To all whom it may concern:

Be it known that I, CHARLES FOURNIER, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Ship-Reaming Tools; 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 and figures of reference marked thereon, which form a part of this specification.

This invention relates to ship building implements but more particularly to an attachment for pneumatic or air hammer machines for reaming the seams of wooden vessels or the like preparatory to calking the same.

In the construction of wooden vessels, it is necessary to ream the seams before driving in the threads of calking. This reaming is usually accomplished by driving in, by hand, a series of wedge-shaped implements. The process is slow, tedious, onerous and expensive, and if not properly and carefully done, a good job of calking cannot be made, with the result that the vessel is leaky.

My invention has for its object to obviate these disadvantages by providing an attachment readily applicable to a pneumatic or air hammer machine, by means of which the seams of a wooden vessel or the like can be quickly reamed and more uniformly than is possible by hand, so that a great saving of time is effected at a great saving of expense.

With this object in view, the invention consists of the novel construction of the attachment, and of the method of reaming a seam, all of which will be first fully described and afterward specifically pointed out in the appended claims.

Referring to the accompanying drawings:

Figure 1 is an elevation of a seam-reaming implement constructed in accordance with this invention.

Figure 2 is a transverse vertical sectional view taken on line 2—2 of Fig. 1, and Figure 3 is a longitudinal sectional view taken on lines 3—3 of Fig. 1.

Like numerals of reference indicate the same parts throughout the several figures, in which:

1 indicates the implement, which consists of a cylindrical shaped body 2, beveled off at 3 near its outer end to provide a flat surface 4. The inner end of the body 2 is 60 screw threaded at 5 for threaded connection with a pneumatic or air hammer machine (not shown) while a reduced portion or shank 6 is provided, which shank may be turned integral with the body 2, or may be 65 a separate metal bar fitted into the body 2.

The flattened portion 4 of the body 2 is provided with a longitudinal dovetailed groove 7 to removably receive the dovetailed reaming blade 8, said blade 8 being tapered transversely to a sharp edge 9 and also convexely tapered from its transverse center 10 toward the front and rear edges 11 and 12 of the blade, terminating in sharp edges as shown in Fig. 3.

As will be seen from Fig. 1, the elevation formation of the blade 8 provides a straight forward edge 11, a curved or rounded bottom edge portion 13 and an upwardly and rearwardly inclined rear edge portion 12, thus providing clearance for the blade as it passes along the seam, while from Fig. 2, it will be seen that the base portion of the blade 8, just adjacent the flattened surface 4 of the body 2, is formed on a curve 14 on each side of the blade, said blade formation acting to smooth out and slightly round the outer corner edges of the planking, as will be apparent from an inspection of Fig. 2.

For the proper and most efficient action 90 of this device, the blade 8 should be thickest at a point in rear of or behind the edge 11, so that the edge 11 will have clearance when in a seam, and to insure that the effective part of the blade is at its thickest portion, 95 which is thicker than the seam is wide, so that the sides of the blade engage act upon the walls of the seam, as distinguished from a reeding blade, in which the front or entering surface of the blade is the effective working surface thereof. For most efficient action of my blade, the front edge should be free from points or projections, which if present, might seriously interfere with proper clearance so essential to the proper functioning of the implement.

Having thus fully described the several parts of the invention, its operation and method of reaming a seam is as follows:

The implement or attachment 1, being attached to a pneumatic or air hammer machine, the blade 8 is inserted in one end of
the seam, and the machine is started. The rapid blows imparted to the attachment by the hammer machine imparts to the blade 8 a steady, progressive, forward movement through and longitudinally of the seam as distinguished from a transverse reaming of the seam, as by the use of hand implements. With my invention, the operator has only to support the machine in proper position with one hand, and guide the body 2 with the other hand, the progressive movement of the blade being accomplished by the rapid blows imparted to the implement by the hammer machine, the flattened portion 4 engaging the face of the planking and limiting the entrance of the blade 8 in the seam. With the use of this machine, one operator can ream more seams in a given time than a gang of seam reamers can accomplish by hand in the ordinary manner, while with this attachment, the seams are reamed in a uniform manner without tearing or injuring the walls of the seams, but leaving the corner edges smooth and slightly rounded in such manner as to most advantageously receive the threads of calking which are subsequently driven into the seams. The net result is that a better, tighter and more workmanlike job of calking is possible.

Having thus fully described the invention, it is evident that this attachment can be changed, altered or modified in design and construction, and I consider myself clearly entitled to all such changes and modifications as fall within the limit and scope of the appended claims:

What I claim as new and desire to secure by Letters Patent of the United States, is:

1. An attachment for pneumatic or air hammer machines for reaming the seams in wooden vessels or the like, including a body for connection with a hammer machine, and a reaming blade depending from said body, said blade being tapered transversely and longitudinally toward its front and back.

2. An attachment for pneumatic or air hammer machines for reaming the seams in wooden vessels or the like, including a body for connection with a hammer machine, and a reaming blade depending from said body, said blade being tapered transversely to an edge and tapered longitudinally toward its front and back.

3. An attachment for pneumatic or air hammer machines for reaming the seams of wooden vessels or the like, including a body for connection with a hammer machine, and a reaming blade depending from the side thereof for application to a seam in a wooden vessel or the like to ream the seam, the thickest portion of the blade being behind the entering edge of the blade, in such manner that the effective surface of the blade on the walls of the seam is at the sides of the blade.

4. An attachment for pneumatic or air hammer machines for reaming the seams in wooden vessels or the like, including a body for connection with a hammer machine, and a reaming blade depending from said body, said blade being tapered transversely and longitudinally toward its front and back.

5. The herein described method of reaming the walls of a seam of a wooden vessel or the like, consisting in applying to a seam a tapered blade having its thickest portion and its effective surface behind its entering edge, and in progressing said blade longitudinally of a seam and within the same.

6. The herein described method of reaming the walls of seams of wooden vessels or the like, consisting in applying to a seam a tapered blade of greater width than the width of the seam, and in progressing said tapered blade longitudinally of the seam and within the same.

In testimony whereof, I affix my signature.

CHARLES FOURNIER.