

实用

钣金展开 图解与计算 手册

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内 容 提 要

本书是金属结构、钣金展开下料和生产工艺的实用工具书。书中本着实践的需要，以图为主、说明为辅、理论与实践、图解与计算相结合的原则编写的。全书共分七章：圆管、棱锥管、长圆管、方口曲面管、圆锥管、异口形管、球体。书中用图解法和计算法列举了各制件的展开下料的过程，从中可以举一反三，也可以直接应用于实践。

本书不仅适用于城乡工业、企业的钣金工、钳工、白铁工、铆工等技术工人阅读，也可作为技工学校、职工中学和有关科技人员的参考书。

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前 言

随着我国科学技术的迅猛发展，计算器已在工矿企业得到广泛的普及和应用。人们对钣金技术的认识也有了进一步的发展和提高。过去只有“划”才能求出展开图的图解法已不能满足生产的需要，而用计算式代替繁琐的放大样已在生产中得到广泛的应用。计算法一般来源图解法，图解法是展开放样的基本方法。因此，本书将从图解法和计算法两个方面，并将之结合在一起，即可以相互独立、又能够达到互相理解、相互校核的作用。

全书按它们的结构特征共分为圆管、棱锥管、长圆管、方口曲面管、圆锥管、异口形管、球体七大类。书中全部制件均从立体图、投影图、放样图（包括板厚处理和求结合线）和展开图等四过程，详细地介绍了用已知投影图尺寸而求出展开图。本书的特点是：图文并茂、简明易懂、实用性强，对于不同制件或同一制件的精度要求不同，可以选用不同的展开方法。也适用于有不同文化程度的技术人员、技术工人、专业技术人员使用。例如：四节圆管直角弯头，如果已知尺寸适当、手中又没有计算器的话，我们可以选用图解法中的“小圆法”直接求出展开图。若已知尺寸过大、要求精度又高，那我们可以用计算器求出画展开图所需的尺寸，然后，直接画出展开图。对于复杂的构件也可以将图解法和计算法结合起来，求出展开图，并可以起到检查、校核的作用。本书是一本实用新型的展开下料书籍。

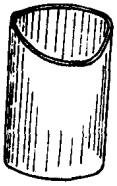
本书在编写过程中得到魏成志、唐忠斌、唐丽杰、唐忠权、蒋运凤、黄桂珍、刘树同、蒋志意、李波、陈凤芹、王颖等同志的帮助，在此表示衷心的感谢。

由于作者水平有限，欠缺不当之处在所难免，敬请广大读者在使用中对发现的问题和不妥之处予以指正批评。

作者：唐忠库

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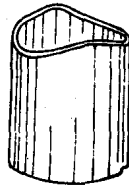
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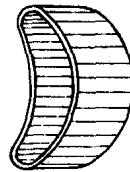
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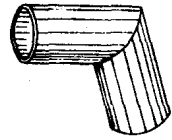
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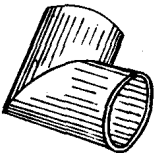
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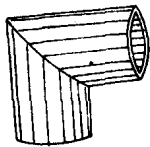
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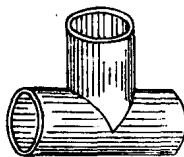
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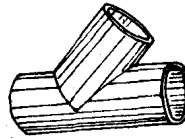
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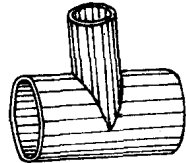
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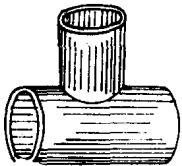
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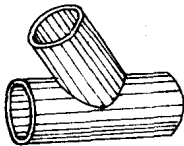
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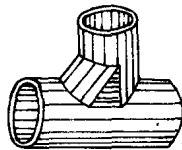
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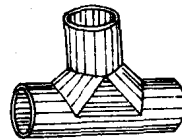
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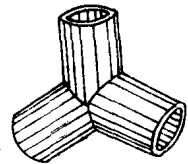
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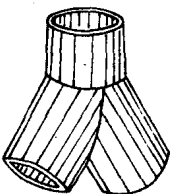
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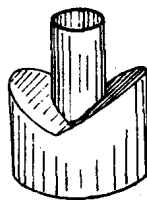
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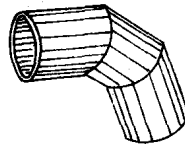
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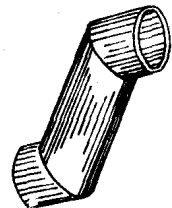
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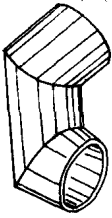
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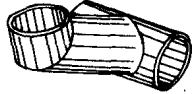
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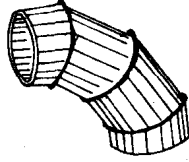
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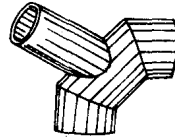
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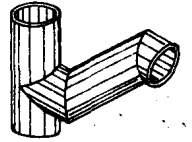
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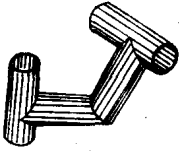
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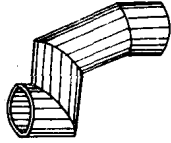
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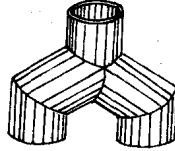
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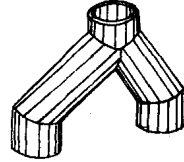
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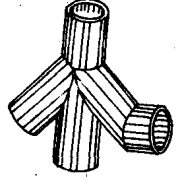
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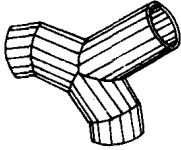
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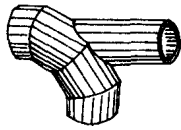
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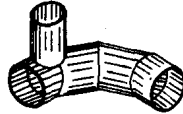
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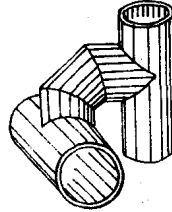
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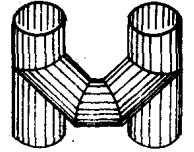
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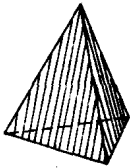


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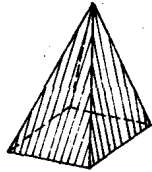


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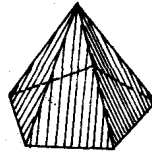
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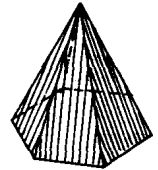
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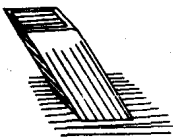
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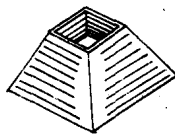
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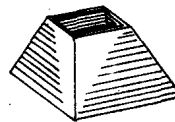
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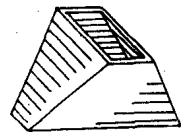
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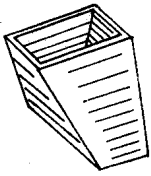
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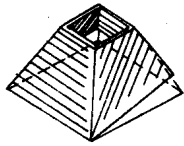
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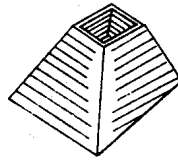
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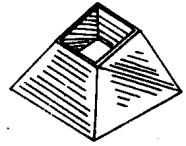
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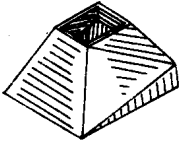
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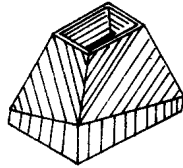
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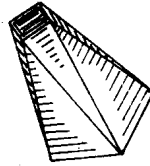
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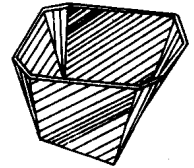
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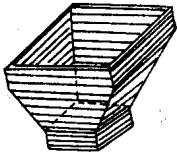
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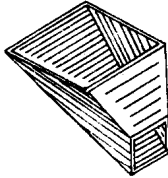
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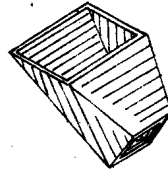
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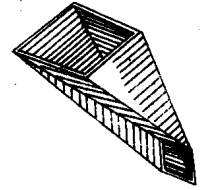
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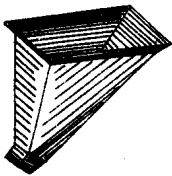
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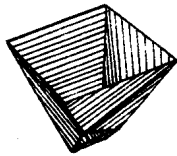
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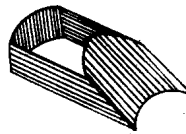
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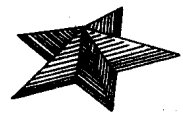
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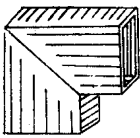
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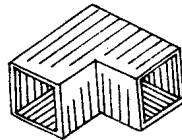
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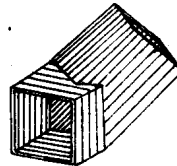
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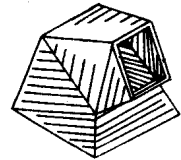
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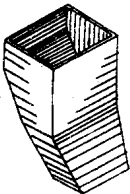
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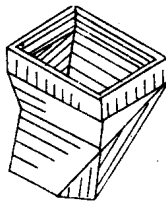
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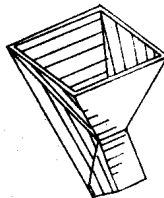
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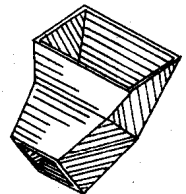
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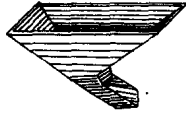
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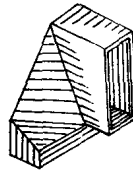
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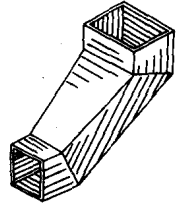
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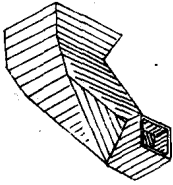
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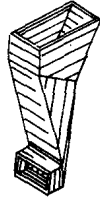
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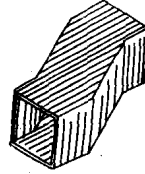
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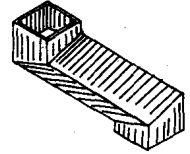
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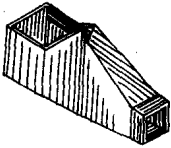
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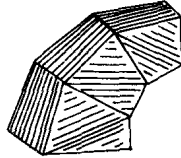
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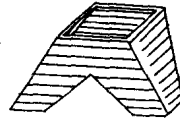
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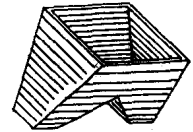
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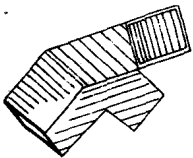
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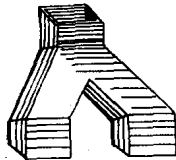
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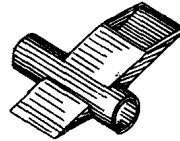
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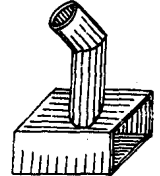
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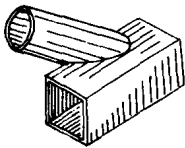
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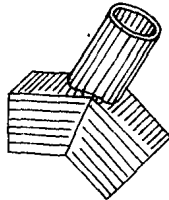
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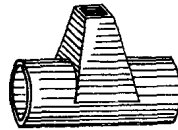
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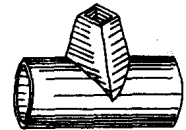
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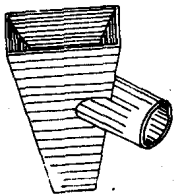
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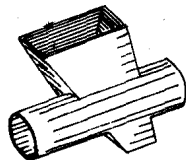
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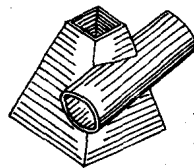
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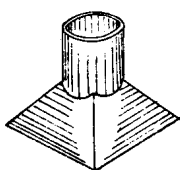
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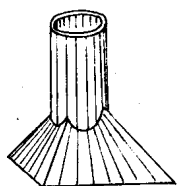
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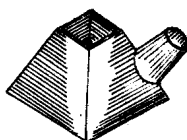
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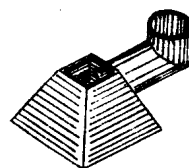
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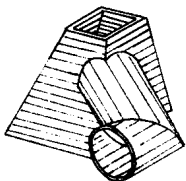
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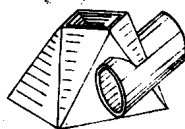
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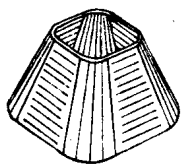


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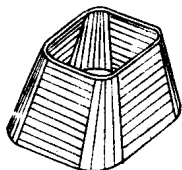


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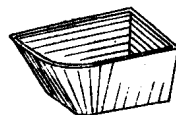
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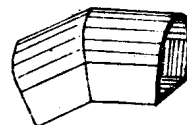
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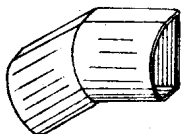
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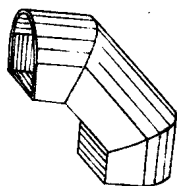
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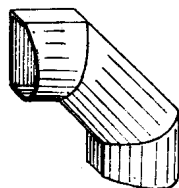
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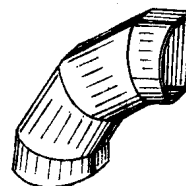
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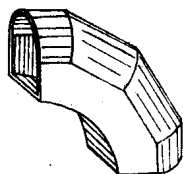
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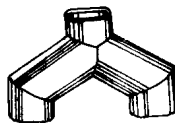
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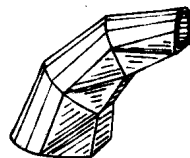
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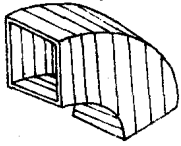


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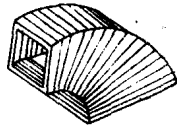


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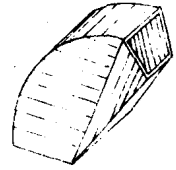
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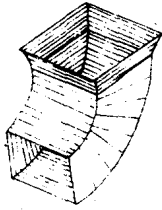
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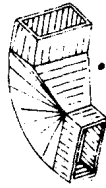
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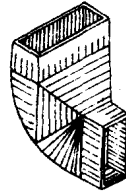
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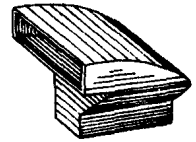
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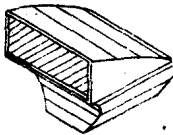
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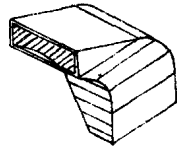
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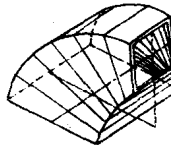
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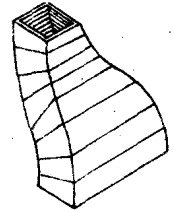
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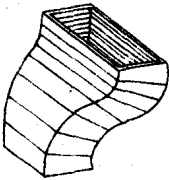
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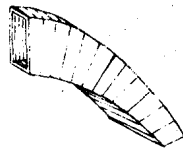
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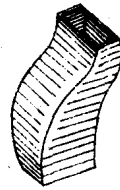
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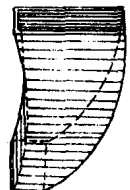
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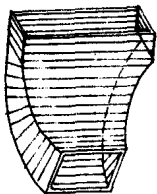
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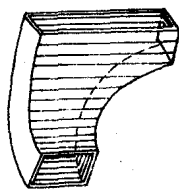
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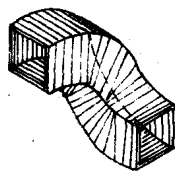
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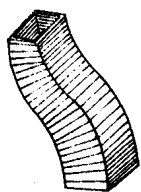
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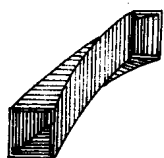
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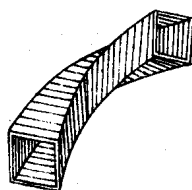
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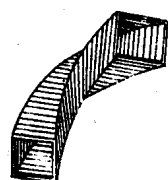
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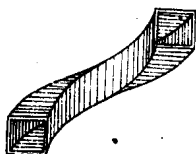
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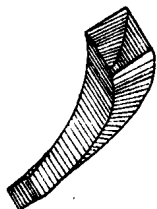
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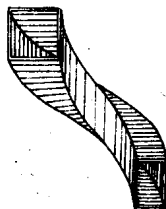
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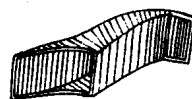
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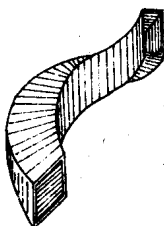
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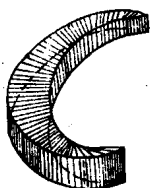
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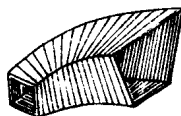
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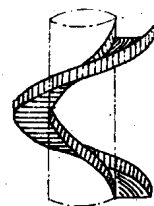
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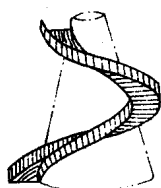
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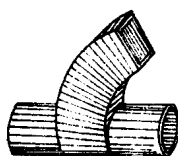
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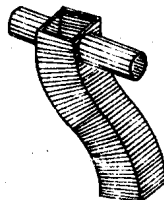
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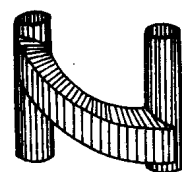
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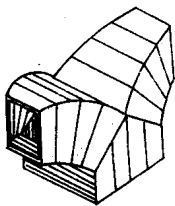
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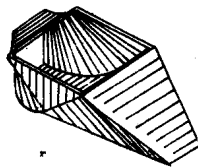
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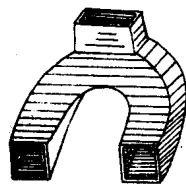
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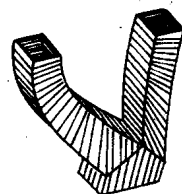
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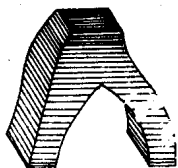
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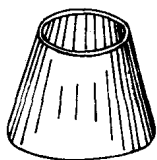


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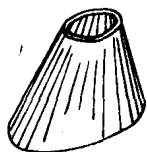


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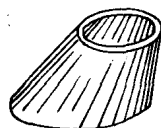
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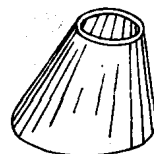
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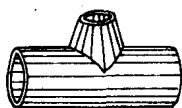
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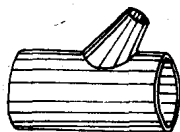
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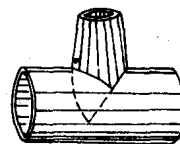
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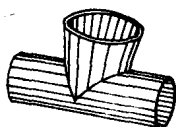
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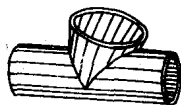
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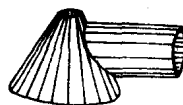
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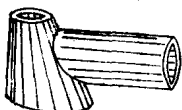
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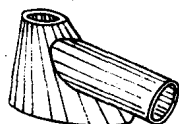
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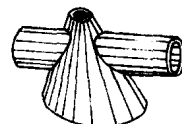
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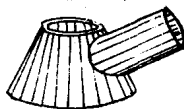
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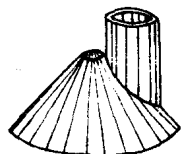
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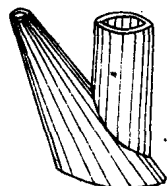
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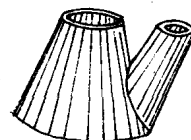
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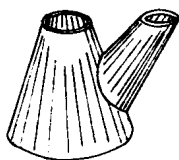
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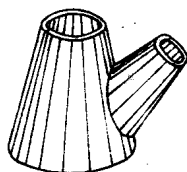
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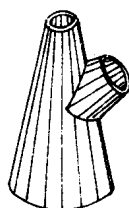
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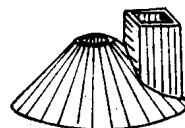
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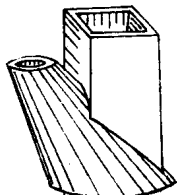
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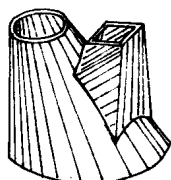
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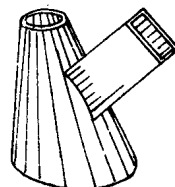
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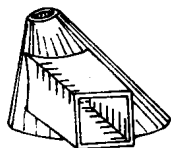
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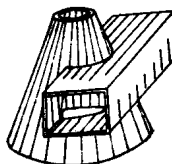
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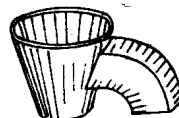
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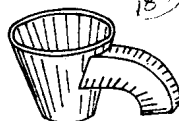
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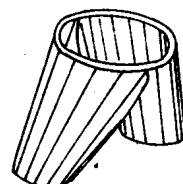
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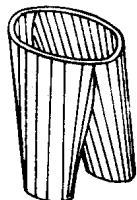
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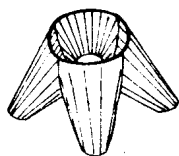
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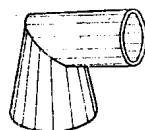
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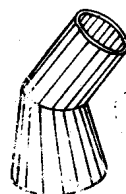
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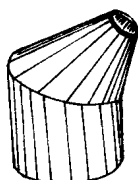
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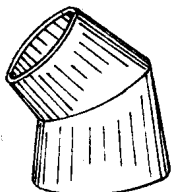
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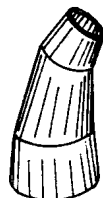
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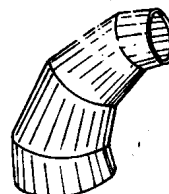
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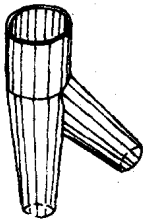
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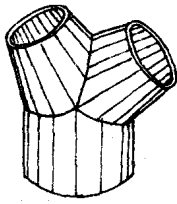
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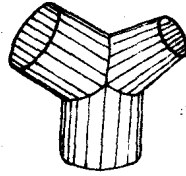
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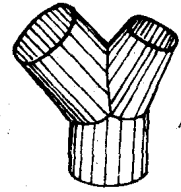
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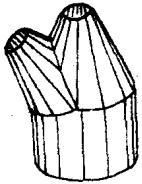
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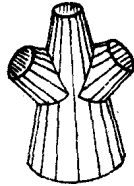
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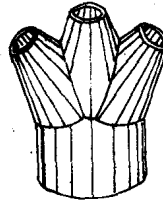
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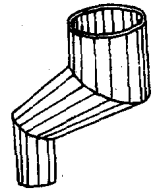
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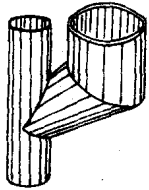
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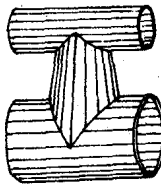
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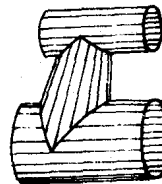
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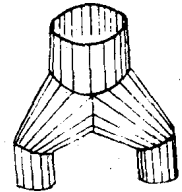
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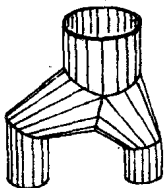
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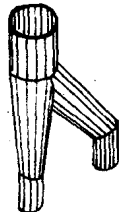
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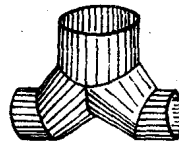
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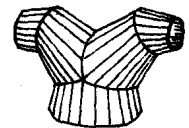
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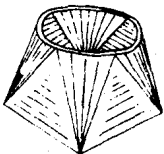


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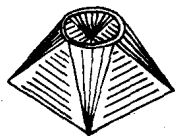


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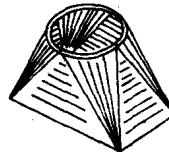
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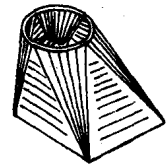
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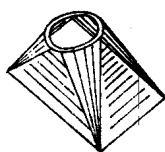
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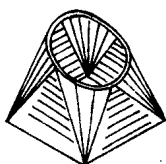
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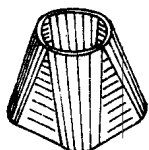
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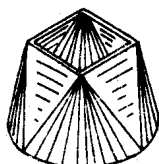
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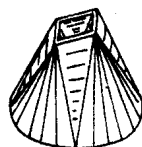
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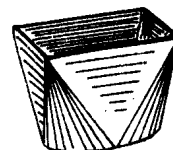
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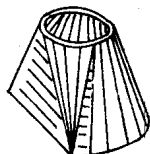
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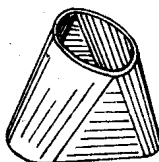
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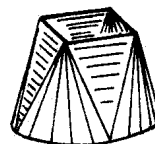
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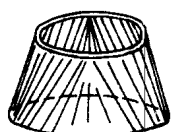
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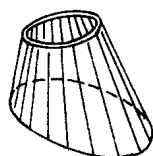
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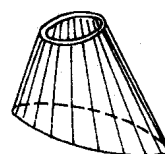
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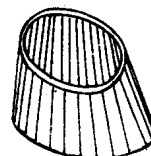
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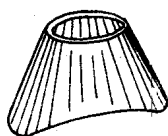
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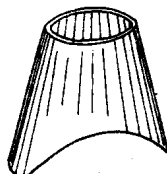
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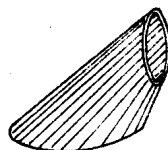
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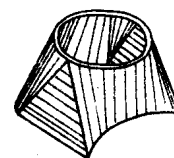
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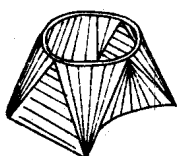
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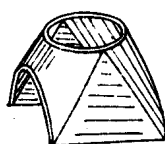
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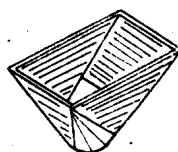
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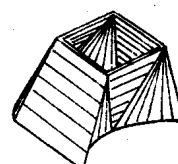
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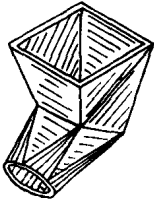
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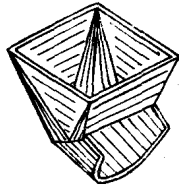
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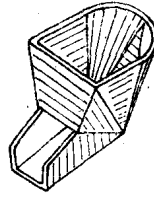
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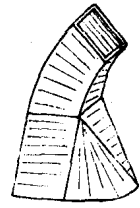
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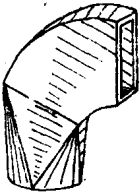
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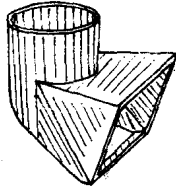
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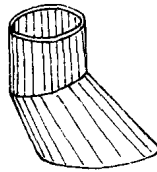
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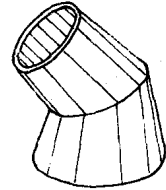
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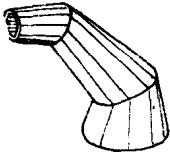
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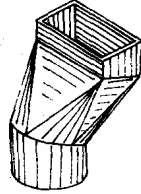
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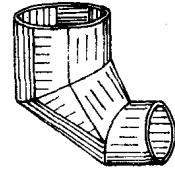
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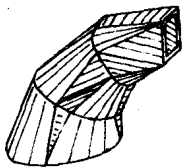
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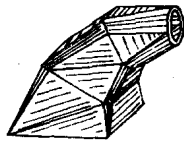
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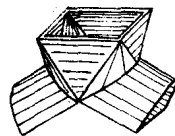
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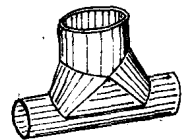
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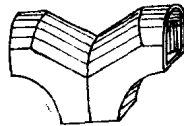
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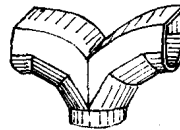
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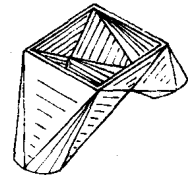
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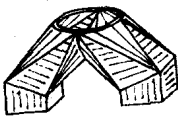
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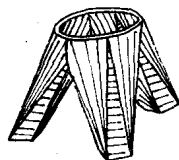
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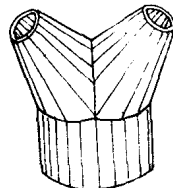
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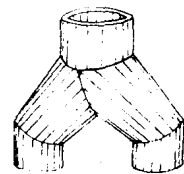
§ 6-49 609 页



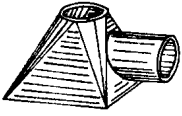
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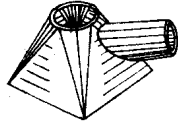
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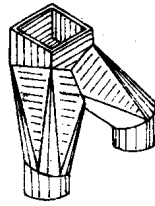
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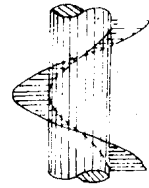
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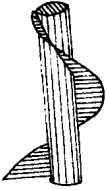
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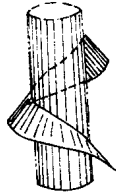
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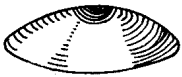


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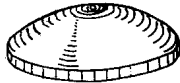


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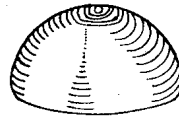
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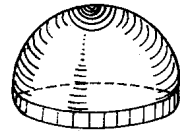
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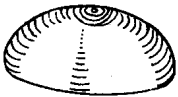
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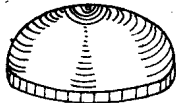
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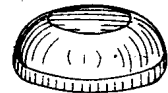
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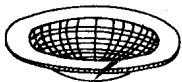
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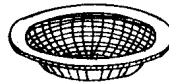
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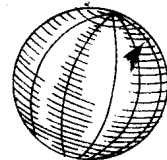
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