

- corrugation being substantially arcuate and substantially one-third of the circumference of a circle, and the height of the corrugation projecting from the major flat area being not less than the approximate thickness of said major flat area, and not more than approximately twice said thickness.
2. A gasket or like sealing means as claimed in Claim 1, wherein the metal is approximately 150 V.P.N. in hardness.
3. A gasket or like sealing means as claimed in Claim 1 or Claim 2, apertured for a plurality of passages and having corrugations surrounding the apertures, the thicknesses and heights of the corrugations being dependent on the loadings and pressures required to be sealed off in the different passages.
4. A gasket or like sealing means as claimed in any of the preceding Claims, wherein at least one of the apertures is surrounded by two parallel contiguous corrugations.
5. A gasket or like sealing means as claimed in Claim 4, wherein the corrugations are arranged in opposite senses, the trough of one facing in the same sense as the crest of the other.
6. A gasket or like sealing means as claimed in any of the preceding Claims, having in addition at least one corrugation not surrounding and independent of any aperture, and located so as to counteract distortion in either of the members between which the gasket is to be used.
7. A gasket or like sealing means as claimed in any of the preceding Claims, having a coating of a heat-resisting varnish.
8. A gasket or like sealing means substantially as described with reference to Figures 1 and 2 of the accompanying drawings.
9. A gasket or like sealing means substantially as described with reference to Figure 3 or Figure 4 of the accompanying drawings.
10. A gasket or like sealing means substantially as described with reference to Figure 5 of the accompanying drawings.
11. A gasket or like sealing means substantially as described with reference to Figure 6 of the accompanying drawings.
12. A gasket or like sealing means substantially as described with reference to Figures 7 and 8 of the accompanying drawings.
13. A gasket or like sealing means substantially as described with reference to Figures 9 and 10 of the accompanying drawings.
14. Means for making a gasket or like sealing means substantially as described with reference to Figure 3 or Figure 4 of the accompanying drawings.
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PROVISIONAL SPECIFICATION

Improvements in or relating to Gaskets and like Sealing means

- We, COOPERS MECHANICAL JOINTS LIMITED, a British Company, of 14, Liverpool Road, Slough, in the County of Bucks, do hereby declare this invention to be described in the following statement:—
- This invention relates to gaskets and like sealing means, and has especial, but not exclusive, reference to cylinder head gaskets for internal combustion engines, in connection with which it will be described.
- It is known to produce stamped steel cylinder head gaskets having embossed ridges or crimps surrounding the bores and oil and water passages, and such gaskets are considered to be highly successful and an advance on the previous copper-asbestos and such-like deformable gaskets. We have found, however, that there are various critical or highly important factors involved, and that it is not sufficient merely to evolve a crimp pattern for any particular gasket and then produce a stamping or pressing in accordance with that pattern. These factors include varying pressures on different parts of the cylinder head, and consequently the different sealing requirements, the thickness and hardness of the gasket, and the shape and dimensions of the crimp.
- According to the present invention, the gasket or like sealing means apertured for a plurality of passages is formed of a metal within the half-hardness range, and having crimps surrounding the apertures, the heights of said crimps being dependent on the loadings required to seal off the different passages.
- Preferably the cross-section of each crimp is approximately semi-circular, and the metal is approximately 150 V.P.N. (Vickers Pyramid Number) in hardness. Preferably also steel is employed, but such metals or alloys as aluminium, aluminium-bronze or phosphor-bronze are possible.
- The relation of the ratio of the width of the crimp to the sum of the height of the crimp and the thickness of the material, and the loading on the gasket, may be in accordance with a predetermined set of values. Tests have shown this relation to be constant over a wide range of loadings, and for a given loading the crimp dimension ratio may be evaluated by graphical methods.
- At least one of the apertures may be surrounded by two or more parallel crimps. Preferably such crimps face in opposite directions, so that there is a trough, with a crest adjacent to it, to be seen on each surface of the gasket.
- Gaskets or like sealing means in accordance with the invention may with advantage have