

J. B. WINCHELL & H. W. RUGG.

Sand-Bands for Vehicle Axles.

No. 144,244.

Patented Nov. 4, 1873.

Fig: 3.

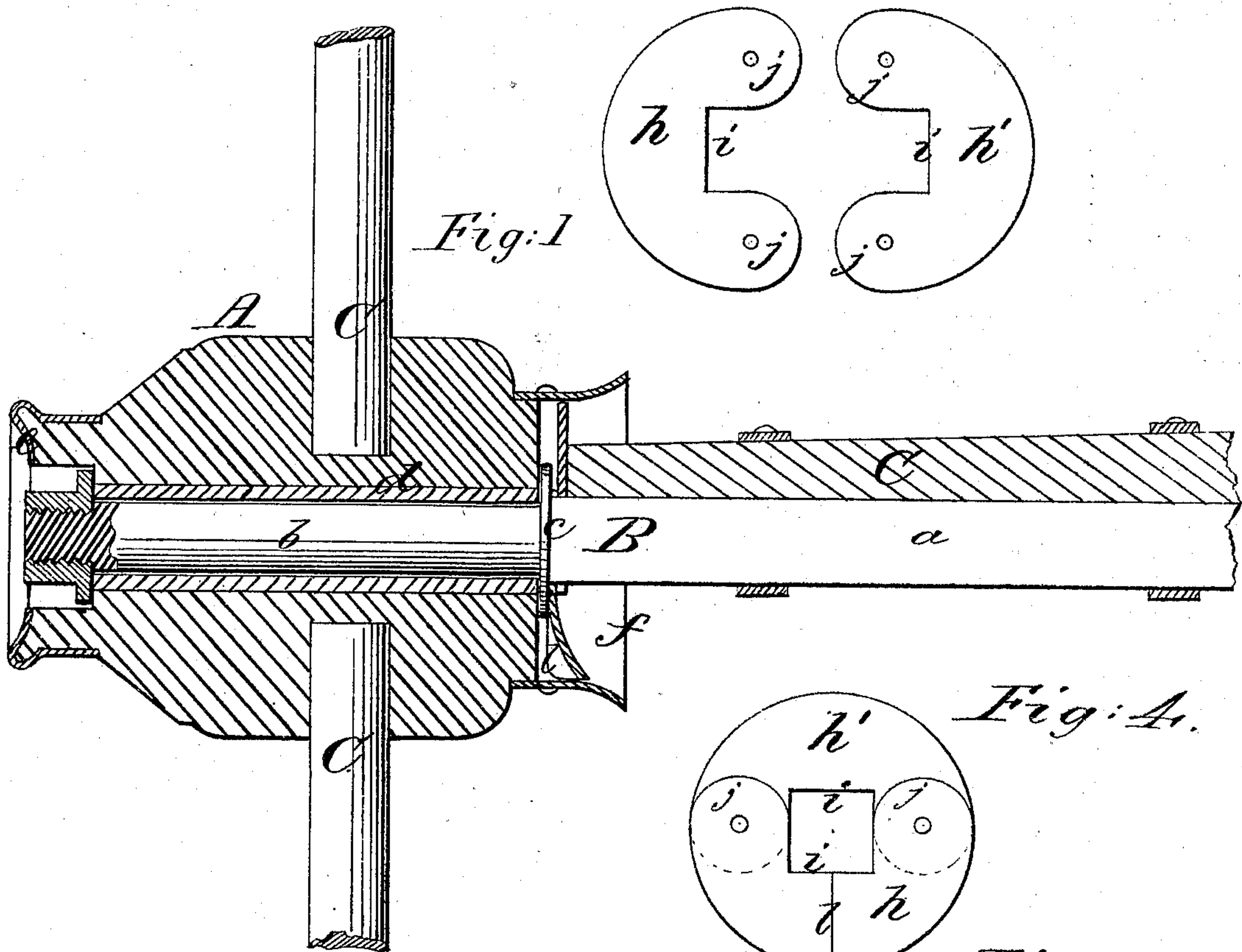


Fig: 4.

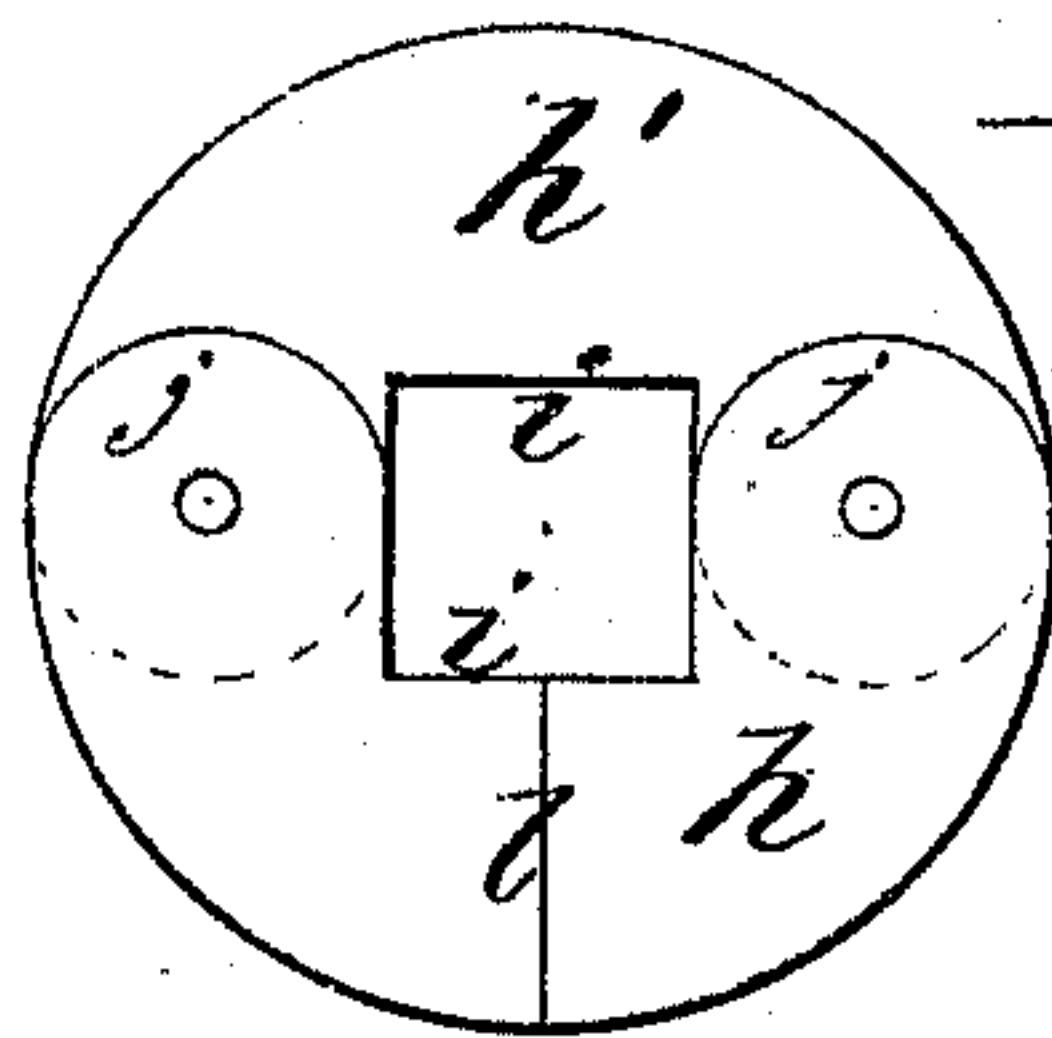
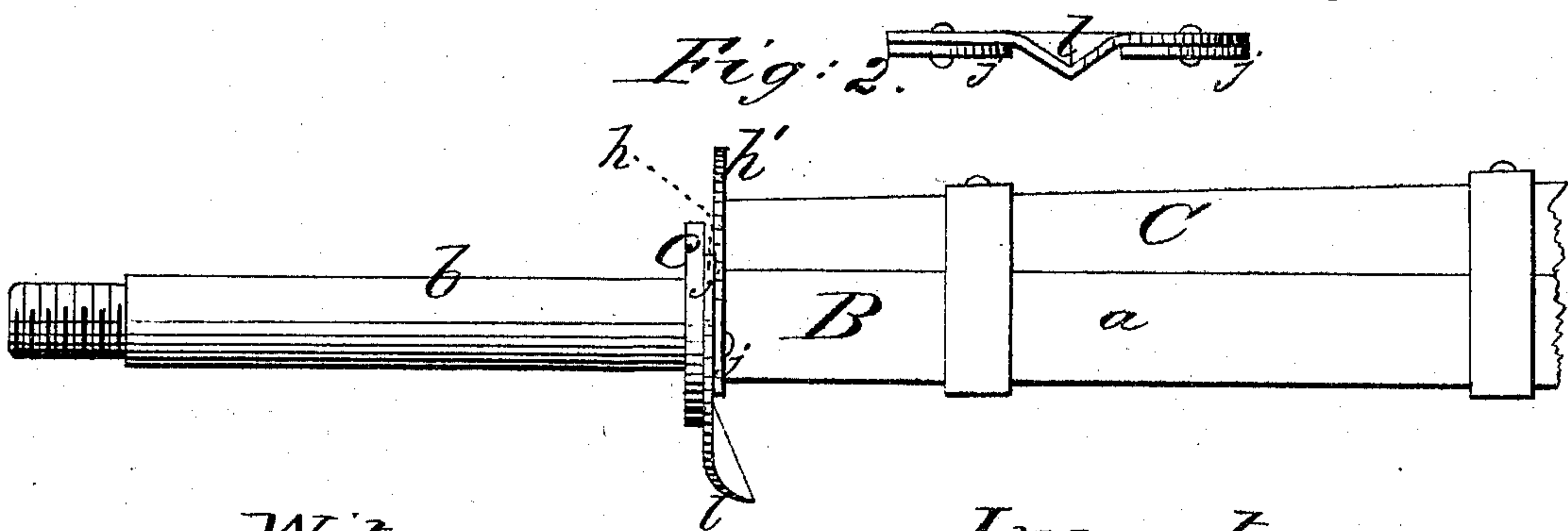


Fig: 5.



Witnesses
J. H. Campbell.

Chas. C. Wilson

Inventor

J. B. Winchell

Harvey W. Rugg

by
Mum. Fenwick & Son

UNITED STATES PATENT OFFICE.

JAMES B. WINCHELL AND HARVEY W. RUGG, OF BENTON HARBOR, MICH.

IMPROVEMENT IN SAND-BANDS FOR VEHICLE-AXLES.

Specification forming part of Letters Patent No. 144,244, dated November 4, 1873; application filed September 11, 1873.

To all whom it may concern:

Be it known that we, JAMES B. WINCHELL and HARVEY W. RUGG, of Benton Harbor, in the county of Berrien and State of Michigan, have invented certain new and useful Improvements in Sand or Mud Guards for Hubs and Axles; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings making part of this specification, in which—

Figure 1 is a longitudinal section of a hub and axle with our improvements applied to it. Fig. 2 is an elevation of an axle with the sand or mud band applied to it. Fig. 3 is an elevation, showing the two parts of which the sand or mud band is formed, separated. Fig. 4 shows the said two parts together, ready to be united. Fig. 5 is an edge view of the parts as shown in Fig. 4.

The same letters of reference in the several figures indicate corresponding parts.

The nature of our invention consists in making the sand or mud guard of two parts, which are notched and shaped in such manner and form that they close together upon the square of the axle, just behind the collar thereof, and when thus closed upon the axle they overlap, one upon the other, in which position they are riveted together. Our invention also consists in making one of the halves or plates of the sand or mud guard with a V-shaped depression in its outer face, such depression commencing with the plane face of the plate at a point some distance from the periphery thereof, and increasing until it terminates in said periphery in the form of a semi-square, or nearly that form. This construction enables the sand or mud band to serve as a scraper to the inner circumference of the back band of the hub. Our invention likewise consists in the combination of the sand or mud guard, as described, and a bell-mouthed back hub-band, as will be hereinafter explained.

To enable others skilled in the art to make and use our invention, we will proceed to describe it with reference to the drawings.

A represents a hub; B, an axle, and C spokes. The part *a* of the axle is square, and the part *b*, which serves as the arm, is round, as usual. C is the usual wood cap-piece to the square

portion of the axle. Between the arm *b* and the part *a* of the axle the usual shoulder-collar *c* is formed. As axles are now made, this collar is wrought with or welded upon the axle. The hub is of a well-known construction, having a metal boxing, *d*, in its eye, and a concave metal band, *e*, on its front end. The inner or back band *f* of this hub is of trumpet or bell-mouth shape at its inner end, as shown at *g*. This band is long enough to extend inward some distance over the shoulder-collar of the axle when the hub and axle are put together, as shown in Fig. 1. *h h'* represent the sand or mud guard. The form of each of the parts of this guard is clearly shown in Fig. 3. The notch *i* in each guard is of semi-square form, and the ears *j j* on each side of this notch are of semicircular form. By this construction, when the parts *h h'* are brought together, the ears of the part *h* form, with the ears of the part *h'*, complete circles, by one ear overlapping the other, and the notch of the part *h*, with the notch of the part *h'*, forms a square hole. The guard *h h'* is placed upon a square part of the axle, just behind the shoulder-collar *c*, by first setting the notched parts of *h h'* in range with said square of the axle, and directly opposite one another, and then forcing parts *h h'* toward one another until they come against the said square part of the axle, in which position the parts are fastened firmly together by rivets passed through the ears *j j*, as shown in Fig. 2. The wood cap-piece of the axle prevents the guard from moving away from the collar in one direction, while the collar keeps it from moving in an opposite direction.

By examining Figs. 2, 3, and 4, the manner in which the angular V-shaped depression *l* is made in one of the plates *h* will be clearly seen, and the manner in which it serves as a scraper to the inner surface of the back hub-band will be fully understood from an inspection of Figs. 1 and 2. The depression is made by depressing the metal of the plate with a V-shaped tool, and the peculiarity of the depression is, that it begins on the plane of the plate, and increases gradually until it terminates in the circular part of the plate in a depression which is in form of a semi-square, or very nearly so.

By our invention we guard the axle-arm

from flying sand and mud, which, if not kept out, will, by mixing with the grease used to lubricate the axle, soon cause a grinding wear as well as heating of the axle; and, besides this, we keep the back hub-band clear and free from mud, which tends to collect within it. We also have provided a device which is applicable to axles now in use, which is a matter worthy of some consideration.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The sand or mud guard *h h'*, made of two parts, which overlap one another, and are constructed to be put upon the axle, behind the collar thereof, and fastened together in that

position, substantially as and for the purpose set forth.

2. The sand or mud guard made of two overlapping parts, and with a depression on its inner face, for the purpose of enabling it to serve as a scraper to the inner surface of the back hub-band.

3. The combination of the mud or sand guard, constructed with a depression on its inner face, and the bell-mouthed back hub-band, substantially as described.

JAMES B. WINCHELL.

Witnesses: HARVEY W. RUGG.

N. ROBBINS,

WENDELL P. ROBBINS.