<page>025v</page>

<image>http://gallica.bnf.fr/ark:/12148/btv1b10500001g/f56.item</image>

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<id>p025v\_1</id>

<head>Gunner</head>

<ab>There are three reinforcement rings on a cannon, one at the breech, one in the middle, one at the mouth. When founders want to work on their craft or render the cannon or other piece lighter &amp; easier <add>to cart around</add>, they make it from the ring at the breech to the ring in the middle of the size &amp; proportion of the balls, as is said above. But from the ring in the middle to the ring of the mouth <del>&amp;</del> they diminish it one <ms>line</ms>, or more or less, on each side, always taking their measurements with the compass from the straight line which they make in the middle of the <tl>model</tl> of <m>paper</m> or otherwise. And this reduction amounts to seven or eight <ms>quintals</ms> of reduction &amp; lightening <add>in weight</add>, and the piece is not less secure for it. This is done for big pieces, but for <del><fr>gr</fr></del> small pieces <del>from</del> <add>lesser than</add> the average, one needs to observe the aforesaid proportion, <del>from</del> drawing the piece in a continuous line from one end to the other. The trunnions are commonly situated one foot from the ring of the middle, <del>from</del> towards the edge of the breech.

But because some gunners prefer a piece which is weighted at the front because it is easier to plant, to do this, one only needs to move the trunnions closer to the breech &amp; further away from the middle. On the contrary if you want to render it <add>more</add> weighted at the back, you will move the trunnions

closer to the middle of the piece or place them further up towards the mouth. When you bore your piece you make a fluted cast <m>iron</m> box like a bedpost &amp; there ought to be sixteen channels or notches in which you will fasten sixteen blades quite evenly, <del>with</del> so that all together they cut &amp; scrape in the same manner. Because if some were to not cut &amp; scrape, chambers &amp; waves would be made in the cannon which would make it lopsided and there would be a danger that the piece might break in the middle. In order to avoid this, it is necessary that the borer should pass evenly from the breech to the mouth, &amp; that the opening of the piece should be evenly bored from one end to the other, because thus the <m>powder</m> goes off all at once with more force. On the contrary, if restrained, it goes sideways &amp; makes the piece break.</ab></div>