(No Model.)

E. PARTRIDGE.

BACK COLLAR FOR AXLE BOXES.

No. 350,387. Patented Oct. 5, 1886.

Fig. 1.

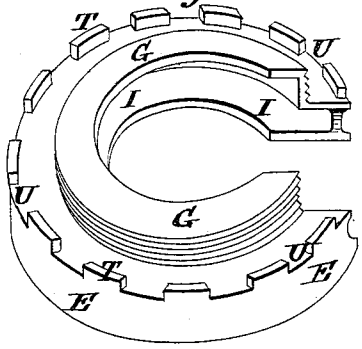


Fig. 3.

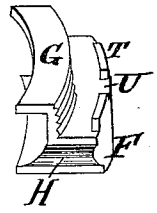


Fig. 4.

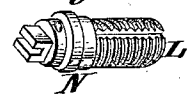


Fig. 5.

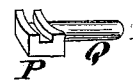


Fig. 7.

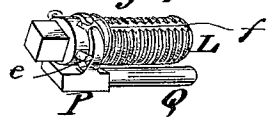


Fig. 2.

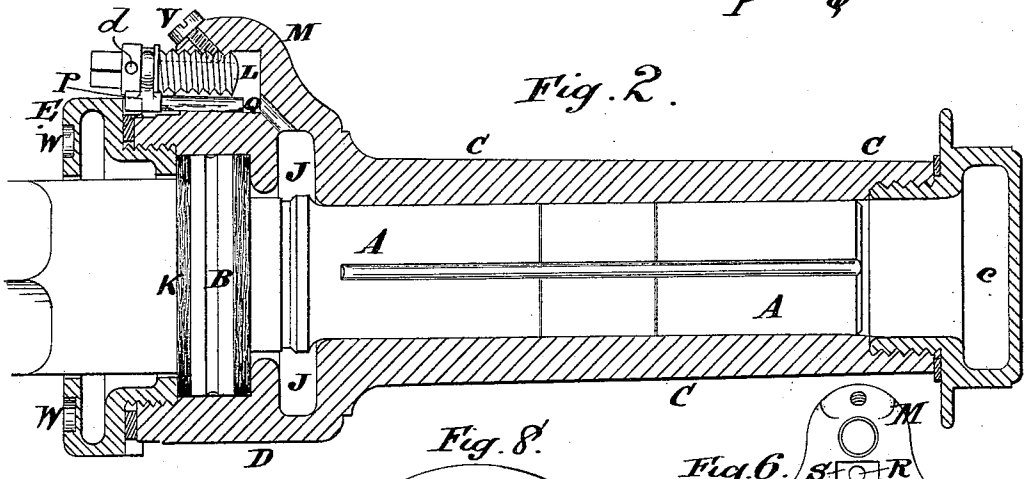


Fig. 8.

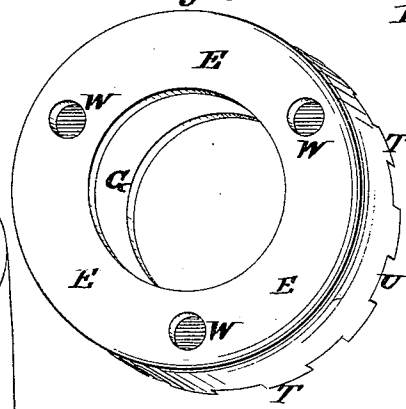


Fig. 6.

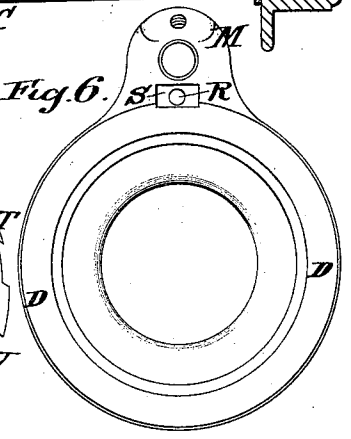


Fig. 9.

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UNITED STATES PATENT OFFICE.

EBENEZER PARTRIDGE, OF BIRMINGHAM, COUNTY OF WARWICK, ENGLAND.

BACK COLLAR FOR AXLE-BOXES.

SPECIFICATION forming part of Letters Patent No. 350,387, dated October 5, 1886.

Application filed July 19, 1886. Serial No. 208,439. (No model.) Patented in England September 28, 1885, No. 11,539.

To all whom it may concern:

Be it known that I, EBENEZER PARTRIDGE, a subject of the Queen of Great Britain, residing at Poplar Avenue, Edgbaston, Birmingham, county of Warwick, England, have invented new and useful Improvements in Back Collars for Axle-Boxes, and in appliances connected therewith for securing wheels upon axles, (for which I have obtained a patent in Great Britain, No. 11,539, bearing date September 28, 1885,) of which the following is a specification.

The object of this invention is to construct revolving back collars or back caps of axles in a special manner, and to so adapt appliances to be used in conjunction therewith for adjusting and securing axle-boxes in position without the usual old-fashioned plates, rings, or bolts.

The invention is particularly applicable for the method of adapting what is known as "Collinge Shape Solid Collar" to the old mail pattern of axle, but with certain parts modified to suit the purpose intended.

Figure 1 is a perspective view of the inner face of my improved back collar. Fig. 2 is a longitudinal section of axle-box and attachments. Fig. 3 is a perspective view of the removable portion of the back collar. Figs. 4, 5, and 7 represent details hereinafter referred to. Fig. 6 is a back view of the enlarged end of the axle-box. Fig. 8 is a perspective view of the outer face of my improved back collar. Fig. 9 represents a spanner for attaching or detaching the back collar, oil-cap, and other devices.

The drawing Fig. 2 shows a mail-pattern axle, A. The axle-box C is of the old mail-pattern shape, and is screw-threaded at its back inner end for the reception of my newly-invented back collar, E, which I show in position at Fig. 2, but for more clearness in the perspective view, Fig. 1. This collar E, which can be attached to the axle-box and revolve with the wheel, may be a true circle, and be permanently fitted on the axle, but with those axles known as "solid-flap" axles a portion, F, as at Fig. 3, of the collar E, specially shaped, may be removed by a sliding action outward from the edge, and be slid into position after the collar is slipped over the axle, so as to make a true ring shape of said collar E, the screw-thread on the flanges G G coinciding for screwing into axle-box after leather washer is put on. The ends of the removable piece F at H are rounded and fit in corresponding specially-shaped recesses, which tend to lock it in position when pushed home. This revolving back collar is chambered at I I for holding grease for lubricating the back part of the axle, particularly that part where the flange G abuts against the back collar, B, of axle, the front part of B and the axle-arm A being lubricated from the usual oil-reservoir, J, formed in the axle-box, and a ready oil-supply is kept up by pouring it through screw-pin hole V, without removing any other part. The collar E, when turned or screwed up tight against the leather washer K of the abutting piece or axle-collar B, is locked in that position by the screw-bolt L, Fig. 7, which is screwed into the lump M of the axle-box C D. This screw (shown detached at Fig. 7) has a groove or recess turned in it to receive prong-shaped claws on sliding plate P, said plate having a guide-pin, Q, which enters the hole R, Fig. 6, this being a back view of the enlarged end D of the axle-box, so that when the screw L is turned to the right or left the plate P and pin Q slide with it.

Fig. 4 is a modified form of Fig. 7, with raised ring or collar N′, which is caused to enter a recess in the sliding plate P, Fig. 5, said plate having a guide-pin, Q. The sliding plate P has a certain amount of play into a recess, S, and when the screw-bolt is turned in one direction the sliding plate P can enter the space S, and be clear of the projections T T of the front inner edge of my newly-invented collar, E; but when the screw L is turned in the reverse direction—such as when the collar E is screwed up into position or adjusted—the sliding plate P is then drawn outward and enters one of the notches U (square or rectangular) and locks the collar E in position, so that it cannot shift or possibly jar loose until the sliding plate P is again pushed or screwed away from the space F. The head of the screw-pin, Fig. 7, has a hole, *d*, through it at right angles for the insertion of a cotter, *e*, to prevent it turning back and becoming loose while the wheel is running; also screw-pin V answers same purpose when screwed up

into the groove *f*, cut along screw-pin L, which groove also carries oil-supply to chamber J in box E.

In Figs. 4 and 5 the two pieces L and Q are detached; but I make or groove a recess into the screw L, and pinch the two-prong shaped claws or arms on the sliding plate into said recess or groove to connect the two articles together, and, if desired, instead of putting a cotter through the head of the screw-pin L, I screw another pin, V, Fig. 2, through the lump M, the point of said screw V engaging in a longitudinal groove in the screw-threaded part of the bolt, as seen at Fig. 7, which will serve as a passage for leading the oil into the reservoir J when the pin Z is removed or unscrewed two or three turns. The revolving back collar, E, has holes W in its outer face, as shown in Fig. 8, to receive a stud, X, on a spanner, Z, which is adapted at one end to bear on the periphery of the collar E in unscrewing it or turning it into place. The notch *a* in the spanner serves to turn the screw-bolt L, and the mouth *b* of the spanner fits the oil-cap *c* of the axle-box.

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

1. The revolving back collar, E, having a grease-chamber, I, notches U, and projections T, and adapted to be attached to the back end of an axle-box, substantially as described.

2. The revolving back collar, E, having a removable section, F, said parts being provided with grease-chamber I, projections T, and notches U, substantially as and for the purpose described.

3. The combination of the axle-box C, axle-collar B, back collar, E, screw-bolt L, sliding plate P, and guide-pin Q, substantially as described.

4. The combination of an axle-box, C, having a recessed back face, an axle-collar, B, washer K, revolving back collar, E, having alternating notches and projections, and the sliding plate P, and screw-bolt L, substantially as described.

In witness whereof I have hereto signed my name in the presence of two subscribing witnesses.

EBENEZER PARTRIDGE.

Witnesses:
H. PRIOR,
ROB. P. TEWARK,
Both of 19 *Change Alley, London, England.*