

F02F

CYLINDERS, PISTONS OR CASINGS, FOR COMBUSTION ENGINES; ARRANGEMENTS OF SEALINGS IN COMBUSTION ENGINES (specially adapted for rotary-piston or oscillating-piston internal-combustion engines F02B; specially adapted for gas-turbine plants F02C; specially adapted for jet-propulsion plants F02K)

F02F 1/00

Cylinders; Cylinder heads (in general F16J)

Definition statement

This subclass/group covers:

Cylinders and cylinder heads for combustion engines

References relevant to classification in this group

This subclass/group does not cover:

Cylinders and cylinder heads in general	F16J
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F02F 1/002

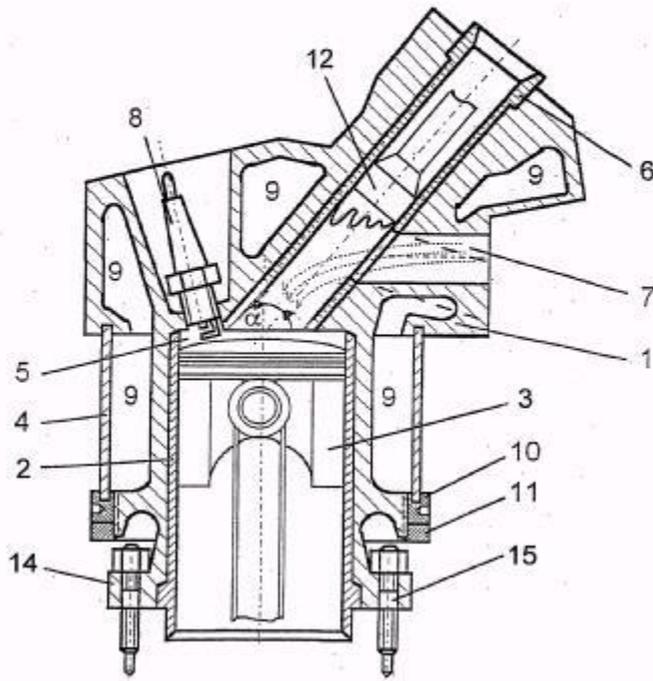
[N: Integrally formed cylinders and cylinder heads]

Definition statement

This subclass/group covers:

All applications of a single piece forming the cylinder and the cylinder head.

1/3



F02F 1/02

having cooling means (cylinder heads F02F1/26)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Cooling of cylinders or cylinder heads in general	F01P 1/02 and F01P 3/02
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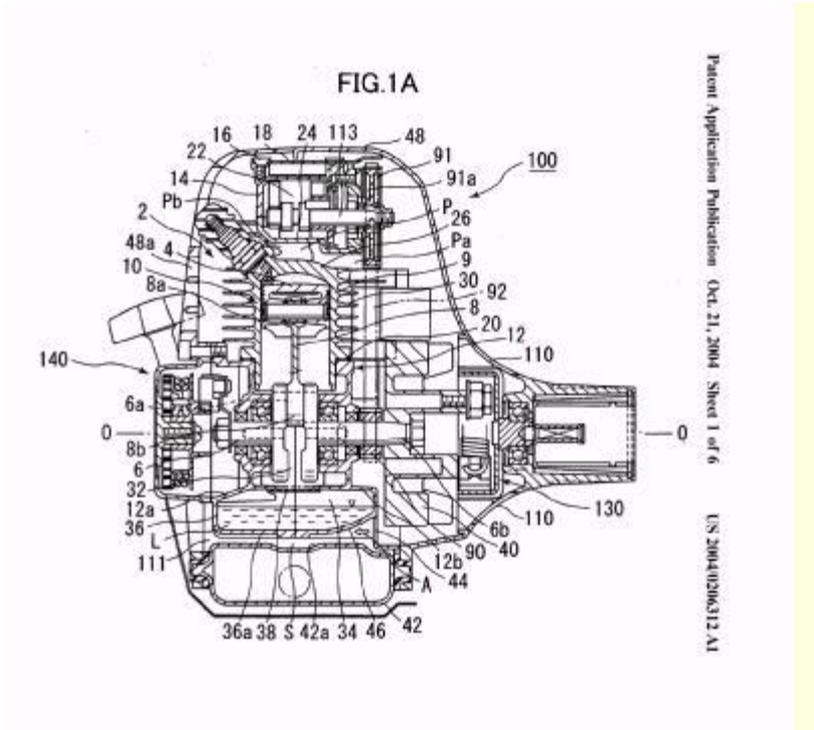
F02F 1/04

for air cooling

Definition statement

This subclass/group covers:

Means for air cooling of cylinder heads



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Informative references

Attention is drawn to the following places, which may be of interest for search:

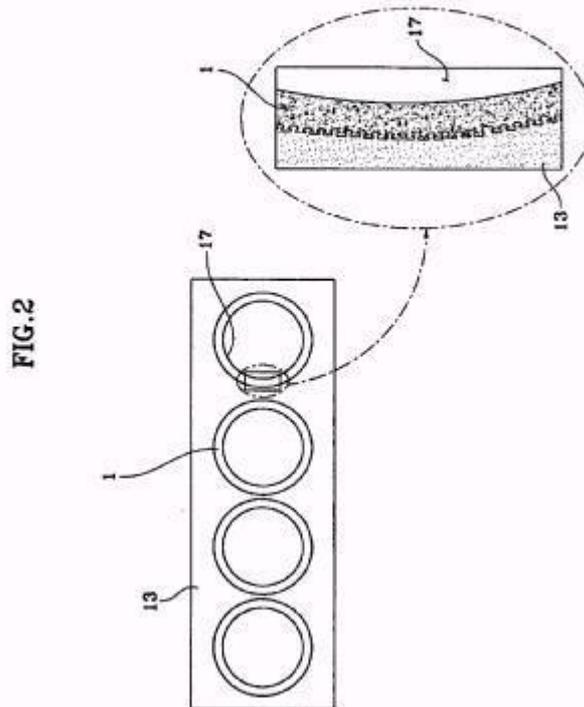
Air cooling of cylinders and cylinder heads	F01P 1/02
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F02F 1/08

running-liner and cooling-part of cylinder being different parts or of different material

Definition statement

This subclass/group covers:
 Running-liner and cooling-part of cylinder being different parts or of different material:



Only for air cooled engines, e.g. different materials used for the liners and the cooling fins.

F02F 1/10

for liquid cooling

Informative references

Attention is drawn to the following places, which may be of interest for search:

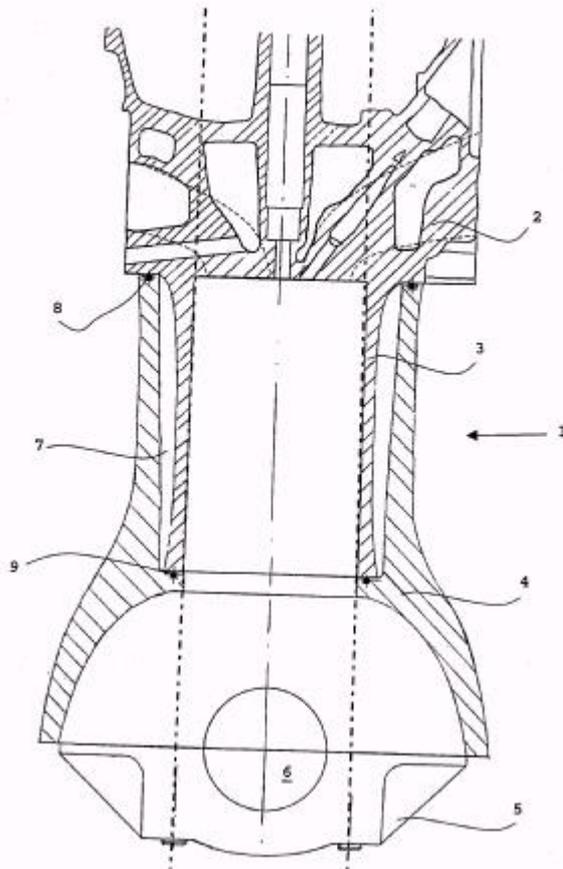
Liquid cooling of cylinders and cylinder heads	F01P 3/02
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F02F 1/102

[N: Attachment of cylinders to crankcase]

Definition statement

This subclass/group covers:



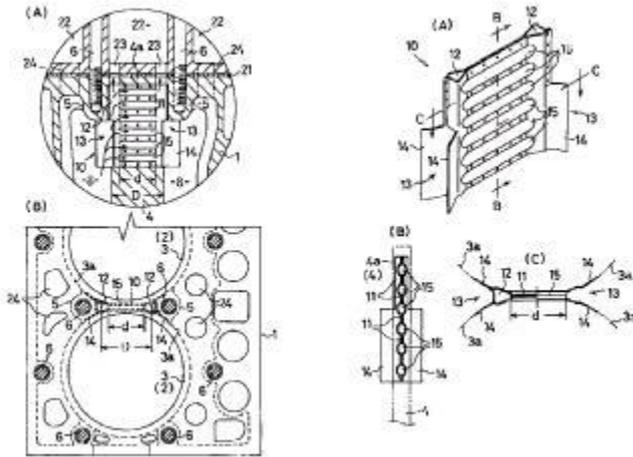
F02F 1/108

[N: Siamese-type cylinders, i.e. cylinders cast together]

Definition statement

This subclass/group covers:

Siamese-type cylinders, i.e. cylinders cast together:



Informative references

Attention is drawn to the following places, which may be of interest for search:

Arrangement for cooling cylinders or cylinder heads	F01P 3/02
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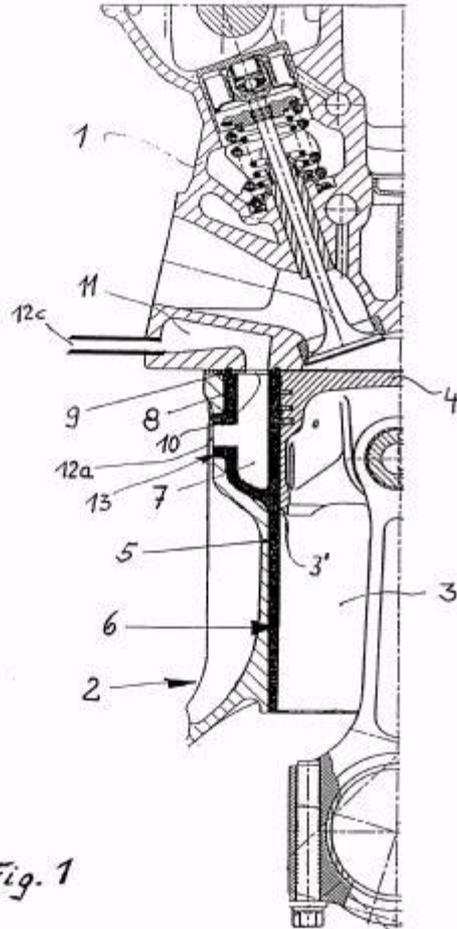
F02F 1/12

Preventing corrosion of liquid-swept surfaces

Definition statement

This subclass/group covers:

All measures taken for combating corrosion in water cooled engines.



✱ Fig. 1

Informative references

Attention is drawn to the following places, which may be of interest for search:

Engines with means for preventing corrosions of gas swept spaces	F02B 75/08
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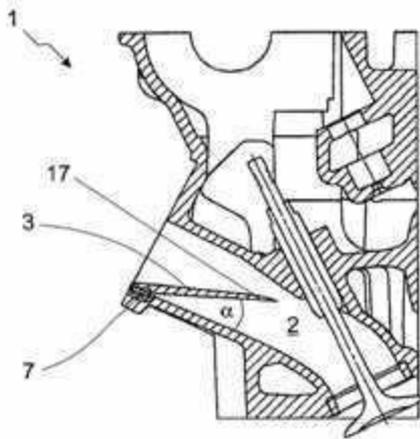
F02F 1/425

[N: with a separate deviation element inside the channel]

Definition statement

This subclass/group covers:

Separate deviation element inside the intake channel. E.g. a butterfly valve or an insert placed just before the valve seat.



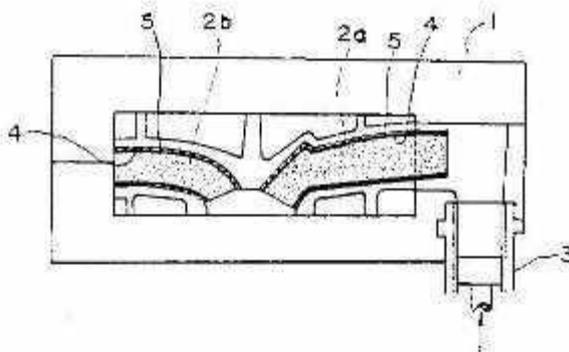
F02F 1/4292

[N: with liners (F02F1/4257, F02F1/4271 take precedence)]

Definition statement

This subclass/group covers:

Liners in both intake and exhaust channel.



References relevant to classification in this group

This subclass/group does not cover:

Liners in intake channels only	F02F 1/4257
Liners in exhaust channels only	F02F 1/4271

F02F 3/00

Pistons (in general F16J)

Definition statement

This subclass/group covers:

Pistons for combustion engines:

Patent Application Publication Feb. 17, 2005 Sheet 1 of 6 US 2005/0034598 A1

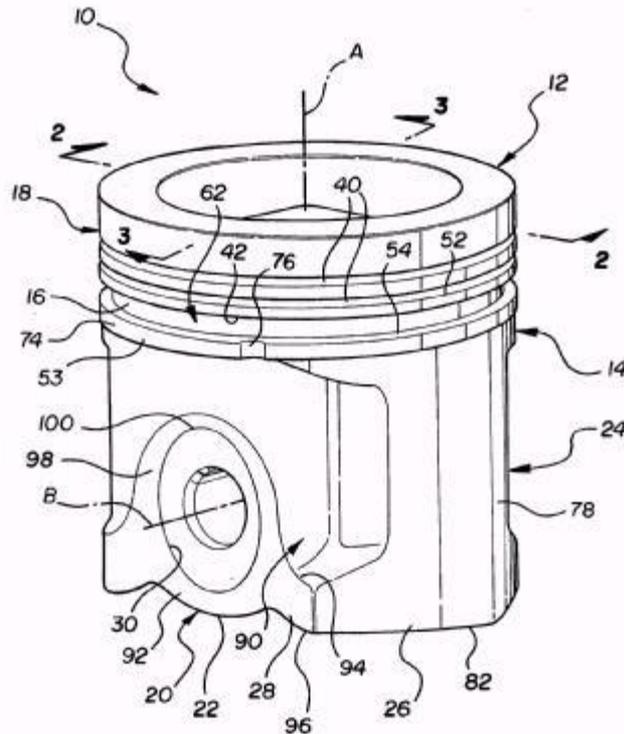


FIG-1

Informative references

Attention is drawn to the following places, which may be of interest for search:

Pistons in general	F16J
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F02F 3/16

having cooling means

Informative references

Attention is drawn to the following places, which may be of interest for search:

Liquid cooling arrangements for pistons	F01P 3/06
Air cooling arrangements for pistons	F01P 1/04

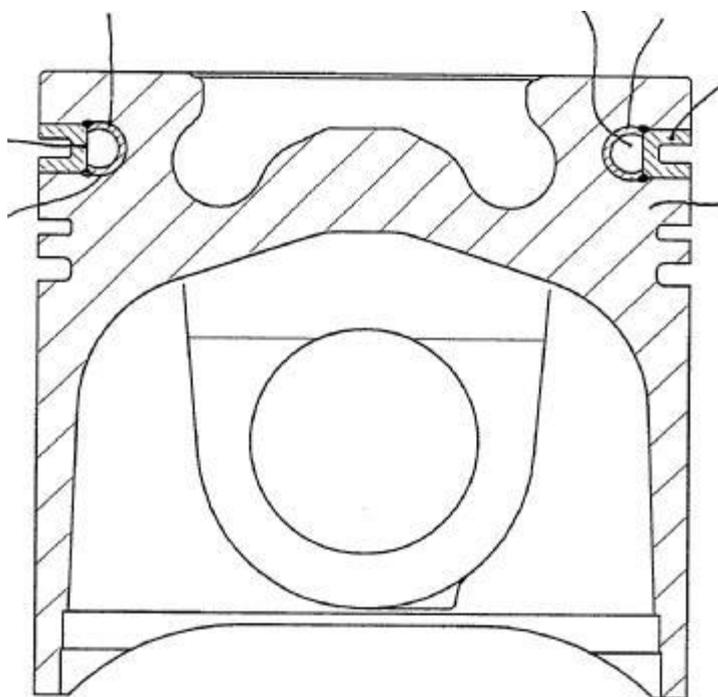
F02F 3/22

the fluid being liquid

Definition statement

This subclass/group covers:

Liquid cooling means:



Synonyms and Keywords

In patent documents the following expressions/words "cooling channel cover" and "ring carrier" are often used as synonyms.

F02F 5/00

Piston rings, e.g. associated with piston crown, [N: not used see F16J9/00]

References relevant to classification in this group

This subclass/group does not cover:

Piston rings	F16J 9/00
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Special rules of classification in this group

Not used

F02F 7/00

Casings, e.g. crankcases (engine casings in general F16M) [N: or frames]

Definition statement

This subclass/group covers:

Combustion engine casings, e.g. crankcases or frames.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Engine casings in general	F16M
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F02F 11/00

Arrangements of sealings in combustion engines (piston rings F02F5/00 [N: not used, see F16J9/00]; sealings per se F16J)

Definition statement

This subclass/group covers:

Arrangement of sealings in combustion engines

References relevant to classification in this group

This subclass/group does not cover:

Piston rings for combustion engines	F16J 9/00
Sealings per se	F16J

