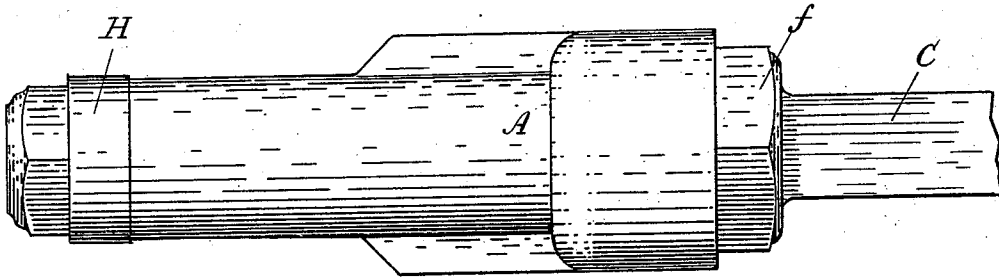


(No Model.)

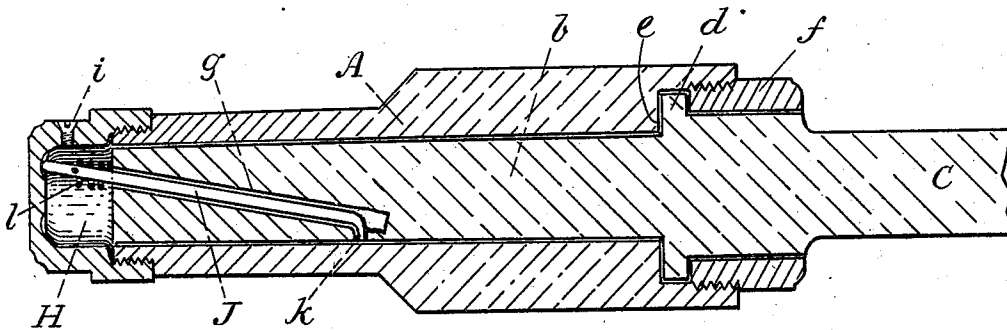
F. LABEL.  
CARRIAGE AXLE.

No. 404,635.

Patented June 4, 1889.



— FIG. 1 —



— FIG. 2 —

Witnesses:  
Arthur Charbonneau  
Fred. Day

Inventor.  
Florian Label  
By J. Coursole  
Atty.

# UNITED STATES PATENT OFFICE.

FLORIAN LEBEL, OF LEVIS, QUEBEC, CANADA.

## CARRIAGE-AXLE.

SPECIFICATION forming part of Letters Patent No. 404,635, dated June 4, 1889.

Application filed July 16, 1888. Serial No. 280,049. (No model.)

*To all whom it may concern:*

Be it known that I, FLORIAN LEBEL, a citizen of Canada, residing in the city and county of Levis and Province of Quebec, have invented certain new and useful Improvements in Carriage-Axles, of which the following is a specification.

My invention relates to improvements in devices for supplying oil to the wheel bearings or journals of carriage-axles.

It consists, essentially, in an opening formed in the journal of the axle extending from its outer end in a downward sloping direction to a point near the middle of the journal on its under side, where it opens outward; a rod or needle lying loosely in said opening having its outer end provided with a spiral spring and its inner end turned downward to project through the central opening above mentioned; a cap fitted on the outer end of the axle-box constructed internally so as to serve as an oil-cap and also to agitate the needle above mentioned; and an internal nut fitted to the inner end of the axle-box acting in co-operation with a shoulder in the axle-box on a fixed collar formed on the axle, all as hereinafter more fully described, reference being had to the accompanying drawings, in which—

Figure 1 is an outside view of a part of the axle with its box, and Fig. 2 is a longitudinal section of the same.

The box A is bored to fit snugly upon the journal *b* of the axle C. The inner portion of the box is enlarged to overreach the fixed collar *d*, and thus formed in the box the shoulder *e*. An internal nut *f* is screwed into the enlarged end of the box until it butts against the inner side of the collar, and thus holds the wheel from slipping endwise on the axle. An opening *g* is bored in the axle from its outer end at a point preferably above the center in a sloping downward direction until it reaches a point near the middle lengthwise of the journal, where it turns abruptly downward and opens out through the under side of the journal. The purpose of this opening is to serve as a passage for oil from the chamber in the cap H to the center of the under side of the journal. The cap H is chambered and serves as a reservoir or oil-cup to the axle. The oil is let into this chamber through an opening in the outer part of the nut, which is after-

ward stopped by the screw-plug *i*. A rod or needle J is placed and works loosely in the opening *g*. A small pin *k* branches downward from the rod J through the inner end of the opening *g*. The prong K on the rod J is formed after the rod has been introduced into the opening *g* by bending the end of the said rod outward through the hole at the periphery of the axle. The rod J projects out past the end of the axle, and is held outward against the end of the oil-chamber in the cap H by a spring *l*. The end of the chamber is indented or otherwise made uneven, so that in passing the end of the rod J will give it an endward motion as the wheel revolves. The object of this agitation of the rod is to prevent any stagnation of the oil, which should flow freely through the opening *g* around the rod J, and thus insures a perfect and continuous lubrication of the axle.

What I claim as my invention in the above-described device, and desire to secure by Letters Patent, is—

1. The axle and the surrounding axle-box formed to leave a chamber between them, the said axle having the oil-passage extending from the chamber to its periphery, in combination with the agitating-rod located within said oil-passage and arranged to be moved therein by the revolution of the wheel.

2. A carriage-axle provided with a rod J, playing loosely in the opening *g*, and held against the end of the chamber in the cap H by the spiral spring *l*, substantially as shown and specified.

3. The combination of the axle C, with the cap H secured to the box A, having the interior of its end wall indented or otherwise uneven, and provided with a filling-hole closed by the screw-plug *i*, substantially as specified.

4. The combination of the chambered cap H, having an indented interior surface and an opening fitted with a screw-plug *i*, with the rod J lying loosely in the opening *g* in the axle and held against the uneven wall of the cap H by the spiral spring *l*, as shown and described.

Signed at Ottawa, this 18th day of June, 1888.

FLORIAN LEBEL.

In presence of—

ART. CHARBOUNEAU.

FRED DAY.