

EUROPEAN PATENT OFFICE
U.S. PATENT AND TRADEMARK OFFICE

CPC NOTICE OF CHANGES 1242

DATE: JANUARY 1, 2022

PROJECT MP0523

The following classification changes will be effected by this Notice of Changes:

<u>Action</u>	<u>Subclass</u>	<u>Group(s)</u>
SCHEME:		
Titles Changed:	F02K	Subclass
	F02K	1/002, 1/06, 1/1207, 1/54, 1/827
	F02K	3/072, 3/08
	F02K	7/005
	F02K	9/00, 9/08, 9/32, 9/425, 9/46, 9/52, 9/54, 9/58, 9/60, 9/80
Warnings Deleted:	F02K	Subclass
Notes Modified:	F02K	Subclass
DEFINITIONS:		
Definitions New:	F02K	3/072, 3/08
	F02K	7/005
	F02K	9/08, 9/32, 9/425, 9/46, 9/52, 9/54, 9/58, 9/60
Definitions Modified:	F02K	Subclass
	F02K	1/00, 1/002, 1/004, 1/006, 1/008, 1/04, 1/08, 1/085, 1/09, 1/10, 1/11, 1/1207, 1/1215, 1/1223, 1/123, 1/1238, 1/1246, 1/1261, 1/44, 1/46, 1/827
	F02K	3/00
	F02K	5/00
	F02K	7/00

No other subclasses/groups are impacted by this Notice of Changes.

This Notice of Changes includes the following [Check the ones included]:

1. CLASSIFICATION SCHEME CHANGES

- A. New, Modified or Deleted Group(s)
- B. New, Modified or Deleted Warning(s)
- C. New, Modified or Deleted Note(s)
- D. New, Modified or Deleted Guidance Heading(s)

2. DEFINITIONS

- A. New or Modified Definitions (Full definition template)
- B. Modified or Deleted Definitions (Definitions Quick Fix)

3. REVISION CONCORDANCE LIST (RCL)

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4. CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)
5. CHANGES TO THE CROSS-REFERENCE LIST (CRL)

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1. CLASSIFICATION SCHEME CHANGES

A. New, Modified or Deleted Group(s)

SUBCLASS F02K – JET-PROPULSION PLANTS

<u>Type*</u>	<u>Symbol</u>	<u>Indent Level Number of dots (e.g. 0, 1, 2)</u>	<u>Title</u> “CPC only” text should normally be enclosed in {curly brackets}**	<u>Transferred to#</u>
M	F02K	Subclass	JET-PROPULSION PLANTS (features of jet-propulsion plants common to gas-turbine plants, air intakes or fuel supply control of air-breathing jet-propulsion plants F02C 7/00, F02C 9/00)	
M	F02K1/002	1	{with means to modify the direction of thrust vector (F02K 1/54 takes precedence; thrust vectoring of rockets F02K 9/80)}	
M	F02K 1/06	1	Varying effective area of jet pipe or nozzle (by using fluid jets to influence the jet flow F02K 1/30)	
M	F02K1/1207	3	{of one series of flaps hinged at their upstream ends on a fixed structure (F02K 1/1215 – F02K 1/1292 take precedence)}	
M	F02K 1/54	1	Nozzles having means for reversing jet thrust (reversing jet thrust using fluid jets F02K 1/32)	
M	F02K1/827	3	{Sound absorbing structures or liners }	
M	F02K3/072	3	with counter-rotating { , e.g. fan } rotors	
M	F02K 3/08	1	with supplementary heating of the working fluid; Control thereof (control of fuel supply therefor F02C 9/26)	
M	F02K7/005	1	{the engine comprising a rotor rotating under the actions of jets issuing from this rotor}	
M	F02K 9/00	0	Rocket-engine plants, i.e. plants carrying both fuel and oxidant therefor; Control thereof	
M	F02K9/08	1	using solid propellants (F02K 9/72 takes precedence; using semi-solid or pulverulent propellants F02K 9/70)	
M	F02K 9/32	2	Constructional parts; Details not otherwise provided for	

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<u>Type*</u>	<u>Symbol</u>	<u>Indent Level Number of dots (e.g. 0, 1, 2)</u>	<u>Title</u> <u>“CPC only” text should normally be enclosed in {curly brackets}**</u>	<u>Transferred to#</u>
M	F02K9/425	2	{Propellants}	
M	F02K 9/46	3	using pumps	
M	F02K 9/52	3	Injectors	
M	F02K 9/54	3	Leakage detectors; Purging systems; Filtration systems	
M	F02K 9/58	4	Propellant feed valves	
M	F02K 9/60	2	Constructional parts; Details not otherwise provided for	
M	F02K 9/80	1	characterised by thrust or thrust vector control (burning control of solid propellants F02K 9/26; feeding control of liquid or gaseous propellants F02K 9/56; re-ignitable, restartable or intermittently operated rocket-engine plants F02K 9/94)	

*N = new entries where reclassification into entries is involved; C = entries with modified file scope where reclassification of documents from the entries is involved; Q = new entries which are firstly populated with documents via administrative transfers from deleted (D) entries. Afterwards, the transferred documents into the Q entry will either stay or be moved to more appropriate entries, as determined by intellectual reclassification; T = existing entries with enlarged file scope, which receive documents from C or D entries, e.g. when a limiting reference is removed from the entry title; M = entries with no change to the file scope (no reclassification); D = deleted entries; F = frozen entries will be deleted once reclassification of documents from the entries is completed; U = entries that are unchanged.

NOTES:

- **No {curly brackets} are used for titles in CPC only subclasses, e.g. C12Y, A23Y; 2000 series symbol titles of groups found at the end of schemes (orthogonal codes); or the Y section titles. The {curly brackets} are used for 2000 series symbol titles found interspersed throughout the main trunk schemes (breakdown codes).
- U groups: it is obligatory to display the required “anchor” symbol (U group), i.e. the entry immediately preceding a new group or an array of new groups to be created (in case new groups are not clearly subgroups of C-type groups). Always include the symbol, indent level and title of the U group in the table above.
- All entry types should be included in the scheme changes table above for better understanding of the overall scheme change picture. Symbol, indent level, and title are required for all types.
- “Transferred to” column must be completed for all C, D, F, and Q type entries. F groups will be deleted once reclassification is completed.
- When multiple symbols are included in the “Transferred to” column, avoid using ranges of symbols in order to be as precise as possible.
- For administrative transfer of documents, the following text should be used: “<administrative transfer to XX>”, “<administrative transfer to XX and YY simultaneously>”, or “<administrative transfer to XX, YY, ...and ZZ simultaneously>” when administrative transfer of the same documents is to more than one place.
- Administrative transfer to main trunk groups is assumed to be the source allocation type, unless otherwise indicated.
- Administrative transfer to 2000/Y series groups is assumed to be “additional information”.
- If needed, instructions for allocation type should be indicated within the angle brackets using the abbreviations “ADD” or “INV”: <administrative transfer to XX ADD>, <administrative transfer to XX INV>, or <administrative transfer to XX ADD, YY INV, ... and ZZ ADD simultaneously>.
- In certain situations, the “D” entries of 2000-series or Y-series groups may not require a destination (“Transferred to”) symbol, however it is required to specify “<no transfer>” in the “Transferred to” column for such cases.
- For finalisation projects, the deleted “F” symbols should have <no transfer> in the “Transferred to” column.
- For more details about the types of scheme change, see CPC Guide.

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B. New, Modified or Deleted Warning(s)

SUBCLASS F02K – JET-PROPULSION PLANTS

<u>Type*</u>	<u>Location</u>	<u>Old Warning</u>	<u>New/Modified Warning</u>
D	F02K	In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.	<u>Delete</u> the entire warning.

*N = new warning, M = modified warning, D = deleted warning

NOTE: The “Location” column only requires the symbol PRIOR to the location of the warning. No further directions such as “before” or “after” are required.

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C. New, Modified or Deleted Note(s)

SUBCLASS F02K – JET-PROPULSION PLANTS

<u>Type*</u>	<u>Location</u>	<u>Old Note</u>	<u>New/Modified Note</u>
M	F02K	<p>1. In this subclass, the following expression is used with the meaning indicated:</p> <ul style="list-style-type: none"> • "jet-propulsion plants" means plants using combustion to produce a fluid stream from which a propulsive thrust on the plant is obtained on the reaction principle. <p>2. Attention is drawn to the notes preceding class F01.</p>	<p><u>Insert</u> in existing Note 1 the <u>second</u> bullet shown below.</p> <p>1. In this subclass, the following expression is used with the meaning indicated:</p> <ul style="list-style-type: none"> • "jet-propulsion plants" means plants using combustion to produce a fluid stream from which a propulsive thrust on the plant is obtained on the reaction principle. • {"jet-pipe" means the exhaust duct of a jet engine that carries the exhaust to the nozzle.} <p>2. Attention is drawn to the notes preceding class F01.</p>

*N = new note, M = modified note, D = deleted note

NOTE: The "Location" column only requires the symbol PRIOR to the location of the note. No further directions such as "before" or "after" are required.

2. A. DEFINITIONS (new)

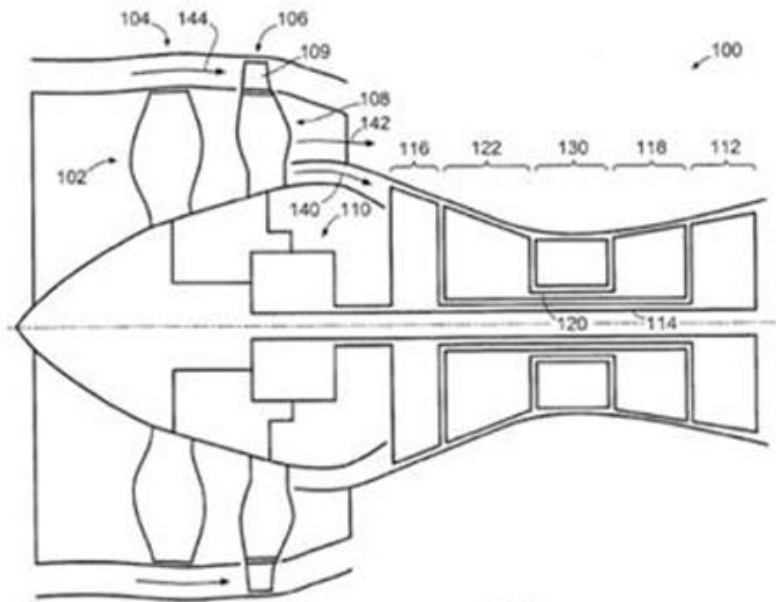
Insert: The following new Definitions.

F02K 3/072

Definition statement

This place covers:

Illustrative example of subject matter classified in this group.



References

Informative references

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

Turbomachines with counter-rotating rotors	F01D 1/24
Gas turbines having counter-rotating rotors	F02C 3/067
Axial flow pumps for elastic fluids with counter-rotating parts	F04D 19/024

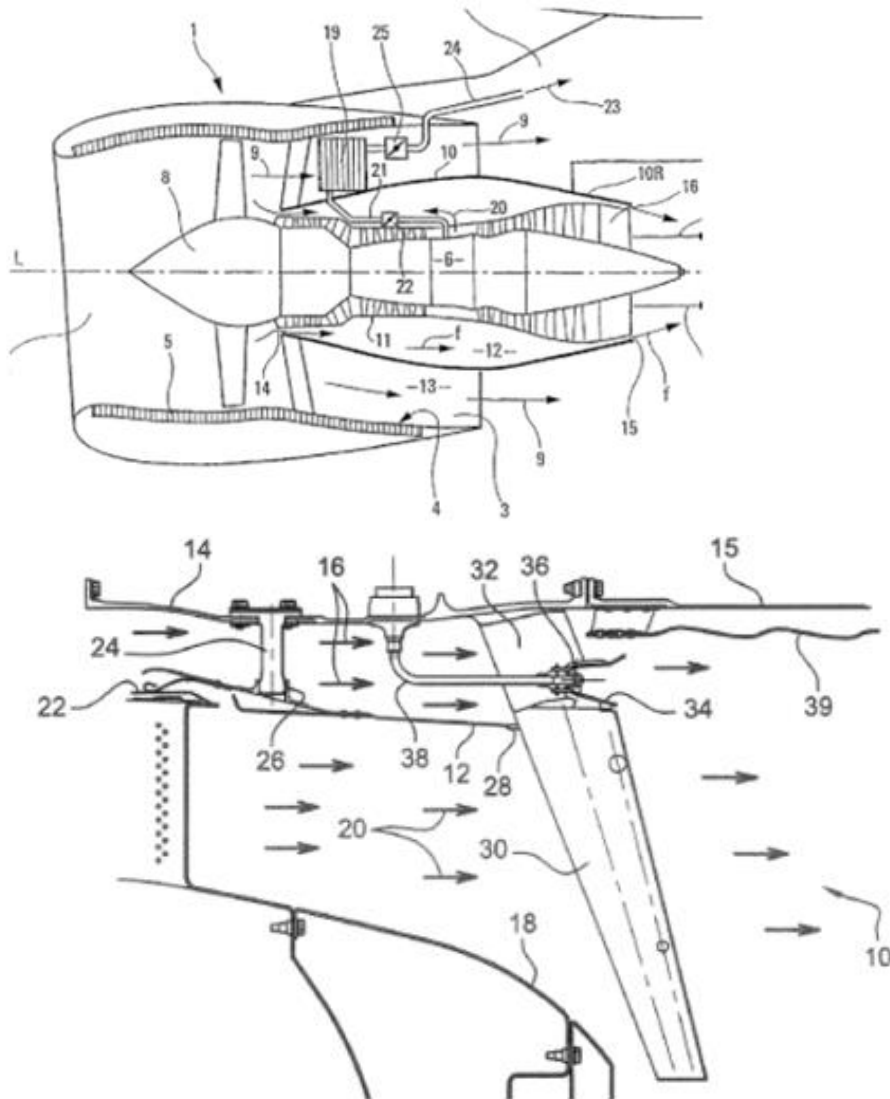
F02K 3/08

Definition statement

This place covers:

Heating of the working fluid, e.g. main working fluid or bypass flow, by heat exchangers or burners. These include after-burners.

Illustrative example of subject matter classified in this group.



References

Limiting references

This place does not cover:

Control of fuel supply therefor	F02C 9/26
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Informative references

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

After-burners, combustion chambers	F23R
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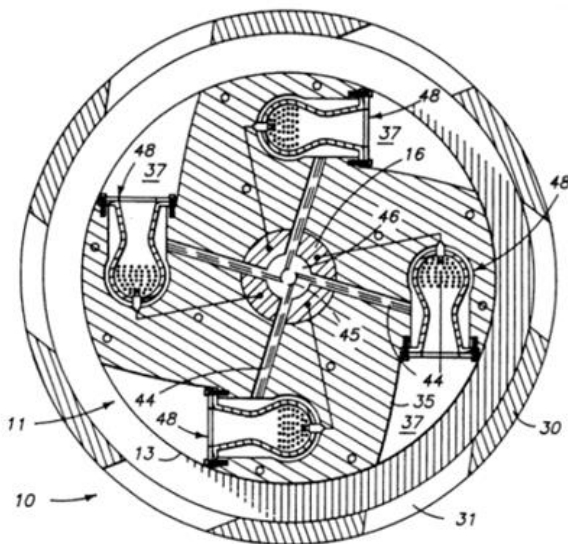
F02K 7/005

Definition statement

This place covers:

Rotating rotors rotating due to the reaction force of the jets issued from the rotor.

Illustrative example of subject matter classified in this group.



References

Informative references

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

With pressure velocity transformation exclusively in rotor, e.g. the rotor rotating under the influence of jets issuing from the rotor	F01D 1/32
Rotating combustion chamber with the working fluid being a combustion product	F02C 3/165

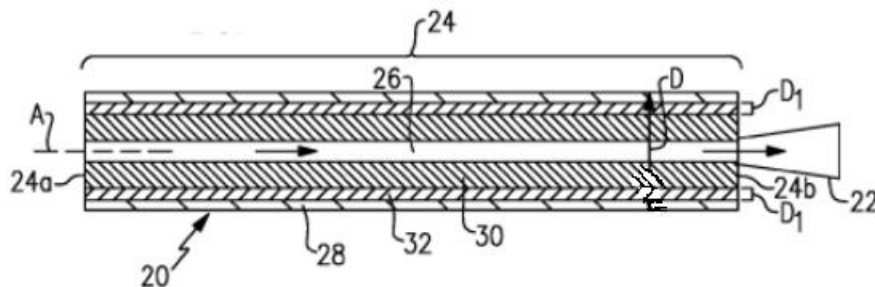
F02K 9/08

Definition statement

This place covers:

Solid propellant rocket plants.

Illustrative example of subject matter classified in this group.



References

Limiting references

This place does not cover:

Using semi-solid or pulverulent propellants	F02K 9/70
Using liquid and solid propellants, i.e. hybrid rocket-engine plants	F02K 9/72

Informative references

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

Explosives or thermic compositions; Manufacture thereof; Use of single substances as explosives	C06B
Means for generating smoke or mist; Gas-attack compositions; Generation of gas for blasting or propulsion (Chemical part)	C06D
Cartridges for producing gas under pressure	F42B 3/04

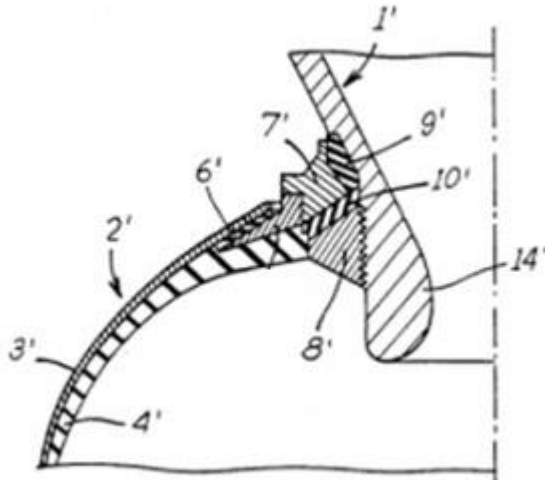
F02K 9/32

Definition statement

This place covers:

Solid propellant construction parts and details including: casings, liners, joints, seals, propellant supports, safety devices, and cooling arrangements.

Illustrative example of subject matter classified in this group.



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

Shape or structure of solid propellant charges	F02K 9/10
Starting or ignition means or arrangements	F02K 9/95
Rocket nozzles	F02K 9/97

F02K 9/425**Definition statement***This place covers:*

Specific types of liquid or gaseous propellants, e.g. hypergolic propellants, methane, hydrogen peroxide.

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

Explosives or thermic compositions; Manufacture thereof; Use of single substance as explosive	C06B
Means for generating smoke or mist; Gas-attack compositions; Generation of gas blasting or propulsion (Chemical part)	C06D

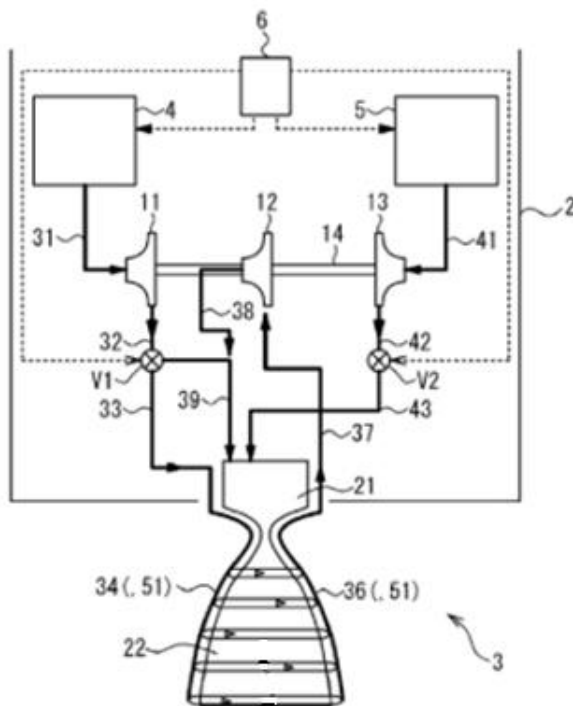
F02K 9/46

Definition statement

This place covers:

Feeding propellants by the use of pumps, e.g. turbo-pumps.

Illustrative example of subject matter classified in this group.



References

Informative references

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

Pumps per se	F04
Control of propellant feed pumps	F02K 9/563

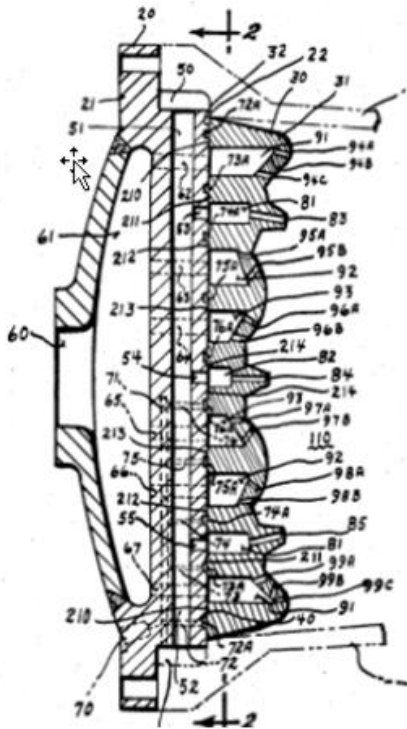
F02K 9/52

Definition statement

This place covers:

Injectors for liquid or gaseous propellants.

Illustrative example of subject matter classified in this group.



References

Informative references

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

Spraying or atomising in general	B05B
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F02K 9/54

References

Informative references

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

Filters per se	B01D
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F02K 9/58

Definition statement

This place covers:

Control of rocket propellant feed valves.

References

Informative references

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

Valves in general	F16K
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F02K 9/60

Definition statement

This place covers:

Constructional parts or details of liquid or gaseous propellant rockets such as reservoirs, combustion chambers, decomposition chambers.

References

Informative references

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

Starting or ignition means or arrangements	F02K 9/95
Rocket nozzles	F02K 9/97

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2. A. DEFINITIONS (modified)

F02K

Delete: The entire Definition statement.

References

Limiting references

Replace: The existing Limiting references table text with the following updated text.

Features of jet-propulsion plants common to gas-turbine plants, air intakes or fuel supply control of air-breathing jet-propulsion plants	F02C 7/00, F02C 9/00
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Insert: The following new Informative references section.

Informative references

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

Arrangement or mounting of jet-propulsion plants in land vehicles or vehicles in general	B60K
Arrangement or mounting of jet-propulsion plants in waterborne vessels	B63H
Controlling aircraft attitude, flight direction or altitude by jet reaction	B64C 15/00
Arrangement or mounting of jet-propulsion plants in aircraft	B64D
Plants characterised by the power of the working fluid being divided between jet propulsion and another form of propulsion, e.g. propeller	F02B 61/00, F02C 6/20

Insert: The following new Glossary of terms section.

Glossary of terms

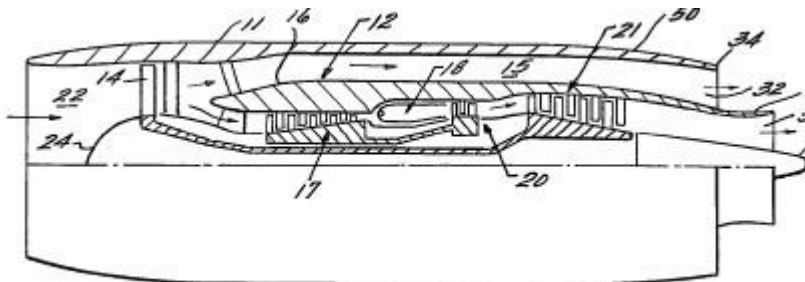
Jet-propulsion plants	means plants using combustion to produce a fluid stream from which a propulsive thrust on the plant is obtained on the reaction principle
Jet pipe	means the exhaust duct of a jet engine that carries the exhaust to the nozzle

F02K 1/00

Definition statement

Replace: The existing Definition statement text including the text under the image with the following updated text and image.

Illustrative example of subject matter classified in this group.



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References

Delete: The entire Informative references section.

Insert: The following new Limiting references section.

Limiting references

This place does not cover:

Rocket nozzles	F02K 9/97
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F02K 1/002

References

Insert: The following new Limiting references section.

Limiting references

This place does not cover:

Nozzles having means for reversing jet thrust	F02K 1/54
Thrust vectoring of rockets	F02K 9/80

Informative references

Delete: The following row from the Informative references table.

Thrust vectoring of rockets	F02K 9/80
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Delete: The entire Special rules of classification section.

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F02K 1/004

Definition statement

Delete: The following text from the Definition statement.

taken from DE1049711

F02K 1/006

Definition statement

Delete: The following text from the Definition statement.

taken from US3258206

F02K 1/008

Definition statement

Delete: The following text from the Definition statement.

taken from FR1025827

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F02K 1/04

Definition statement

Delete: The following text from the Definition statement.

taken from GB812513

F02K 1/08

Definition statement

Delete: The following text from the Definition statement.

taken from US4244294

F02K 1/085

Definition statement

Delete: The following text from the Definition statement.

taken from US2641104

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F02K 1/09

Definition statement

Delete: The following text from the Definition statement.

taken from US3138921

Delete: The entire Special rules of classification section.

Insert: The following new Limiting references section.

Limiting references

This place does not cover:

Varying effective area of jet pip or nozzle by means of pivoted flaps	F02K 1/12
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F02K 1/10

Definition statement

Delete: The following text from the Definition statement.

taken from US2593420

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F02K 1/11

Definition statement

Delete: The following text from the Definition statement.

taken from US2637972

F02K 1/1207

Definition statement

Delete: The following text from the Definition statement.

taken from GB750307

Delete: The entire Special rules of classification section.

Insert: The following new Limiting references section.

Limiting references

This place does not cover:

Two or more series of flaps; One moveable series of flaps hinged to upstream axially moveable structure	F02K 1/1215 - F02K 1/1292
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F02K 1/1215

Definition statement

Delete: The following text from the Definition statement.

taken from GB871274

F02K 1/1223

Definition statement

Delete: The following text from the Definition statement.

taken from US6352211

F02K 1/123

Definition statement

Delete: The following text from the Definition statement.

taken from FR1602540

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F02K 1/1238

Definition statement

Delete: The following text from the Definition statement.

taken from US2870600

F02K 1/1246

Definition statement

Delete: The following text from the Definition statement.

taken from US2974481

F02K 1/1261

Definition statement

Delete: The following text from the Definition statement.

taken from US5273213

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F02K 1/44

Delete: The entire Special rules of classification section.

Insert: The following new Limiting references section.

Limiting references

Nozzles having means for dividing the jet into a plurality of partial jets or having an elongated cross-section outlet	F02K 1/40
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F02K 1/46

Delete: The entire Special rules of classification section.

Insert: The following new Limiting references section.

Limiting references

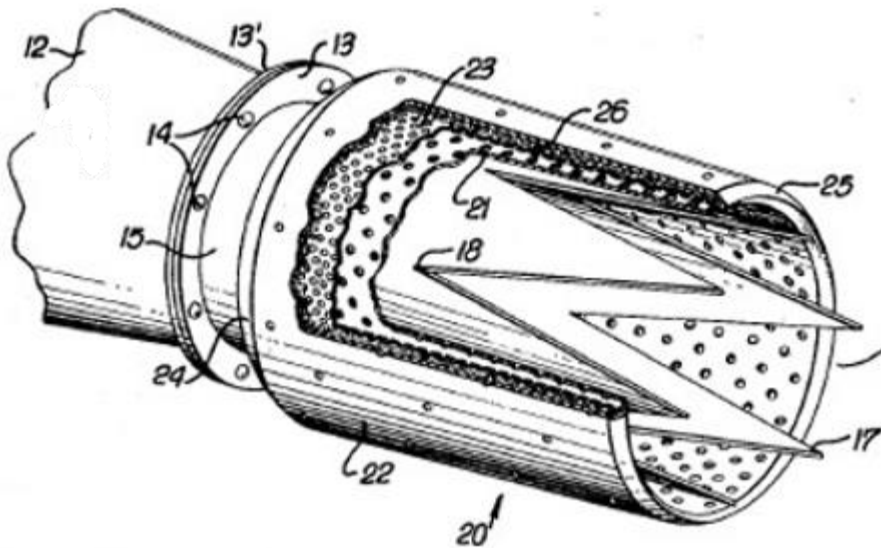
Using fluid jets to influence the jet flow	F02K 1/28
Having an ejector	F02K 1/36
Introducing air inside the jet	F02K 1/38

F02K 1/827

Definition statement

Replace: The existing Definition statement text and image with the following updated text and image.

Illustrative example of subject matter classified in this group.



References

Informative references

Replace: The existing Informative references table text with the following updated text.

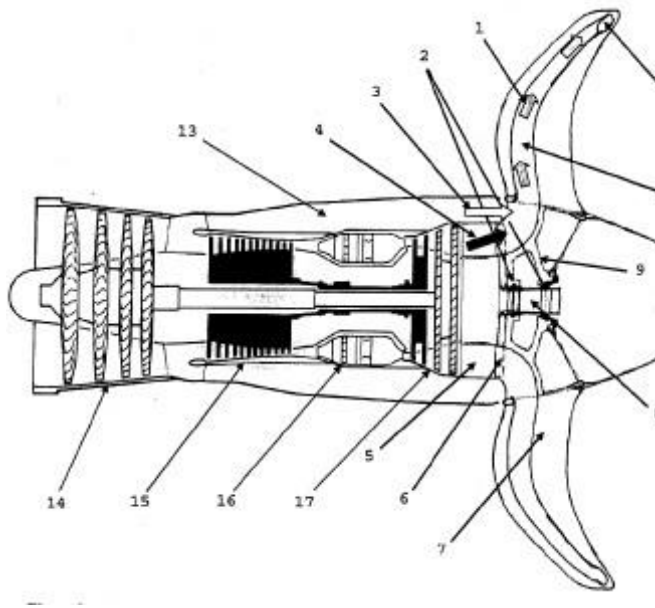
Noise suppression in air intakes	F02C 7/045
Noise attenuators in general	G10K 11/00

F02K 3/00

Definition statement

Insert: The following new text in the Definition statement above the existing image, as shown below.

Illustrative example of subject matter classified in this group.



Delete: The following text from the Definition statement.

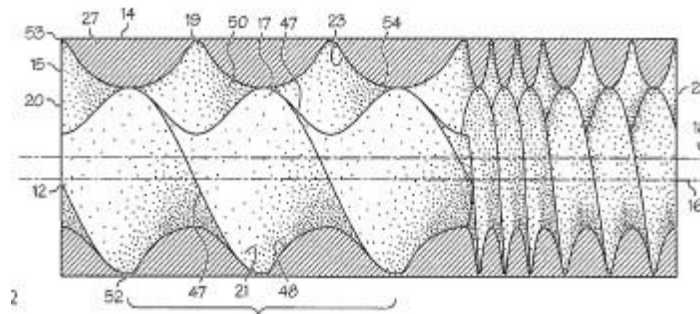
taken from DE102009036011

F02K 5/00

Definition statement

Insert: The following new text in the Definition statement above the existing image, as shown below.

Illustrative example of subject matter classified in this group.



Delete: The following text from the Definition statement.

taken from EP1798371

F02K 7/00

Delete: The entire Definition statement.

References

Insert: The following new Limiting references section.

Limiting references

This place does not cover:

Rocket- engine plants, i.e. plants carrying both fuel and oxidant therefor; Control thereof	F02K 9/00
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