

D. PHILLIPS.

Axle-Skein.

No. 8,707.

Patented Feb. 3, 1852.

Fig. 1.

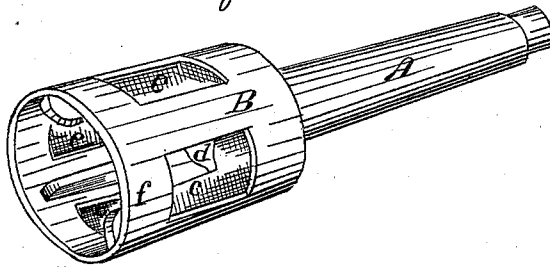
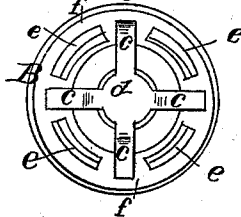


Fig 2.



UNITED STATES PATENT OFFICE.

DAVID PHILIPS, OF SHARON, PENNSYLVANIA.

AXLETREE-ARM.

Specification of Letters Patent No. 8,707, dated February 3, 1852.

To all whom it may concern:

Be it known that I, DAVID PHILIPS, of Sharon, in the county of Mercer and State of Pennsylvania, have invented a new and useful Improvement in Axletrees for Wheel-Carriages, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, which forms part of this specification, and in which—

Figure 1 represents a view in perspective of my improved axle arm and Fig. 2 is an elevation of the inner end thereof.

The object of my invention is to obtain the advantages of wooden and iron axletrees in the same wagon, and it consists in a compound arm and cap, which is formed of metal and is applied to the extremity of a wooden axletree, so that the wagon wheels rotate upon iron arms of small size and consequently with a small amount of friction while the elasticity of a wooden axletree and the advantages incident thereto are retained.

In the accompanying drawing A is the spindle or arm proper on which the wheel rotates. It is of the usual tapering form, and its outer extremity is fitted with a linch pin or with a screw nut as may be preferred to hold the wheel in its place. The butt of this arm terminates in the head of a cap B, which is fitted upon the extremity of the wooden axle tree. The interior of this cap is conical and is furnished with tapering feathers or ribs *c c* which are received in suitable grooves cut in the sides of the axle tree. The inner side of the head of the cap is also fitted with a central boss or hub *d*, which is also tapering and is connected with the feathers *c*. The conical sides of the cap have apertures, *e e*, formed in them to facilitate the formation of it by casting and to lessen its weight, but the base of the cap forms a continuous ring, *f*, which unites all the feathers.

When arms of this description are employed the wooden axletree is socketed at each end to admit the boss *d* of the cap, its sides are also grooved longitudinally to receive the feathers *c*, and it is tapered off conically to correspond in form with the interior of the cap. In thus preparing the end of the axletree for the arm, care must be taken to leave it slightly larger than the interior of the cap so that when the latter is applied it may be driven on and thus insure a tight fit. When the arms have been applied keys may be driven into the wooden axletree through the apertures in the cap to prevent it from working loose. For light wagons I prefer to cast the arm without side apertures, as it then presents a neater appearance, and to drill two or more small holes in it to admit pins. By this mode of construction the metal arms are secured to the wooden stock in an efficient and durable manner without the use of the wrought iron bands, clips, and screw bolts usually employed for the purpose, whereby I effect a considerable saving in the cost of the axletree with an increase of its strength and durability.

What I claim as my invention and desire to secure by Letters Patent is—

Constructing metallic arms for axletrees with sockets and ribs as herein set forth so that the arm can be attached to the wooden stock or body of the axletree without the employment of the hoops, clips and screw bolts heretofore employed even when the stock is as small or of less diameter than the arm.

In testimony whereof I have hereunto affixed my hand and seal this 2d day of July, A. D. 1851.

DAVID PHILIPS. [L. S.]

Witnesses:

E. N. HORNER,
JOHN M. DICK.