

A. KESSBERGER.

Axle and Thimble Skeins for Vehicles.

No. 142,344.

Patented September 2, 1873.

Fig. 1.

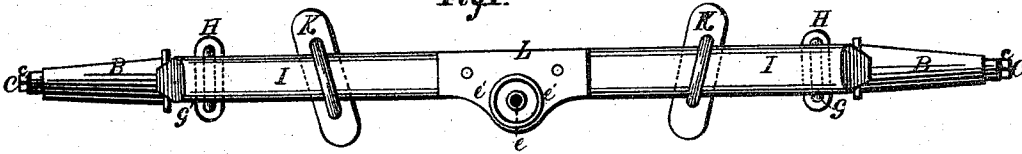


Fig. 2.

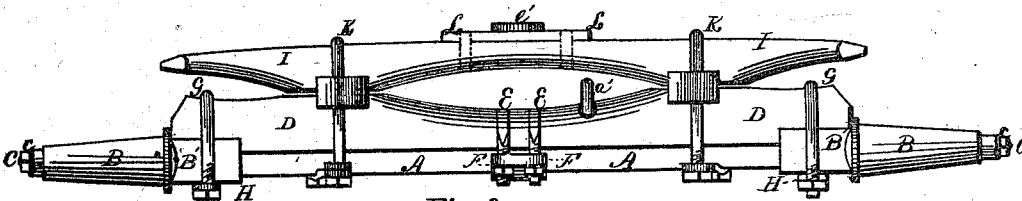


Fig. 3.

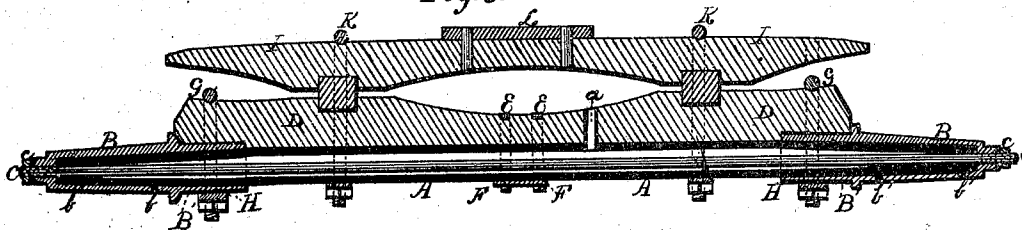
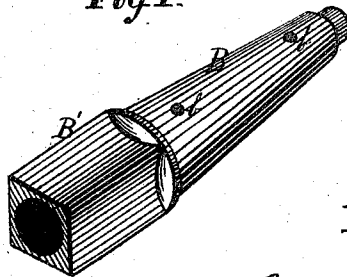


Fig. 4.



Witnesses:

Jas. C. Hutchinson
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Inventor.

August Kessberger,
by Orinelle and Co. his Attys

UNITED STATES PATENT OFFICE.

AUGUST KESSBERGER, OF SPRINGFIELD, ILLINOIS.

IMPROVEMENT IN AXLES AND THIMBLE-SKEINS FOR VEHICLES.

Specification forming part of Letters Patent No. **142,344**, dated September 2, 1873; application filed May 3, 1873.

To all whom it may concern:

Be it known that I, AUGUST KESSBERGER, of Springfield, in the county of Sangamon and in the State of Illinois, have invented certain new and useful Improvements in Wagons; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a plan view of the upper side of my improved axle. Fig. 2 is a front elevation of the same. Fig. 3 is a vertical longitudinal section upon a line extending through the center of said axle; and Fig. 4 is an enlarged perspective view of the thimble-skein detached from the axle.

Letters of like name and kind refer to like parts in each of the figures.

My invention is an improvement upon a class of axles which are constructed of, or from, metal pipe; and it consists, principally, in the peculiar construction of the inner end of the thimble-skein, and its combination with the wooden portion of the axle, substantially as and for the purpose hereinafter shown. It consists, further, in the means employed for securing the thimble-skeins in longitudinal position upon the axle, substantially as is hereinafter set forth. It consists, further, in the employment of the hollow axle and perforated thimble-skeins for the purpose of containing and supplying lubricants to the wheel-hubs, substantially as is hereinafter shown and described.

In the annexed drawing, A represents an axle constructed of, or from, a metal pipe, and having its ends bent downward at such an angle as to give the desired "set" to the wheels. The ends of the axle A are tapered, and over each is fitted a thimble-skein, B, which has a correspondingly-shaped interior opening, and the whole are then secured firmly together by means of a rod, C, which passes through said pipe, and through corresponding openings in the ends of said skeins, and is provided, upon its threaded ends, with nuts c.

As the rod C rests upon the lower side of the interior of the axle, except at its ends, said rod performs the additional office of a truss rod, and materially stiffens and strength-

ens said axle. The extension of the pipe into the thimble-skeins, instead, as heretofore, of having the latter filled with wood, materially increases the strength of both parts, and renders their breakage almost impossible.

Fitted to or upon the upper side of the pipe A is the wooden portion D of the axle, which has the usual form, and is secured in place by means of two clip-bolts, E, which span its central portion, and pass through a clamp-plate, F, placed beneath said pipe, and, by a similar clip-bolt, G, and clamp H, which embrace each end of said wood and the inner end of the thimble-skein B. In order that the thimble-skein B may be prevented from turning upon the axle, its inner end B' is squared, and its upper and lower faces embraced by the wood D and plate H, while its side faces are just contained within the clip-bolt G.

This construction enables the thimble-skein to be turned upon its axle whenever, from wear or from other cause, it is desirable that a change should be made.

The openings at the ends of the thimble-skeins, being made tight by means of rubber washers placed beneath the nuts c, and the joint between the inner end of each skein, and the axle packed with red lead, the interior of said axle is employed as a reservoir for containing lubricating-oil, which latter is admitted through an opening, a, provided, near its center, and inclosed by means of a plug, a'. Suitable radial openings b, provided in and through the axle-skein, and filled with fibrous material, permit the lubricant to pass outward to the bearing-surface, the rapidity with which the oil passes outward being governed by the closeness of said fibrous packing.

By this arrangement a supply of oil can be introduced and carried sufficient for a year's wear; and, as such oil is supplied constantly, in uniform quantities, and without waste, it will be seen that the durability of the bearings will be increased, and the expense for lubricants materially lessened.

A bolster, I, of usual form, is placed upon the upper side of the wooden portion D of the axle, and secured in place by means of two clips, K, which embrace said parts and the iron axle A. Upon the upper side of the bolster I secured a bolster-plate, L, which, as seen in Fig.

1, extends forward of said bolster sufficiently to permit a king-bolt to pass downward in front of the latter. The upper portion of the king-bolt is contained within a suitable opening, *l*, in said bolster-plate; while its lower end passes through a similar opening provided in the extended end of the clamp-plate F. Around the bolt-opening *l* a bearing, *l'*, is raised above the general surface of the bolster-plate L, and provided with a semicircular groove, which receives and retains the lubricant.

By this construction of the bolster-plate the king-bolt is accommodated without, as heretofore, weakening the bolster and axle by passing through the same. The improvements described materially increase the durability and usefulness of a wagon without correspondingly increasing the cost of the same.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. The reversible thimble-skein B, provided with the squared portion B', and combined with the wooden portion D, substantially as and for the purpose shown.

2. In combination with the axle A and thimble-skein B, the rod C, passing through the interior of said axle, and provided with the nuts *c*, substantially as and for the purpose set forth.

3. The hollow axle A, having the opening *a* and plug *a'*, in combination with the detachable and reversible axle-arms B, provided with the radial openings *b*, substantially as and for the purpose shown.

In testimony that I claim the foregoing I have hereunto set my hand this 30th day of April, 1873.

AUG. KESSBERGER.

Witnesses:

L. H. BRADLEY,

J. W. BITTINGER.