

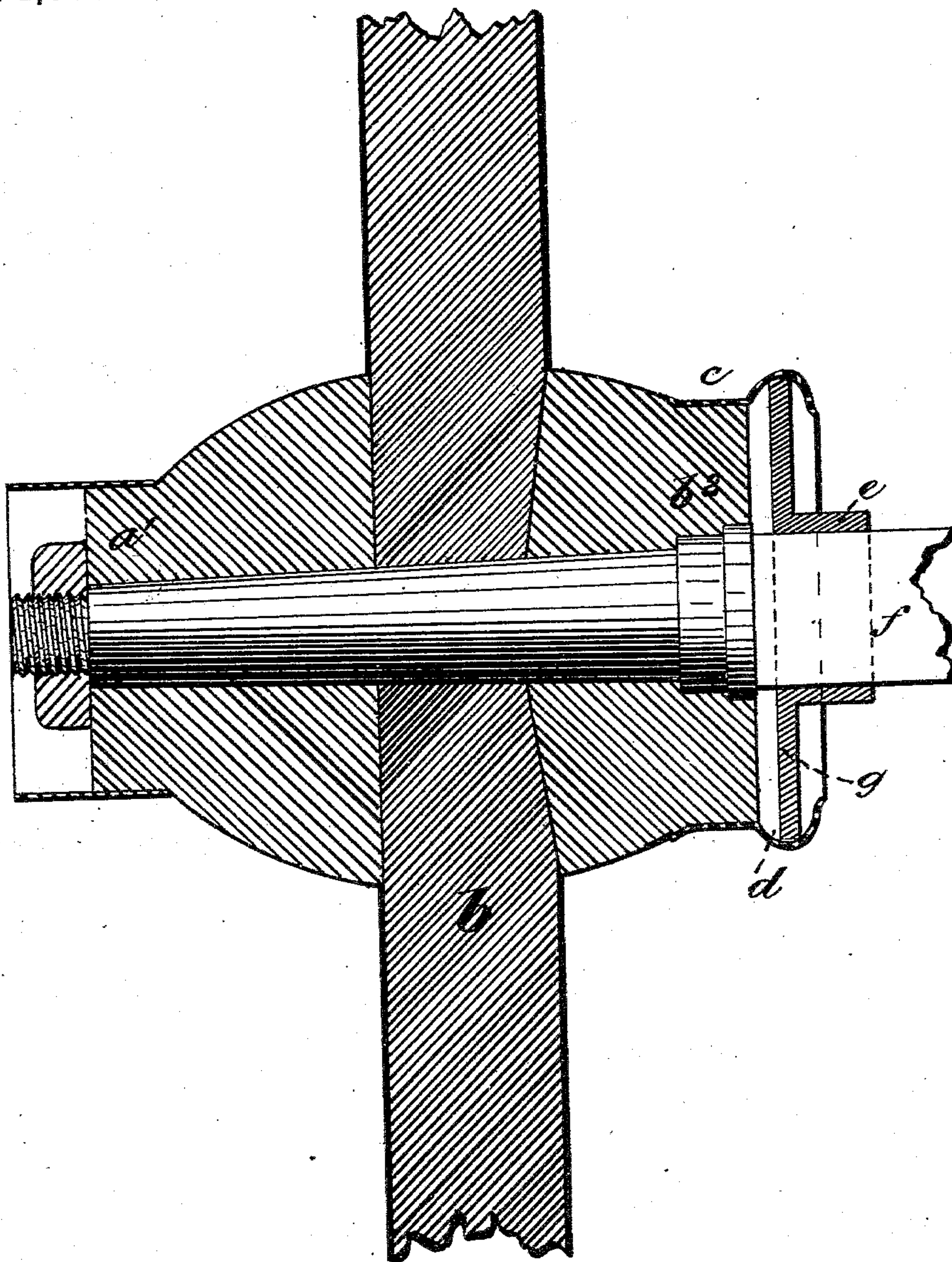
(No Model.)

J. O. WADDELL.

SAND BAND.

No. 274,535.

Patented Mar. 27, 1883.



Attest:
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UNITED STATES PATENT OFFICE.

JAMES O. WADDELL, OF ELIZABETH, NEW JERSEY.

SAND-BAND.

SPECIFICATION forming part of Letters Patent No. 274,535, dated March 27, 1883.

Application filed December 1, 1882. (No model.)

To all whom it may concern:

Be it known that I, JAMES O. WADDELL, a citizen of the United States, residing at Elizabeth, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Axle-Protectors; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to more effectively hold the axle-grease or other wheel-lubricant within the axle-box in the hub, and prevent it from collecting on the exterior of the said hub and on the exposed portion of the axle, whereat it collects the dust raised when the wagon is being drawn, which dust works into the axle-box and causes the axle to wear away and the wheels to rattle. Further objects are to reduce the cost of construction by simplifying the device, and to render said device capable of being arranged upon a carriage with the least amount of trouble or expense.

Axles, where they engage with the wheels or form the journals for the wheels, ordinarily increase in diameter as they approach the wagon-body, the axle-box in the wheel-hub being correspondingly formed—that is to say, smaller toward the outside a' of the hub than toward the inside b^2 . This construction, which is the usual one in carriages, &c., causes the lubricant to work toward the back and collect on the outside of the hub and on the axle, as before stated.

The invention consists in the arrangement and combination of parts, substantially as will be hereinafter set forth, and finally embodied in the claims.

The accompanying drawing is a sectional view of the hub portion of a carriage-wheel, a' b^2 representing said hub, and b spokes, which extend radially therefrom in the ordinary manner.

Upon the back portion, b^2 , of said hub, which lies adjacent to the wagon or carriage body, and in which lies the wider portion of the axle-box, is formed a band, c , which may be spun

from sheet metal. Said band projects over the edge of the hub, and bulges to form an annular socket, d , adapted to receive the periphery of a flange, g , or disk arranged upon the axle. When the band c is metallic the disk g is of rubber.

The collar e , which in the case shown carries the disk or flange g , has an aperture or perforation formed therein, which is usually square to conform to the square axle-iron f . The rubber collar, by stretching, is adapted to hug snugly several sizes of iron, as will be evident, and prevent the exit of oil, grease, or other lubricant at that point. Said collar is arranged a short distance back of the hub, as shown, forming a small chamber for the reception of the grease, which, being kept free from grit or dust, maintains its lubricating qualities for a long time. The band c , after bulging to form the socket, is bent back toward the center, the edge thereof overhanging the rear edge of the hub. Said band is thus adapted to throw off any mud falling from the spokes, &c., away from the axle-box. It will be thus apparent that the band alone is capable of protecting the hub in a degree, and alone is an improvement of practical value. The collar e , revolving with the wheel, can be used with or take the place of the ordinary band.

The portion g , being formed of rubber, is capable of stretching to suit several sizes of axle and form a perfect and impervious joint therewith without any peculiar care in fitting. Said portion is also adapted to be arranged upon or removed from the axle without the employment of screws or pins or other device capable of being broken, lost, or otherwise inconvenient.

The axle-protector thus described is capable of being constructed at but a small cost, can be applied readily to either new or old vehicles, is neat in appearance, will not interfere with the action of the wheel or mar the appearance of the same, and is withal very effective in its operations.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. As a new article of manufacture, the band c , having an annular socket, a , therein, in com-

bination with a perforated flanged collar, *e*, having the periphery of the flange thereof arranged in the socket *d*, all said parts being adapted to be arranged on the hub and axle
5 of a carriage-wheel, as herein set forth.

2. The combination, with the hub and wagon-axle, of a band projecting from the back edge of the hub, and a rubber collar or disk, all arranged and operating substantially as set
10 forth and shown.

3. The combination, with the hub and wagon-

on-axle, of a band, *c*, having the bulge *d* therein, and the rubber collar *g*, all arranged and operating as herein set forth.

In testimony that I claim the foregoing I
have hereunto set my hand this 27th day of
November, 1882.

JAMES O. WADDELL.

Witnesses:

CHARLES H. PELL,
OLIVER DRAKE.