(No Model.)

G. D. CLEVELAND.

SAND BAND.

No. 511,124. Patented Dec. 19, 1893.

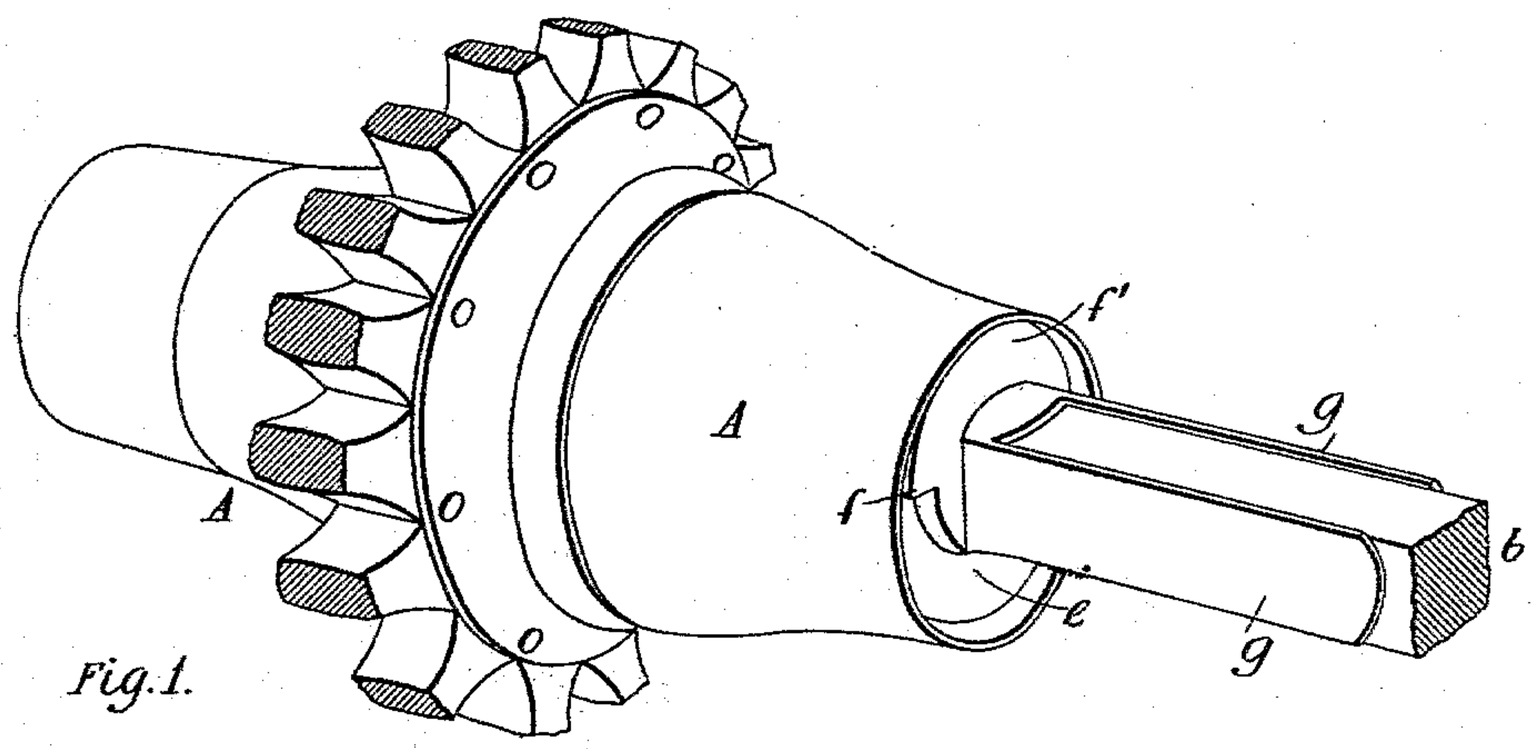


Fig. 1.

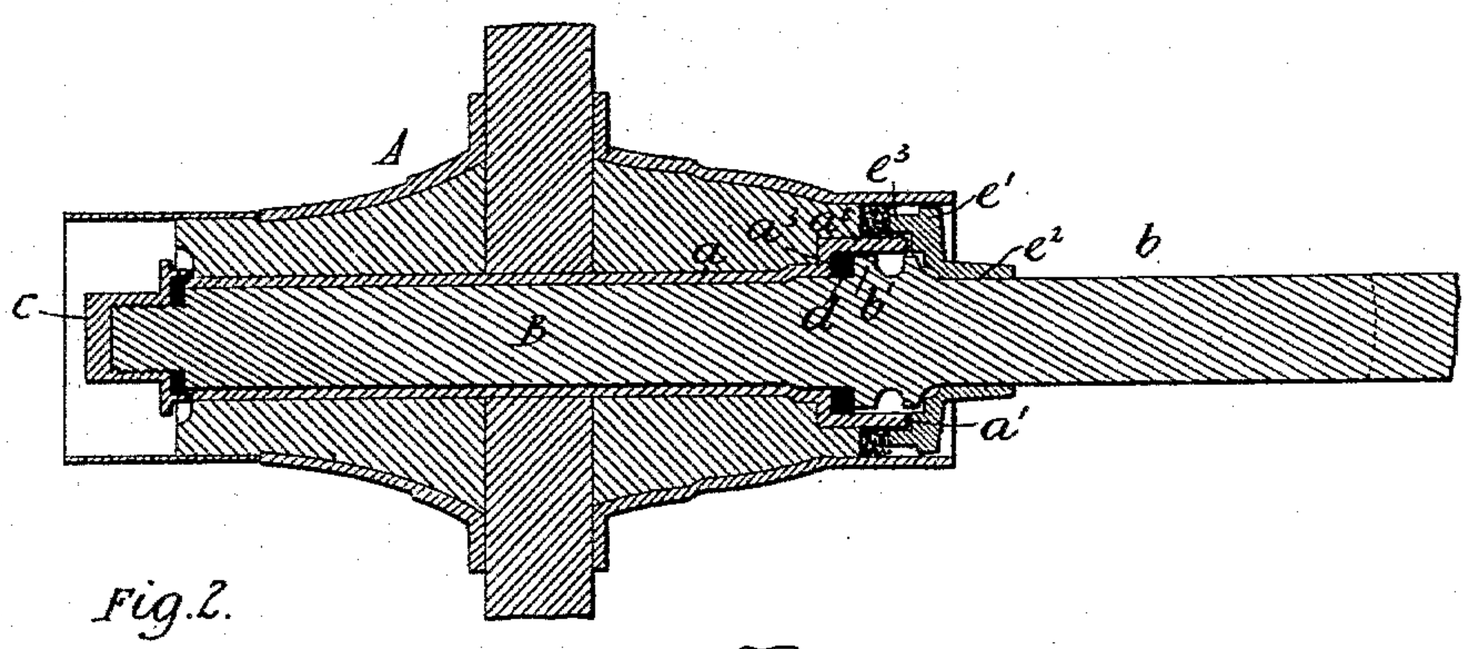


Fig. 2.

Fig. 3.

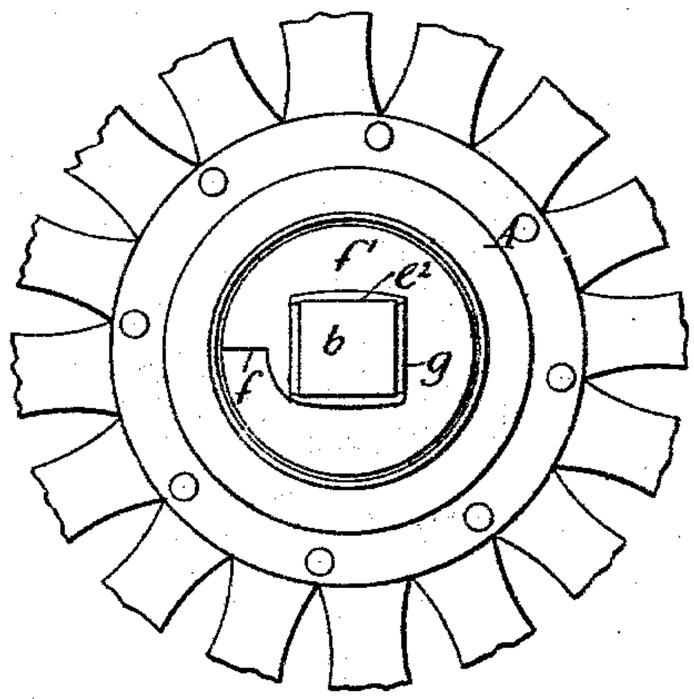
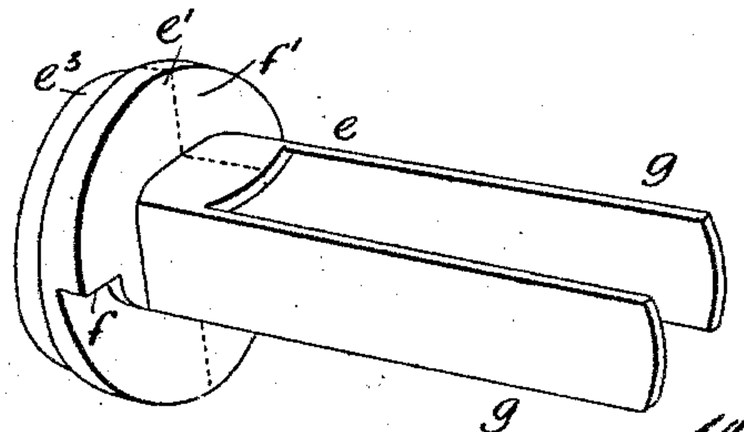


Fig 4.



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SAND-BAND.

SPECIFICATION forming part of Letters Patent No. 511,124, dated December 19, 1893.

Application filed September 19, 1893. Serial No. 485,797. (No model.)

To all whom it may concern:

Be it known that I, GEORGE D. CLEVELAND, a citizen of the United States, residing at Angola, in the county of Steuben and State of Indiana, have invented certain new and useful Improvements in Sand-Bands; 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.

My invention has reference to certain new and useful improvements in sand bands for use in connection with the wheel hubs and axles of road vehicles, the object being to prevent the accumulation, and to provide for the removal of any sand, gravel or other obstruction that may find an entrance between the axles and hub boxes ordinarily constructed and employed.

It is the object of my invention to provide a sand band in which the general construction is improved, and in which the accumulation of sand and other foreign substance is entirely prevented.

My invention consists in the construction of the several parts composing the sand band, their relative arrangement and operation, all of which will fully and clearly appear from a reading of the subjoined description taken in connection with the accompanying drawings which form a part of this specification, and in which—

Figure 1, is a perspective view of a wheel and axle having my improved sand band in operative position thereon. Fig. 2, is a vertical, longitudinal section thereof. Fig. 3 is a rear elevation; and Fig. 4, is a view in perspective of the sand band detached.

Referring to the said drawings by letter, A denotes the hub of the wheel, and B is the axle. The hub has the usual box *a* for the axle, the heel *a'*, and the inside hub band a^2, and my improved sand band is adapted to be applied to this portion of the hub, it being well known that the sand accumulates mostly within the hub band and the heel of the box. The axle has the usual screw-threaded outer end for connection with the nut *c*, and has at its inner end the stub *b* square in cross section for connection with the axle tree; and the flange *b'* thereon abuts against the shoulder a^3 in the box, a washer *d* being interposed to prevent wear of the parts.

The sand band is shown at *e* and is adapted to be made in one piece for connection with the axle before the vehicle is completed, or may be made in two sections for connection with completed vehicles; and the bands are made for the right and left axles. The band consists of the washer *e'* having a square shaped opening e^2 for connection with the axle stub, and the flange e^3 which fits around the heel of the box. The washer fits closely within the hub band, and between the flange and the inner side of the washer I interpose packing of asbestus or equivalent material in order to secure a sand and dust proof joint. The inner end of the washer is cut away to conform to the shape of the axle where the stub commences and this with the packing prevents the sand from working in between the stub and the opening in the washer. The accumulations of sand and other substance in the hub band are removed by the action of a shoulder *f* arranged on the outer side of the washer which is formed by gradually increasing the thickness of the latter, or forming an incline *f'* to the terminating shoulder. In practice this washer is placed in position on the stub with the shoulder at the rear side of the latter, and as the wheel revolves all accumulations are engaged and discharged from the hub band by an auger-like action. The sand band is maintained in position by two clamping arms *g g* which are formed integral with the washer, and extend rearwardly over the stub to which they are connected in any suitable manner, as for instance a clip.

By my invention the hub and axle are thoroughly protected from sand, gravel and the like, and the accumulations in the hub band are removed before their entrance to the box. The flange on the washer and the packing interposed between it and the heel of the box operate not only to prevent the working in of the sand, but to retain the grease or other lubricant within the box.

My invention is very simple in construction, may be cheaply made, and is very compact. As before stated the device as shown may be made in one part for connection with the stub

before the completion of the vehicle, or the same may be formed in two parts as shown by the dotted line in Fig. 4, for connection to a completed vehicle.

I claim as my invention—

In a sand band for vehicles, and in combination with a hub having the box, the heel and the band, of the sand band comprising the washer having an incline on its outer side terminating in a shoulder, the arms, the flange on the inner side of the washer, and the packing between said flange and the heel, all substantially as described.

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

GEORGE D. CLEVELAND.

Witnesses:
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