(No Model.)

# J. F. SMITH.

## SAND BAND FOR VEHICLES.

No. 429,654. Patented June 10, 1890.

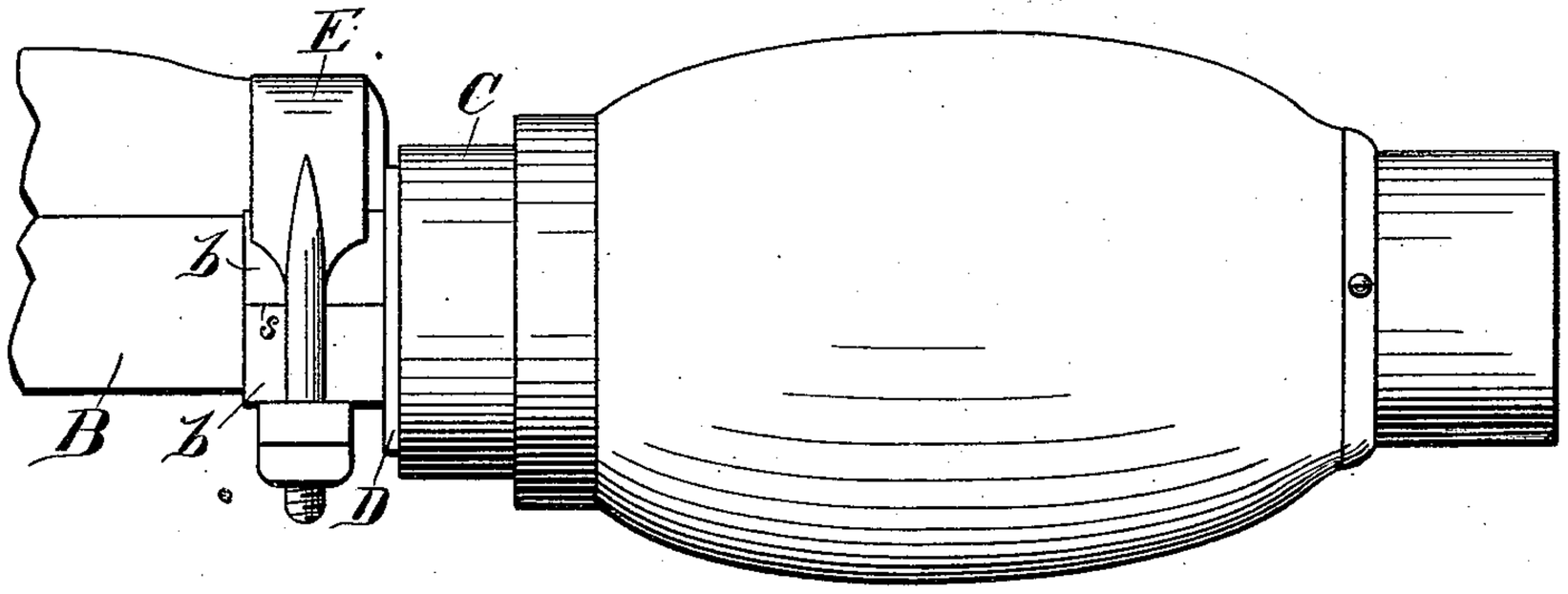


Fig. 1.

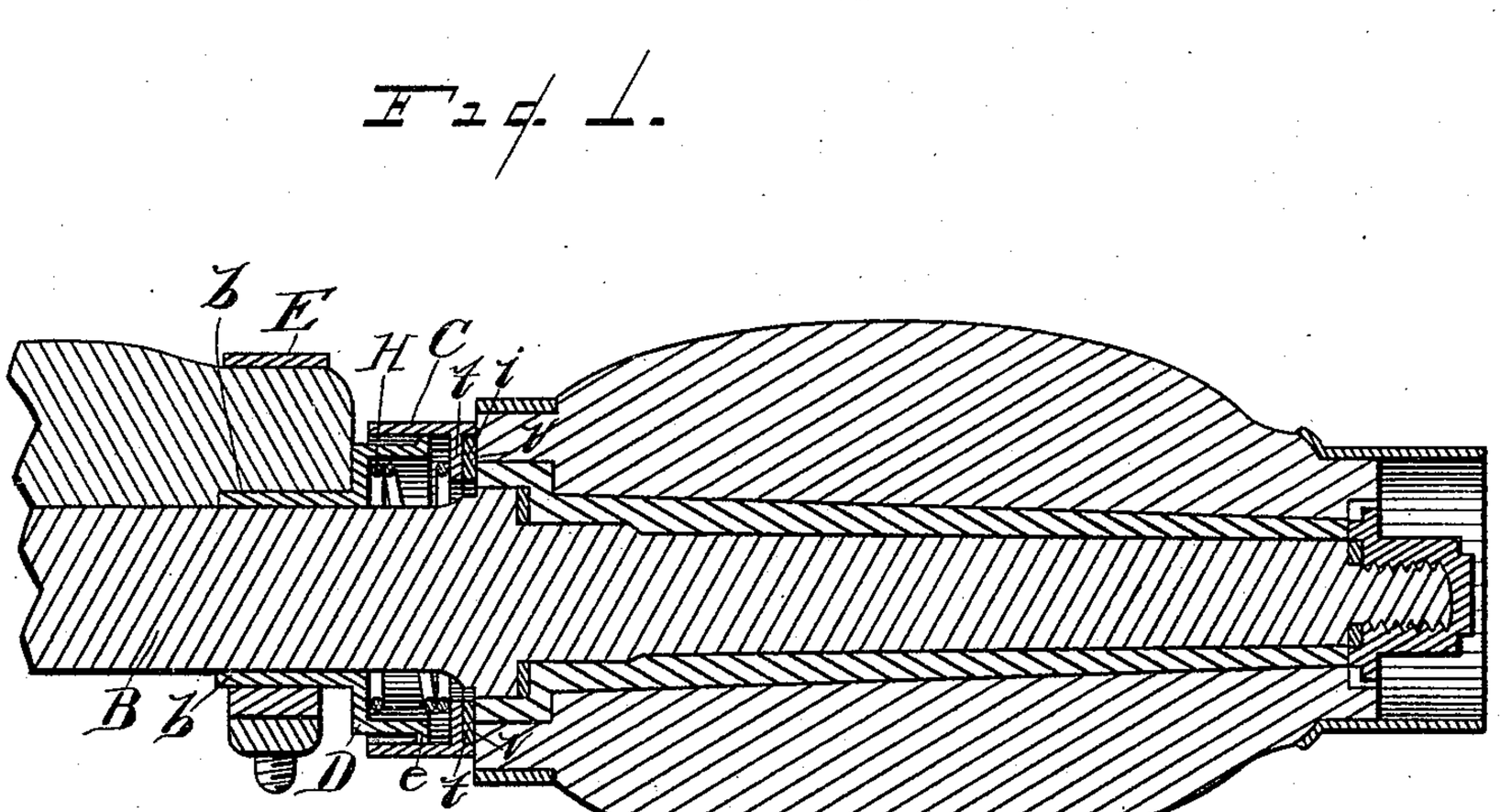


Fig. 2.

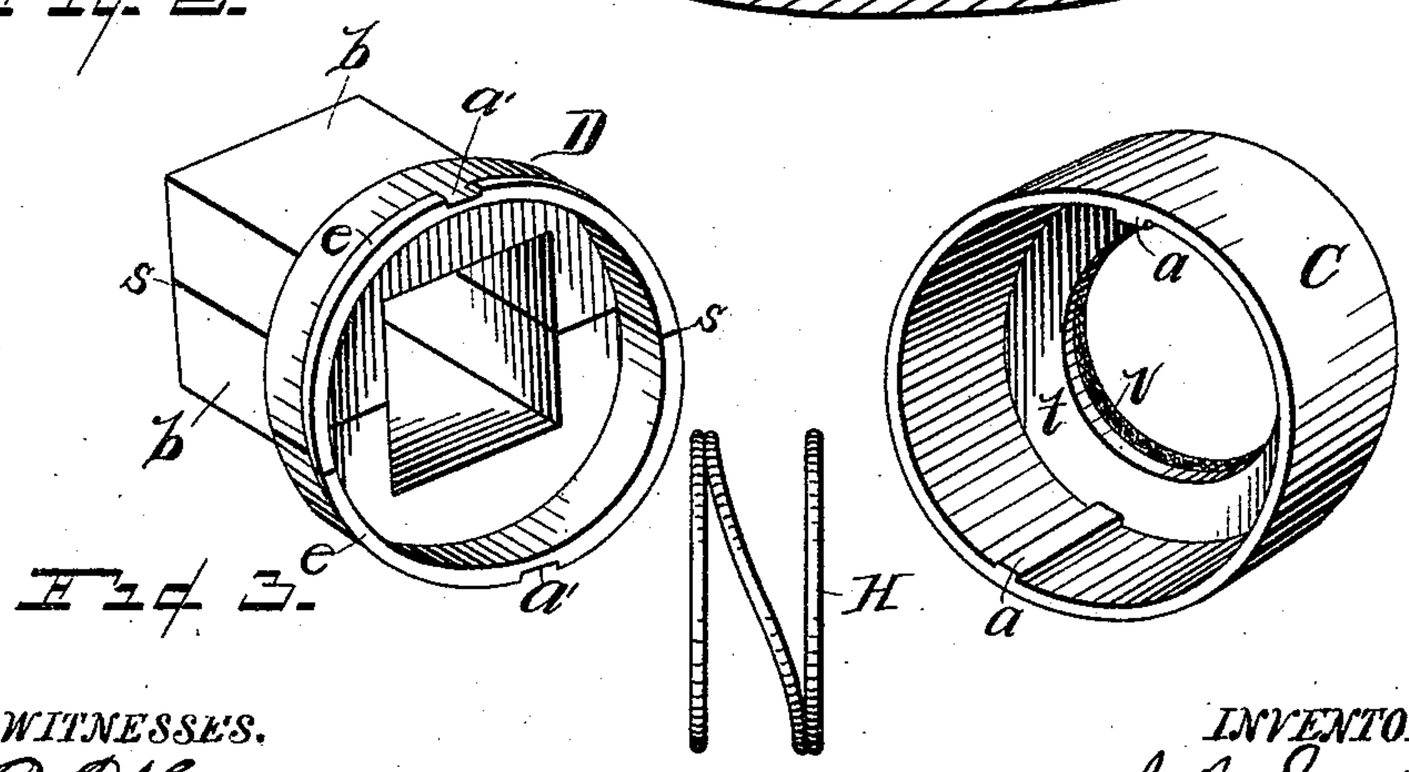


Fig. 3.

WITNESSES.

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# UNITED STATES PATENT OFFICE.

JOHN F. SMITH, OF IONIA, MICHIGAN, ASSIGNOR OF ONE-HALF TO GEORGE DYSINGER, OF SAME PLACE.

## SAND-BAND FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 429,654, dated June 10, 1890.

Application filed March 8, 1890. Serial No. 343,209. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN F. SMITH, a citizen of the United States, residing at Ionia, in the county of Ionia and State of Michigan, have invented certain new and useful Improvements in Sand-Bands for Vehicles; and I do 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 drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to sand-bands for vehicles; and it consists of an outer and an inner shell that environ the axle and are adapted to be secured thereto, the outer shell adapted to snugly receive the inner shell and to which it is slidingly coupled, a spring that encircles the axle, located in the chamber between the two shells, the tension of which holds a washer in the face of the outer shell against the inner face of the hub, the object being to provide simple and effective means for excluding sand or dust from the journal or wearing parts of the axle. This object is attained by the device illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a hub and a portion of the axle of a vehicle, showing my improved sand-band attached thereto. Fig. 2 is a central vertical longitudinal section through Fig. 1. Fig. 3 is an enlarged view of the shells and spring, said parts being drawn apart.

Referring to the letters of reference, A indicates the hub of a vehicle-wheel; B, the axle on which the hub is mounted; C and D, the shells forming the sand-band, and H the coiled spring located in the chamber between said shells. The shells C and D may be made of any suitable metal. The shell D is formed in two parts, being divided horizontally through its center, as shown by line *s* in Fig. 3, and is provided with the extended shank *b*, having a square opening therethrough that is adapted to receive the square portion of the axle B, on which it is placed some distance back from the inner end of the hub. To accomplish this a division of the shell is necessary, as the square opening through said shell, to fit the axle snugly, is too small to pass over the shoulder on the axle, against which the hub abuts. Therefore the shell is formed in two parts, one part being placed on the axle from below, and the other part from above. Said parts meet around the axle and are secured thereto by the slip E, as shown in Figs. 1 and 2. The annular rim of the shell D is provided with the raised flange *e*, having the slots *a' a'* through its periphery, as shown in Fig. 3.

The inclosing-shell C is cylindrical in form and of such diameter as to snugly receive the shell D within the chamber thereof, and is provided with the elongated lugs *a a*, projecting from its inner face, that are adapted to lie in the slots *a' a'* of the flange *e* on the periphery of the shell D, whereby the inclosing-shell C is locked from rotating, but is permitted free longitudinal play, said shell C also having the flange *t* extending diametrically from its interior wall some distance back from its front or outer end, so as to form the recess *i* between said flange and the outer end of said shell, in which to place the flexible wiper or washer *v*, as shown in Figs. 2 and 3. The spring H is located in the chamber between the shells C and D and encircles the axle B, one end of said spring bearing against the inner end of the shell D and the other end against the flange *t* of the shell C, whereby the tension of said spring will force the shell C outward, causing the washer *v* in the outer end of said shell to bear against the inner end of the hub A, as shown in Fig. 2. By this arrangement as the hub revolves the spring holds the washer *v* in continuous contact with the end thereof, and should there be end-play or a wabbling motion to the hub the spring will yield, permitting a longitudinal or rocking play to the shell C, so that the wiper or washer *v* therein may at all times conform to the angle of the end of the hub, to the entire exclusion of all sand and dust from the wearing parts of the axle.

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

1. In combination with the hub and axle of a vehicle, the two-part shell made fast to the axle, the coiled spring inclosed in said shell, the inclosing-shell slidingly coupled to the two-part shell and having in its face adjacent to the hub a flexible washer, for the purposes specified.

2. In a sand-band for vehicles, the combination of the two-part shell having the annular flange with notches therein, and coupling-shanks projecting from the back face of the shell, the inclosing-shell having the lugs on its inner periphery and annular recess in its front face, the washer therein, and the spring located between the shells, as specified.

In testimony whereof I affix my signature in presence of two witnesses.

JNO. F. SMITH.

Witnesses:
R. B. WHEELER,
E. S. WHEELER.