<page>118v</page>

<image>http://gallica.bnf.fr/ark:/12148/btv1b10500001g/f242.item</image>

<div>  
<id>p118v\_1</id>

<head>Casting in <tl>box molds</tl></head>

<ab>The same sand that was used in the reheated <fr>noyaulx</fr>, composed of <m>plaster</m>, <m>brick</m> and <m><fr>alum de plume</fr></m> as is said, is excellent for casting in <tl>box molds</tl>, and I have experienced it thus: I crushed the pieces which had come out of <tl>core molds</tl> in a <tl>mortar</tl>, dragging the <tl>pestle</tl>, because this sand is very <fr>doulx</fr>. I did not pass it through the <tl>sieve</tl>, because the <m><fr>alum de plume</fr></m> mixed throughout, which binds it, would not pass; but I ground finely upon <tl>marble</tl> what seemed to me too coarse. And having prepared it thus, I moistened it with <m>sal ammoniac water</m>, made of <m>sal ammoniac</m>, as much as the size of two <ms><pa>walnuts</pa></ms>, in a bottle of <m>common water</m> the same size as a <tl>bottle</tl> in which one boils <m>tisane</m>, or in a good <tl>pot</tl> of <m>water</m> so that you find the <m>water</m> fairly salty. I mixed throughout half a <ms>glass</ms> of <m>sal ammoniac</m>, two <tl>silver spoonfuls</tl> of <m>spirits</m>. Having thus moistened the sand in such a way that it took hold well, nevertheless coming apart easily, I sprinkled my medal with <m>pulverized charcoal</m> with a <tl>file</tl> to rid it of <m>oil</m>, and all other <m>grease</m>. It is necessary to avoid them, for they would hinder good stripping. I blew on my medal &amp; molded it, and the female part of the <tl>box mold</tl> once filled, I marked &amp; made a line on the reverse &amp; edge of the medal, &amp; on the nearby sand as well. In order that the second <tl>box mold</tl> take the imprint thereupon to indicate the place for making the cast, <del>once filled</del><del>the female part of the box mold once filled</del> I uncovered the outline of the medal and pounced the whole side with <m>pulverized charcoal</m>, and then filled the male part with sand. <del>Once mad</del> I separated the <tl>box mold</tl> and did not hit the corners of the medal to make it strip, because that knocks the sand and makes it crumble. Rather I struck the back of the <tl>box mold</tl>, retaining the obverse of the medal on the bottom, and it molded very neatly. If it had not stripped thus, I would have waited to remove it until the <tl>box mold</tl> had been dried out over fire. I lit a row of <m>charcoals</m> between two little <tl>trivets</tl> of <m>iron</m> in the form that you see, and put the back &amp; reverse of <tl>box molds</tl> thereupon, &amp; the imprint on top, <figure>

<id>fig\_p118v\_1</id>

<link><https://drive.google.com/open?id=0B9-oNrvWdlO5Rm5qaUJCNWVFWlk></link>

</figure>

because in this way, they dry out gently. And if, by chance, they should crack from being too moistened, it is on the back that they take the harshest fire, &amp; the imprint remains safe &amp; whole.</ab>

<ab><margin>left-top</margin>  
For the best, it is necessary to reheat the sand that is used in the <fr>noyau</fr> rather than used it in the <tl>box mold</tl>, until it no longer contracts.</ab>

<man><margin>left-top</margin>

Excellent sand</man>

<ab>Take a little of the same sand, the finest that you can, for covering the medal.</ab>

<ab>  
<margin>left-middle</margin>  
For medals &amp; flat things, the true heat of <m>lead</m> &amp; <m>tin</m> is when it is melted gently.</ab>

<ab>  
<margin>left-middle</margin>  
Note that I filled the <tl>box mold</tl> before pressing it, and did not hit it, but rather pressed it with the strength of my <bp>hands</bp> alone, because hitting it makes it go awry. Secure your <tl>box mold</tl> that it does not shift at all, &amp; if you put some moistened sand under it, it will only hold in place more firmly.</ab>

<ab>  
<margin>left-bottom</margin>  
Make the gate that it is not too thick, so as not to overcharge the medal, but wide enough near the medal that it embraces a third part. Do not forget the vents.</ab>

<ab>  
<margin>left-bottom</margin>  
Drying <tl>box molds</tl> is to keep them from humidity, that they no longer smoke, once having nevertheless been very hot.</ab>

<ab>  
<margin>left-bottom</margin>  
<fr>Recuire</fr> is to redden the box mold, which is done for <m>gold</m> and for <m>silver</m>.</ab>

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