(No Model.)

A. T. BREWER.

ART OF BANDING.

No. 417,808. Patented Dec. 24, 1889.

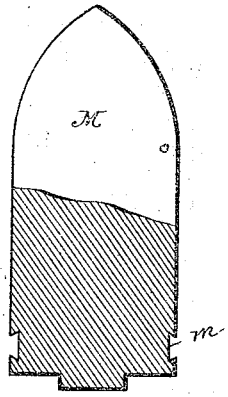

Fig. 1.

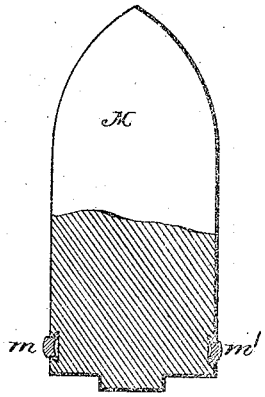

Fig. 2.

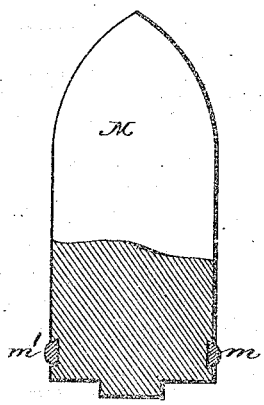

Fig. 3.

Fig. 4.

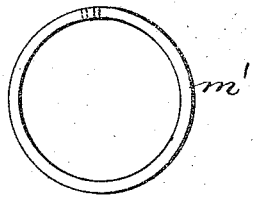

Fig. 5.

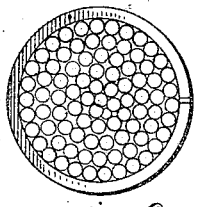

Fig. 6

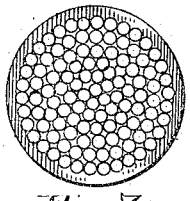

Fig. 7.

Witnesses
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UNITED STATES PATENT OFFICE.

ALANSON TOWNSON BREWER, OF BOSTON, MASSACHUSETTS.

ART OF BANDING.

SPECIFICATION forming part of Letters Patent No. 417,808, dated December 24, 1889.

Application filed April 25, 1889. Serial No. 308,552. (No model.)

To all whom it may concern:

Be it known that I, ALANSON TOWNSON BREWER, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in the Art of Banding, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation, partly in section, of a projectile formed with a groove to receive its band. Fig. 2 is a similar view showing the band partially home, and Fig. 3 is a like view showing the band in place. Fig. 4 is a strip of metal from which one form of band is formed, and Fig. 5 shows the strip bent into a band. Fig. 6 shows a bundle of wires with an endless band in position to be secured therein, and Fig. 7 shows the wires banded with the endless band.

My invention consists in securing a band in place by reducing its perimeter by pressure between dies, as will be more fully explained hereinafter.

In Figs. 1, 2, 3, 4, and 5 I have illustrated my invention with reference to the banding of projectiles, to which it is especially applicable, M being the projectile, *m* the band-receiving groove therein, and *m'* one form of the band, the band shown in these figures being formed of a blank whose ends are preferably beveled, as shown in Figs. 4 and 5. In Figs. 6 and 7, however, the band is an endless band.

I have discovered that by subjecting metallic bands to great pressure between dies when the bands are properly situated (in respect of the article to be banded) to be forced home the bands are forced into place so firmly and tightly that they will seldom, if ever, become loosened.

In practicing my invention I prefer to subject the band to pressure in the machine described in my application of even date herewith for a patent for an improved toggle-press, Serial No. 308,551, the pressure to which the band is subjected therein causing the metal to flow more or less, and thereby reduce the perimeter of the band and securely fasten the band to the article to be banded. The advantage of this method of banding shot, for example, will be readily understood from the fact that in banding shot the shot have hitherto been banded by hand, the bands being hammered while hot into grooves and the banded shot turned in lathes to bring the periphery of the band flush with the periphery of the shot and to finish the shot.

Shot banded, as described herein, by placing the band *m'* in the groove *m* and then subjecting the band and shot to enormous pressure between dies are very much better and more cheaply banded than has heretofore been the case.

In banding bundles of wire, for example, as shown in Figs. 6 and 7, the spaces receive the metal of the band when the band is subjected to pressure just as the groove *m* in the projectiles receives it, and in both cases the perimeter of the band is reduced and the band forced home upon the article to be banded in a more uniform and perfect manner than ever before.

What I claim is—

The herein-described improvement in the art of banding, which consists in reducing the perimeter of the band and securing it in place by pressure between dies, substantially as and for the purpose set forth.

ALANSON TOWNSON BREWER.

Witnesses:

S. E. FELT,

EUGENE M. JOHNSON.