(No Model.)

R. W. GORMLY.

BURR WHEEL.

No. 491,345. Patented Feb. 7, 1893.

Fig. 1.

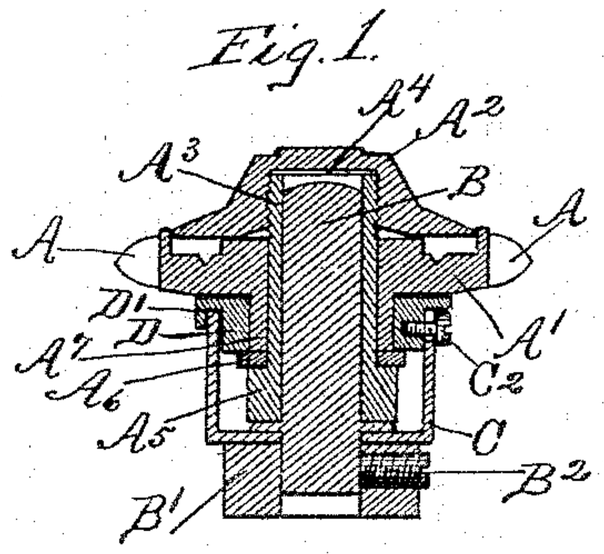


Fig. 2.

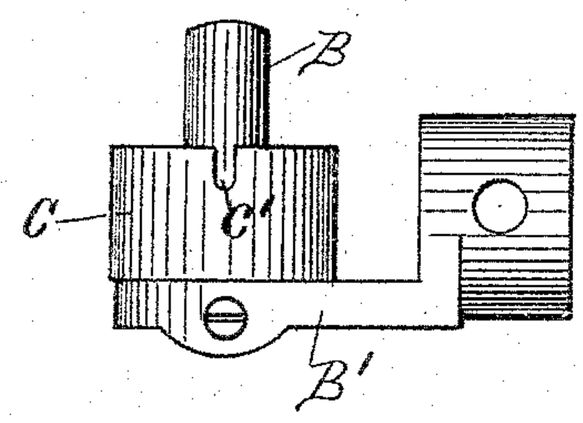
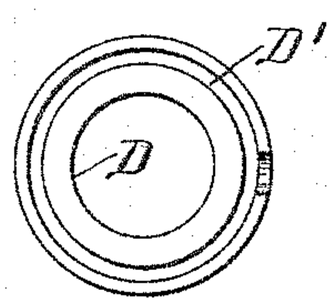


Fig. 3.



Witnesses:
Frank E. Curtis
A. D. Delaney

Inventor:
Robert W. Gormly
by Geo. Willcox
Atty.

UNITED STATES PATENT OFFICE.

ROBERT W. GORMLY, OF TROY, NEW YORK.

BURR-WHEEL.

SPECIFICATION forming part of Letters Patent No. 491,345, dated February 7, 1893.

Application filed September 15, 1892. Serial No. 445,934. (No model.)

To all whom it may concern:

Be it known that I, ROBERT W. GORMLY, a citizen of the United States, residing at Troy, county of Rensselaer, and State of New York, have invented certain new and useful Improvements in Burr-Wheels, of which the following is a specification.

My invention relates to such improvements and consists of the novel construction and combination of parts hereinafter described and subsequently claimed.

Reference may be had to the accompanying drawings, and the letters of reference marked thereon, which form a part of this specification.

Similar letters refer to similar parts in the several figures therein.

Figure 1 of the drawings is a vertical central section of my improved burr-wheel. Fig. 2 is a view in side elevation of the oil-cup, spindle and supporting bracket. Fig. 3 is a bottom plan view of the sleeve by which the body section of the wheel is rotatably secured to the oil-cup.

In illustrating my invention, I have shown a well known type of wheel in which the radial blades, A— are clamped upon a radially slotted body-section, A′— by a washer or cap, A^2—. The cap is secured to the body-section by a bushing, A^3— adapted to fit a central aperture in the body-section, and exteriorly threaded at its upper, or outer, end to fit the interiorly threaded socket, A^4— in the cap. The lower or inner end of the bushing is provided exteriorly with an annular flange, A^5— to bear upon the inner side of the body-section, or an intervening washer, A^6—.

B— is a spindle fixed at its lower end in a supporting bracket, B′—, as by set-screw, B^2—, and having its upper end adapted to enter and fit the bushing, A^3—. When in use, the wheel is supported by, and rotates upon, the spindle in the position shown in Fig. 1.

In some kinds of burr-wheels, such as clearing-wheels, it is necessary to provide mechanism for securing the rotary portion upon the supporting spindle. Heretofore, a screw-threaded bolt has been inserted through a central aperture in the cap into a threaded central aperture in the outer end of the spindle, a head upon the outer end of the screw or bolt bearing upon the outer surface of the cap to hold the same upon the spindle. In such a form of construction, or any form which necessitates perforating the cap, the oil deposited in the cup, C— for the purpose of lubricating the spindle bearings, would be forced up through the aperture in the cap and soil the yarn or knitted fabric.

My improved form of construction avoids the necessity for an aperture through the cap, and consists in securing the rotary part of the wheel, by a connection on its inner, or lower, side with the oil-cup. The cup incloses the spindle as shown, and is provided on one side with an open slot or recess, C′— adapted to receive the shank of a screw. The ring or sleeve, D-- is adapted to receive and loosely fit the boss, A^7— on the inner side of the body-section, and is provided with an annular groove, D′— adapted to receive and loosely fit the edge wall around the mouth of the cup. The sleeve is also provided with a threaded aperture, opening outwardly, adapted to receive and fit the screw C^2—. To secure the rotary parts to the spindle, the screw is inserted in the recess, C′— and screwed into the threaded aperture in the sleeve D— until the head of the screw bears upon the recess walls of the cup. The washer, A^6— will engage with the sleeve to prevent the rotary parts of the wheel from being detached from the spindle. Such parts can be easily detached for cleaning or repairs by a slight backward turn of the screw which will loosen its hold upon the cup and permit it to slide out of the open end of the recess. The rotary movements of the bushing draw the oil from the oil-cup and carry it to the upper end of the spindle, as required for use. It is wholly confined and prevented from escaping from the spindle-socket by the closing cap.

I do not wish to be limited to the mechanism shown for connecting the rotary parts to the oil-cup, as any known mechanism may be employed for that purpose. When desired the blades may be soldered to the body-section, or secured thereto in any known manner.

What I claim as new and desire to secure by Letters Patent is

1. The combination in a burr-wheel of a fixed spindle; a blade-supporting body-sec-

tion provided with a central spindle-socket closed at its outer end; a fixed support; and a connection between the fixed support and the body-section for rotatably securing the body-section upon the spindle, substantially as described.

2. In a burr-wheel, the combination with a fixed spindle and spindle-inclosing oil-cup; of a blade-supporting body-section; a flanged bushing adapted to receive the spindle and inserted in a central aperture in the body-section; a cap for closing the outer end of the bushing; a sleeve rotatably secured to the body-section; and means for securing the sleeve to the oil-cup, substantially as described.

In testimony whereof I have hereunto set my hand this 10th day of September, 1892.

ROBERT W. GORMLY.

Witnesses:
FRANK C. CURTIS,
CHAS. L. ALDEN.