(No Model.)

J. HIGGINS & J. SULLIVAN.

FELLY CLIP.

No. 386,983. Patented July 31, 1888.

Fig. 1.

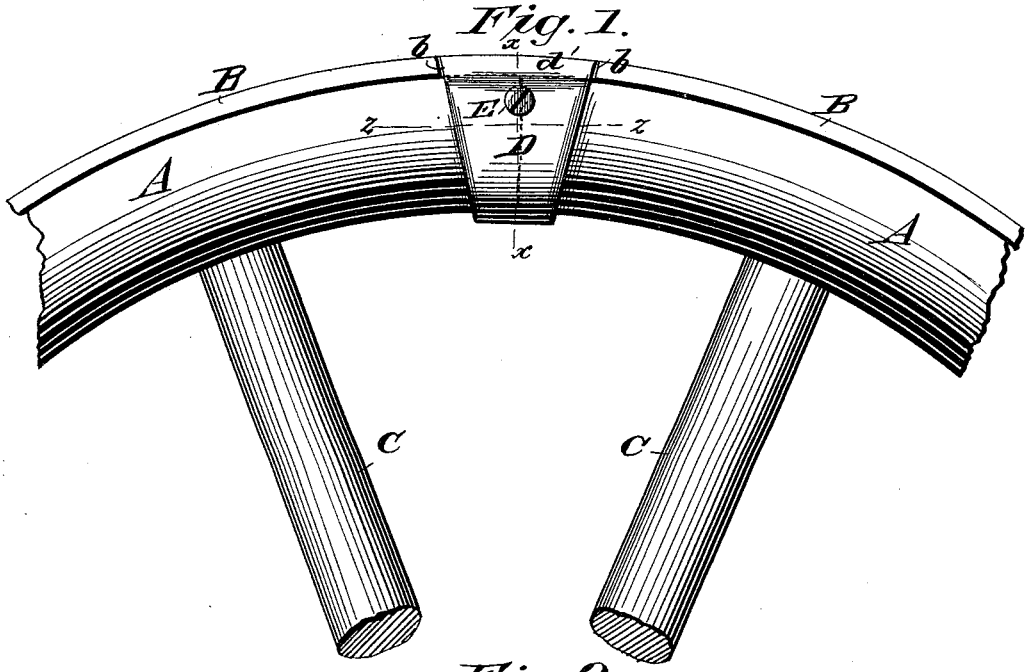


Fig. 2.

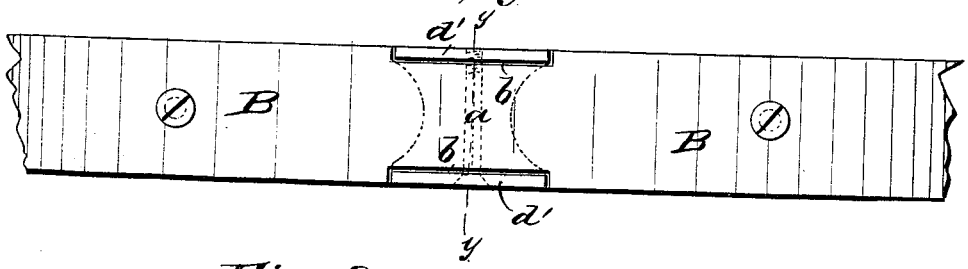


Fig. 3.

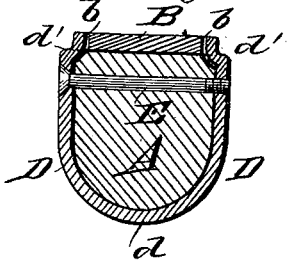


Fig. 4.

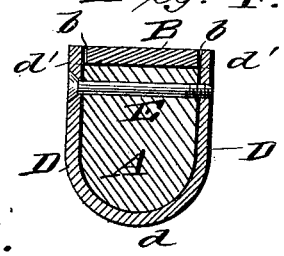
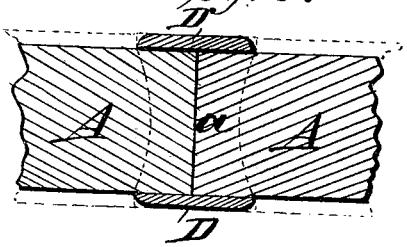


Fig. 5.



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FELLY-CLIP.

SPECIFICATION forming part of Letters Patent No. 386,983, dated July 31, 1888.

Application filed March 17, 1888. Serial No. 267,500. (No model.)

To all whom it may concern:

Be it known that we, JAMES HIGGINS and JOHN SULLIVAN, both of Grand Rapids, in the county of Kent and State of Michigan, have invented a new and Improved Felly and Tire Clip for Vehicle-Wheels, of which the following is a full, clear, and exact description.

Our invention relates to clips for holding tires to the fellies of vehicle-wheels; and the invention has for its object to provide a simple, inexpensive, and efficient device of this character.

The invention consists in certain novel features of construction of the clip as combined with the felly and tire of a wheel, all as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of part of a vehicle-wheel with our improvement applied. Fig. 2 is an outer edge view, when the clip is let in flush with the opposite faces of the felly and the outer face and opposite edges of the tire. Fig. 3 is a cross-section taken on the line *x x* of Fig. 1. Fig. 4 is a transverse section taken on the line *y y* of Fig. 2, and Fig. 5 is a longitudinal section taken on the line *z z* of Fig. 1.

Vehicle-wheels embodying our improvement may have felly A, tire B, and spokes C fitted to each other and to the wheel-hub in any ordinary or approved way.

On the felly A and at all joints *a*, between the segments or sections thereof and at proper places between the joints, we place metal clips or plates D, which are preferably stamped or formed of steel, about one eighth of an inch thick and in one piece, made narrower at its central part, *d*, where its laps onto the inner rounded edge of the felly, and gradually widened toward both ends *d' d'*, which are let into notches or recesses *b b*, formed in opposite edges of the wheel-tire B, and so as to be about flush with the outer face and opposite edges of the tire. A bolt or pin, E, is passed through the felly and clip-plate, and is preferably screw-threaded at one end to fit a tapped hole at one side of the clip-plate, and has a head which fits flush into a countersunk hole at the other side of the clip-plate, and as most clearly shown in Figs. 2 and 3 of the drawings.

The clip-plate may either be fitted to the outer faces of the felly and be bent inward rather sharply at both ends, so as to enter the opposite side edges of the tire, as shown in Figs. 1 and 3 of the drawings, or, for finer vehicles, the clip-plate may be let into the felly either flush, or nearly so, and, as will be understood from Figs. 2 and 4 of the drawings, the extremities of the clip in every instance entering the edge notches *b b* of the tire.

Fig. 5 illustrates in full lines how the clip-plate will preferably be rounded over at the outer edges or corners when it is bolted to or upon the outer face of the felly and projects above it, this rounding over of the edges of the plate largely preventing the accumulation of mud and dirt on the wheel-felly next the clip. The dotted lines in Fig. 5 indicate the appearance of a clip and felly when the clip is let in flush with the sides of the felly.

It is obvious that the clip-plates D, by lapping on the opposite edges of the tire B, prevent lateral displacement of the tire from the wheel, and that by letting the extremities of the clips into notches *b b* of the tire, strains on the tire, felly, and spokes of the wheel are more widely distributed over the entire wheel than they otherwise would be, and we especially mention the dovetailed or overlapping fit of the flaring or widening ends *d'* of the clip-plates onto or over the end parts of the recesses *b* of the wheel-tire B, which locks the tire closely onto the outer edges of the felly-sections and further increases the strength and durability of the wheel.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

1. A felly and tire clip fixed to the felly and entering an edge notch or notches of the wheel-tire, substantially as herein set forth.

2. A felly and tire clip fixed to the felly and fitting by a dovetailed or overlocking joint or joints into an edge notch or notches of the wheel-tire, substantially as herein set forth.

3. A felly and tire clip consisting of a plate fitted around the inner edge and opposite faces of the felly and fixed thereto and entering opposite edge notches of the wheel-tire, substantially as herein set forth.

4. A felly and tire clip consisting of a plate fitted around the inner edge and opposite faces of the felly and fixed thereto, and having opposite dovetailed extremities which enter recesses in opposite edges of the wheel-tire and overlock the tire at said recesses, substantially as herein set forth.

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