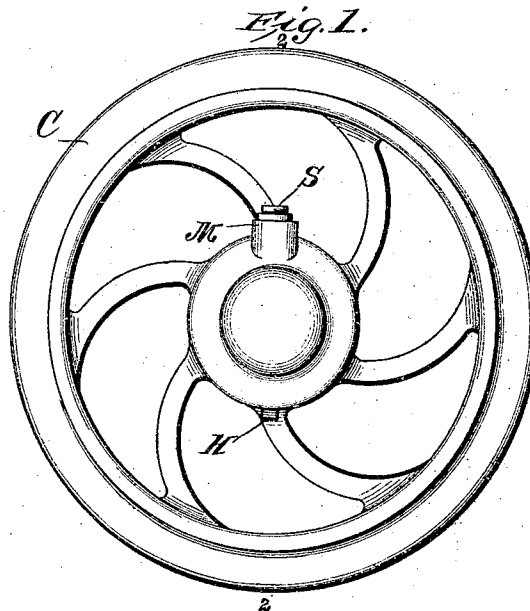
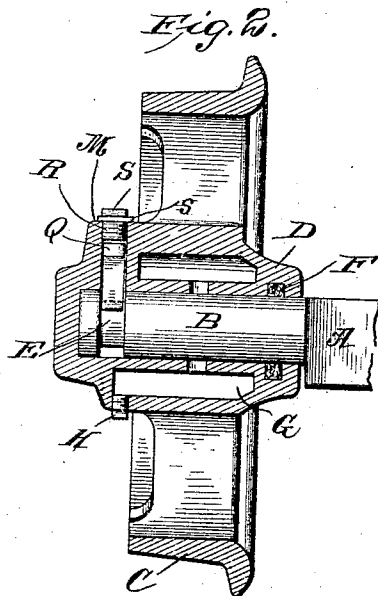


J. T. PARKS & M. T. DAVIS, JR.  
MINE CAR WHEEL.  
APPLICATION FILED SEPT. 22, 1909.

945,584.

Patented Jan. 4, 1910.



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# UNITED STATES PATENT OFFICE.

JOHN T. PARKS AND MADISON T. DAVIS, JR., OF CHARLESTON, WEST VIRGINIA.

## MINE-CAR WHEEL.

945,584.

Specification of Letters Patent.

Patented Jan. 4, 1910.

Application filed September 22, 1909. Serial No. 518,953.

*To all whom it may concern:*

Be it known that we, JOHN T. PARKS and MADISON T. DAVIS, JR., citizens of the United States, and residents of Charleston, in the county of Kanawha and State of West Virginia, have invented certain new and useful Improvements in Mine-Car Wheels, of which the following is a specification.

Our invention relates to improvements in mine car wheels, and it consists in the combinations, constructions, and arrangements of parts herein described and claimed.

Our invention is designed as an improvement over that form of wheel shown in our prior patent, No. 909,112, of Jan. 5, 1909, and also over the patents of Faught, Patent No. 321,590, July 7, 1885 and Bond, No. 786,405, of April 4, 1905.

In our former patent, No. 909,112, the wheel was held to the axle by means of a revoluble pin, which was held in a slot in the hub.

The main object of the present invention is to make use of a plug for holding the wheel on the shaft, with improvements for loosening the plug if the latter should become jammed against the shaft.

A further object of our invention is to provide a plug for keeping the hub on the wheel which is not subject to the danger of rotating out of place, but which is held in place by means of an extension.

Further objects and advantages will appear in the following specification, and the novel features will be particularly pointed out in the appended claims.

Our invention is illustrated in the accompanying drawings, in which—

Figure 1 is a face view of the wheel constructed according to our invention, Fig. 2 is a central section along the line 2—2 of Fig. 1, Fig. 3 is a perspective view showing the relation of the retaining plug to the axle, and Fig. 4 is a face view of the plug, a portion of the same being shown in section.

In carrying out our invention, we provide an axle A with a spindle B, adapted to receive the hub D of the wheel C. The axle B is provided near its outer end with a groove E as shown in the drawing.

The hub D of the wheel C is provided with a packing ring F, and may be channeled as shown at G, to render the hub less bulky, and also to provide channels for oil. The oiling means is shown at H. This is a

spring oiler, which is provided with a depression cap arranged to close when the pressure is relieved.

The member for retaining the hub on the wheel consists of a plug K of the shape shown in the drawings.

The plug has a cylindrical portion M at its top, which is threaded internally as shown at J in Figs. 3 and 4, to receive the threaded end of a rod (not shown). The plug is also provided with a rectangular opening P by which it may be put into place. The plug is arranged to fit in a groove Q in the outer edge of the hub D and the central cylindrical extension M is arranged to fit into a cylindrical opening R, in the outer end of which is a screw S provided with a shoulder s arranged to bear on the outer part of the hub. The end of the screw S, when the latter is in its normal position, just clears the end of the extended portion of the plug.

From the foregoing description of the various parts of the device, the operation thereof may be readily understood.

Before placing the wheel on the shaft, a tool is thrust in the opening p of the plug K, and it is then inserted through the inner end of the hub until the cylindrical extension drops into the cylindrical opening R. The wheel is then placed on the axle, and the screw S is inserted, thereby keeping the plug in its place in the groove E, and preventing the wheel from coming off. It will be noticed that with this construction, there is no liability of the plug rotating with the shaft, and thereby causing it to jam against the sides of the grooves Q and E. If for any reason the plug should become jammed against the axle, the screw S may be removed, and a threaded tool may be inserted in the opening J, and the plug drawn outwardly, thereby freeing the axle and permitting the removal of the wheel.

We claim:

1. The combination with a shaft having a groove near one end, of a wheel provided with a hub having a bore arranged to receive the shaft, a portion of said hub having an internal groove adapted to register with the groove in the shaft and a cylindrical opening communicating therewith, a plug disposed in the registering grooves of said shaft and said hub, and means for preventing the rotation of the plug.

2. The combination with a shaft having a

groove near one end, of a wheel provided with a hub having a bore arranged to receive the shaft, a portion of said hub having a groove adapted to register with the groove  
5 in the shaft and a cylindrical opening from the exterior of the hub communicating therewith, a plug disposed in the registering grooves of said shaft and said hub, said plug being provided with a central cylindrical extension arranged to extend into said  
10 cylindrical opening, and a screw disposed in the end of said cylindrical opening.

3. The combination with a shaft having a groove near one end, of a wheel provided  
15 with a hub having a bore arranged to receive the shaft, a portion of said hub having a groove adapted to register with the groove in the shaft and a cylindrical opening from the exterior of the hub communicating therewith, a plug disposed in the registering  
20 grooves of said shaft and said hub, said plug being provided with a central cylindrical extension arranged to project into

said cylindrical opening, said extended portion having a threaded opening arranged to receive the end of a tool, and a screw disposed in the end of said cylindrical opening, and adapted to be removed to permit the entrance of a tool for manipulating the plug. 25

4. The combination with a shaft having a  
30 groove near one end, of a wheel provided with a hub having a bore arranged to receive the shaft, a portion of said hub having an internal groove adapted to register with the groove in the shaft, and an opening from  
35 the exterior of the hub communicating therewith, a plug disposed in the registering grooves of said shaft and said hub, said plug being provided with a central extension arranged to extend into said opening for preventing the rotation of said plug. 40

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