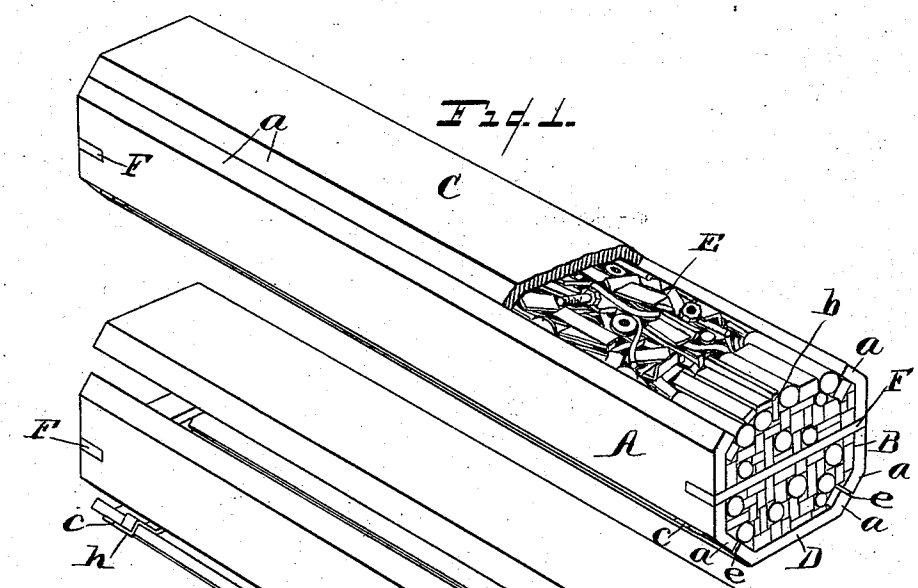
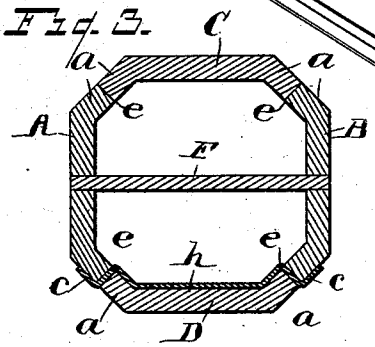
(No Model.)

J. B. BAUGH.

AXLE PILE.

No. 524,294. Patented Aug. 7, 1894.





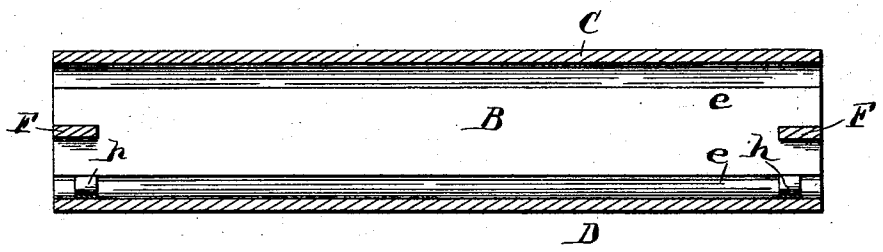


Fig. 4.

WITNESSES

Otto B. Baenziger.

Cassius Hollenbeck.

INVENTOR

John B. Baugh.

By P. B. Wheeler & Co.

Attorneys.

UNITED STATES PATENT OFFICE.

JOHN B. BAUGH, OF DETROIT, MICHIGAN.

AXLE-PILE.

SPECIFICATION forming part of Letters Patent No. 524,294, dated August 7, 1894.

Application filed November 10, 1893. Serial No. 490,507. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. BAUGH, a citizen of the United States, residing at Detroit, in the county of Wayne, State of Michigan, have invented certain new and useful Improvements in Axle-Piles; 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.

This invention relates to a new and useful improvement in "axle-piles," and consists in a certain construction and arrangement of parts, as hereinafter fully set forth and pointed out particularly in the claims.

The object of the invention is to produce a pile from which a superior quality of axle can be made at a great reduction in cost thereof, over the bar piles in common use, and in which the construction is such that there is little if any waste in the furnace and a smooth exterior surface is formed for the axle which is free from seams. This object is obtained by the formation of pile illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my improved pile, the top of the case being broken away showing the filling of scrap. Fig. 2 is a like view showing the parts of the case in juxtaposition. Fig. 3 is a transverse or diametrical section through the end of the case. Fig. 4 is a longitudinal section through the same.

Referring to the letters of reference, A and B designate the side plates, and C and D the top and bottom plates or bars, respectively, which form the exterior case of the pile. These bars are of rolled iron of the requisite length and thickness, and are exact duplicates of one another, their longitudinal margins being beveled or bent at an obtuse angle to the plane of their faces, as shown at *a*, so that when their edges are placed together an oblong box or case is formed octagonal in cross-section, as clearly shown in Fig. 3. This case so formed is then filled with properly selected scrap-iron E, the ends of the case being first built up with scrap bar as shown at *b* to more perfectly retain the scrap filling within the body of the case.

To prevent the sides of the box or case from spreading and retain it in proper form, the cross-bars F are employed, which are forced into slots formed in the ends of said sides and extend between and tie said sides together at each end of the case, holding them firmly in place, which enables the box to be readily filled and prevents it from falling down when moved or when placed in the furnace for heating. As an additional security against the spreading of the sides and the collapsing of the pile in the furnace when heated to a welding heat, a transverse strap-bar *h* is employed at each end of the case which crosses the bottom of the case and conforms to the angles thereof, its ends passing out through the joint between said bottom and the sides and being turned upward at *c*, to embrace the beveled faces of said sides, thus securely fastening the bottom and sides together.

A great saving in the expense of making axles is effected in the use of a pile of this character, as the only re-worked iron used is that which is employed in making the case, the interior or core of the pile being the scrap filling, which if properly selected, when embraced by the case which, giving a perfect outer surface, produces an axle that will stand the test of a flat bar pile, but at a greatly reduced cost. The drawing out of the axle as it is worked causes the fiber of the iron to extend longitudinally producing a laminated core of great strength, which supported by the outer case affords an axle of superior quality. By reason of the particular shape of this case, the pile can be more readily worked into the form of an axle, as it conforms to the concave of the hammer and being devoid of sharp rectangular corners, is not squashed out of shape, and by reason of the joints *e* between the bars of the case standing diametrically at an acute angle to the rectilinear faces of said bars, a blow upon either face of said pile tends to weld all of said joints, of which there are but four in the exterior case of the pile and none of which has an exposed or

lapping edge, so that there are no seams to mar the surface of the axle which may be quickly worked into form.

Having thus fully set forth my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In an axle-pile, the combination of the case or box, consisting of iron bars having angle margins placed edge to edge forming a case whose joints extend radially thereof, the angle strap-bar crossing the bottom of the case and passing between the joints engaging the sides, and the core or filling within the case, substantially as specified.

2. In an axle-pile, the combination of the angle bars forming an inclosing case, the cross-bars connecting the sides of said case, the angle strap-bar crossing the bottom of the case and passing through the joint between said bottom and sides and embracing the latter, and the scrap iron filling within said case.

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

JOHN B. BAUGH.

Witnesses:
H. R. WHEELER,
E. S. WHEELER.