E05F

DEVICES FOR MOVING WINGS INTO OPEN OR CLOSED POSITION; CHECKS FOR WINGS; WING FITTINGS NOT OTHERWISE PROVIDED FOR, CONCERNED WITH THE FUNCTIONING OF THE WING

Definition statement

This place covers:

Devices for moving wings, such as doors or windows, into open or closed position; checks for wings, such as doors or windows; wing fittings not otherwise provided for, concerned with the functioning of the wing.

Gravity-, spring-, or power-operated devices to provide a force input for opening or closing wings, such as door openers and door closers, self-closing hinges and hinges with wing-counterbalancing function.

Also covered are operating mechanisms for wings constructed to convert the force input from a user, motor, opener or closer into movement of a wing, such as cable-, cord-, chain-, or belt-drives, lifting arms, rack and pinion drives or screw and nut arrangements.

The subclass furthermore covers braking devices, stops and buffers for wings as well as controlling means, such as remote wireless controls means, and safety devices such as obstruction detection devices.

Relationships with other classification places

Hinges and other suspension devices for wings in E05D

Locks for doors and windows in E05B and E05C

Construction of doors, windows, gates and frames in buildings in E06B

Construction of doors, windows, and other moveable wings in vehicles in B60J

References

Limiting references

This place does not cover:

Counterbalancing means for sliding or lifting wings E05D 13/10

Informative references

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

| Operating or controlling devices for fire-barriers | A62C 2/24 |
| Operating mechanisms for safeguarding bank teller windows | E05G 5/00 |
| Operating mechanisms for interconnected lamellae | E06B 7/086 |
| Operating mechanisms for blinds or roll-type closures | E06B 9/00 |
| Springs per se | F16F |
| Electric motors per se | H02K, H02P |

Special rules of classification

Closers, openers, braking devices, stops and buffers for wings: E05F 1/00, E05F 3/00 and E05F 5/00.
Accessories for wings: E05F 7/00.

Operating mechanisms for wings: E05F 9/00, E05F 11/00, E05F 13/00, E05F 15/00 and E05F 17/00.

Controlling means, such as remote wireless controls means, and safety devices such as obstruction detection devices: E05F 15/00.

A number of main groups in this sub-class contain a large number of older documents that were classified administratively. These documents have not yet been reclassified to the sub-groups and are indexed with E05Y 2800/00. This index should not be used for classification.

E05F 2700/00 is an old indexing scheme. It can be used for search but should not be used for classification.

Under E05Y 2900/00 and lower an indexing scheme exists for information on the application or use of the devices. The indexing scheme is shared with the sub-class E05D. It is mandatory to allocate the appropriate indexing code of E05Y 2900/00, if the application or use is not implicit from the classification titles.

**Glossary of terms**

*In this place, the following terms or expressions are used with the meaning indicated:*

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Braking device</td>
<td>Devices constructed to slow down the movement of wings</td>
</tr>
<tr>
<td>Closer</td>
<td>Gravity-, spring-, or power-operated device constructed to provide a closing force to wings over a substantial part of their movement; includes devices for assisting users in wing-movement or for wing-counterbalancing; a closer can take the shape of a self-closing hinge</td>
</tr>
<tr>
<td>Opener</td>
<td>Gravity-, spring-, or power-operated device constructed to provide an opening force to wings over a substantial part of their movement; includes devices for assisting users in wing-movement or for wing-counterbalancing</td>
</tr>
<tr>
<td>Operating mechanism for wings</td>
<td>Mechanism constructed to convert force inputs from a user, motor, opener or closer into movement of wings</td>
</tr>
<tr>
<td>Self-closing hinge</td>
<td>Gravity- or spring-operated hinge constructed to provide a closing force to wings over a substantial part of their movement; includes devices for wing-counterbalancing</td>
</tr>
<tr>
<td>Wing</td>
<td>Pivotable, slideable, or otherwise moveable part of doors, windows, flaps, covers etc. in building construction and outfitting, fences, domestic appliances, vehicles and furniture; the term also includes other movable structures such as drawers, lids of chests, car boots, or car bonnets</td>
</tr>
</tbody>
</table>

**E05F 1/00**

**Closers or openers for wings, not otherwise provided for in this subclass**

**Definition statement**

*This place covers:*

Gravity-, or spring-operated closers or openers for wings including those in the shape of hinges, i.e. self-closing hinges.
Relationships with other classification places
Power-operated door closers or openers in E05F 15/00.

E05F 1/002
{controlled by automatically acting means (for powered-operated mechanisms E05F 15/70)}

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

Automatically acting control means for powered-operated mechanisms E05F 15/70

E05F 1/004
{by thermostats, rain, wind or noise (E05F 1/006 takes precedence)}

References
Limiting references
This place does not cover:

Automatically acting control means triggered by emergency conditions such as fire E05F 1/006

E05F 1/006
{by emergency conditions, e.g. fire (operating or controlling mechanisms for physical fire-barriers A62C 2/24)}

References
Limiting references
This place does not cover:

Operating or controlling mechanisms for physical fire-barriers A62C 2/24

E05F 1/043
{with cams, helical tracks (E05F 1/061 takes precedence)}

References
Limiting references
This place does not cover:

Gravity-actuated self-closing hinges with cams and helical tracks E05F 1/061
**Glossary of terms**

*In this place, the following terms or expressions are used with the meaning indicated:*

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-closing hinge</td>
<td>Gravity-operated hinge constructed to provide a closing force to wings over a substantial part of their movement; includes devices for wing-counterbalancing</td>
</tr>
</tbody>
</table>

**E05F 1/063**

{with complementary, substantially identical and slidely cooperating cam surfaces (*E05F 1/066* takes precedence)}

**References**

*Limiting references*

This place does not cover:

<table>
<thead>
<tr>
<th>Hinges</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gravity-actuated self-closing hinges with helical grooves, slots, threads or the like</td>
<td><em>E05F 1/066</em></td>
</tr>
</tbody>
</table>

**Glossary of terms**

*In this place, the following terms or expressions are used with the meaning indicated:*

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-closing hinge</td>
<td>Gravity-operated hinge constructed to provide a closing force to wings over a substantial part of their movement; includes devices for wing-counterbalancing</td>
</tr>
</tbody>
</table>

**E05F 1/08**

spring-actuated{, e.g. for horizontally sliding wings (*E05D*; springs per se *F16F*, e.g. gas-springs *F16F 9/00*)}

**Relationships with other classification places**

Springs per se in *F16F*.

**References**

*Limiting references*

This place does not cover:

<table>
<thead>
<tr>
<th>Hinges</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring-actuated counterbalancing of sliding or lifting wings</td>
<td><em>E05D 13/12</em></td>
</tr>
</tbody>
</table>
E05F 1/10
for swinging wings{, e.g. counterbalance (spring-assisted actuation of lids or covers of refuse receptacles B65F 1/1623)}

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

| Spring-assisted actuation of lids or covers of refuse receptacles | B65F 1/1623 |

E05F 1/1008
{with a coil spring parallel with the pivot axis (E05F 1/1207 takes precedence)}

References
Limiting references
This place does not cover:

| Spring-actuated self-closing hinges with a coil spring parallel with the pivot axis | E05F 1/1207 |

Glossary of terms
In this place, the following terms or expressions are used with the meaning indicated:

| Self-closing hinge | Spring-operated hinge constructed to provide a closing force to wings over a substantial part of their movement; includes devices for wing-counterbalancing |

E05F 1/1033
{with a torsion bar (E05F 1/123 takes precedence)}

References
Limiting references
This place does not cover:

| Spring-actuated self-closing hinges with a torsion bar | E05F 1/123 |

Glossary of terms
In this place, the following terms or expressions are used with the meaning indicated:

| Self-closing hinge | Spring-operated hinge constructed to provide a closing force to wings over a substantial part of their movement; includes devices for wing-counterbalancing |
E05F 1/1041
{with a coil spring perpendicular to the pivot axis (E05F 1/1246 takes precedence)}

References
Limiting references
This place does not cover:

| Spring-actuated self-closing hinges with a coil spring perpendicular to the pivot axis | E05F 1/1246 |

Glossary of terms
In this place, the following terms or expressions are used with the meaning indicated:

| Self-closing hinge | Spring-operated hinge constructed to provide a closing force to wings over a substantial part of their movement; includes devices for wing-counterbalancing |

E05F 1/1083
{with a leaf or similar spring (E05F 1/1284 takes precedence)}

References
Limiting references
This place does not cover:

| Spring-actuated self-closing hinges with a leaf or similar spring | E05F 1/1284 |

Glossary of terms
In this place, the following terms or expressions are used with the meaning indicated:

| Self-closing hinge | Spring-operated hinge constructed to provide a closing force to wings over a substantial part of their movement; includes devices for wing-counterbalancing |

E05F 1/1091
{with a gas spring (E05F 1/1292 takes precedence)}

References
Limiting references
This place does not cover:

| Spring-actuated self-closing hinges with a gas spring | E05F 1/1292 |
Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-closing hinge</td>
<td>Spring-operated hinge constructed to provide a closing force to wings over a substantial part of their movement; includes devices for wing-counterbalancing</td>
</tr>
</tbody>
</table>

E05F 1/12

Mechanisms in the shape of hinges or pivots, operated by springs {(for hinges with two or more pins E05D 3/06)}

References

Informative references

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

<table>
<thead>
<tr>
<th>Term</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hinges with springs applying a holding force, e.g. a hold-closed force to hold the hinge and respective wing in an immobile closed position</td>
<td>E05D 11/1014</td>
</tr>
</tbody>
</table>

Special rules of classification

If the hinges comprises two or more pins, E05D 3/06 applies in addition to E05F 1/12.

Furthermore, it is noted that the group E05F 1/12 contains a number of older documents that were classified administratively. These documents have not yet been reclassified to the sub-groups of E05F 1/12 and are indexed with E05Y 2800/00. The presence of these documents should not be construed as an indicator to classify similar documents in E05F 1/12. Rather, the sub-groups always take precedence.

E05F 3/00

Closers or openers with braking devices, e.g. checks; Construction of pneumatic or liquid braking devices (construction of non-pneumatic or non-liquid braking devices E05F 5/00; friction devices in hinges E05D 11/08)

Definition statement

This place covers:

Closers and openers, including self-closing hinges, with integrated braking devices such as rotary or piston fluid brakes, friction brakes or counteracting springs.

Also covered are the construction of braking devices for such closers and openers.

Relationships with other classification places

Construction of braking devices for wings in E05F 5/00 and lower.

Stops and buffers for wings in E05F 5/00 and lower.
References

Limiting references

This place does not cover:

<table>
<thead>
<tr>
<th>Description</th>
<th>CPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friction devices in hinges to hold relatively-moveable hinge parts and</td>
<td>E05D 11/08</td>
</tr>
<tr>
<td>consequently wings in a user-chosen position</td>
<td></td>
</tr>
</tbody>
</table>

E05F 3/02

with pneumatic piston brakes (rotary type E05F 3/14)

References

Informative references

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

<table>
<thead>
<tr>
<th>Description</th>
<th>CPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pneumatic piston brakes of rotary type</td>
<td>E05F 3/14</td>
</tr>
</tbody>
</table>

E05F 3/04

with liquid piston brakes (rotary type E05F 3/14)

References

Informative references

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

<table>
<thead>
<tr>
<th>Description</th>
<th>CPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid piston brakes of rotary type</td>
<td>E05F 3/14</td>
</tr>
</tbody>
</table>

E05F 3/12

Special devices controlling the circulation of the liquid, e.g. valve arrangement

(\{E05F 3/223 takes precedence\}; valves per se F16K)

Relationships with other classification places

Valves per se in F16K

References

Limiting references

This place does not cover:

<table>
<thead>
<tr>
<th>Description</th>
<th>CPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydraulic power-locks in closers</td>
<td>E05F 3/223</td>
</tr>
</tbody>
</table>


**E05F 3/16**

with friction brakes

**References**

**Limiting references**

*This place does not cover:*

| Friction devices in hinges to hold relatively-moveable hinge parts and consequently wings in a user-chosen position | E05D 11/08 |

**Glossary of terms**

*In this place, the following terms or expressions are used with the meaning indicated:*

| Brake | device constructed to slow down the movement of a wing |

**E05F 3/18**

with counteracting springs (double-acting springs E05F 1/14)

**References**

**Informative references**

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

| Double-acting springs, e.g. for closing and opening or checking and closing | E05F 1/14 |

**E05F 5/00**

Braking devices, e.g. checks; Stops; Buffers (construction of pneumatic or liquid braking devices E05F 3/00; braking devices, buffers or end stops on drawers for tables, cabinets or like furniture A47B 88/473; combined with devices for holding wings open E05C 17/00; devices for limiting opening of wings or for holding wings open by a movable member extending between frame and wing E05C 17/04)

**Definition statement**

*This place covers:*

Construction of braking devices, stops and buffers for wings.

**References**

**Limiting references**

*This place does not cover:*

| Construction of pneumatic or liquid braking devices | E05F 3/00 |
| Braking devices, buffers or end stops on drawers for tables, cabinets or like furniture | A47B 88/473 |
| Braking devices combined with devices for holding the wing | E05C 17/00 |
E05F 7/00

Miscellaneous accessories for wings (specially adapted for furniture A47B 95/00; door-lifters B66F, E04F 21/00; knobs or handles E05B)

Definition statement

This place covers:

Accessories or devices providing additional control to the wing, e.g. devices for alignment of the wing, rattling control, or devices to take the wing’s weight arranged away from a hinge axis.

Relationships with other classification places

Accessories for sliding or lifting wings in E05D 13/00

Accessories for hinges in E05D 11/00

Door lifters in B66F

Knobs and handles in E05B

References

Limiting references

This place does not cover:

Counterbalance devices for sliding or lifting wings E05D 13/10

Informative references

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

Accessories for wings, adapted for furniture A47B 95/00

Door lifters B66F, E04F 21/00

Knobs or handles E05B

E05F 7/02

for raising wings before being turned {(before sliding E05D 15/565)}

References

Informative references

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

Accessories for raising wings before sliding E05D 15/565
E05F 7/04
Arrangements affording protection against rattling (with buffering action E05F 5/00)

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

| Arrangements with buffering action | E05F 5/00 |

E05F 7/08
Special means for transmitting movements between vertical and horizontal sliding bars, rods, or cables {(E05D 15/5208 takes precedence)}

References
Limiting references
This place does not cover:

| Means for transmitting movements between vertical and horizontal sliding bars, rods, or cables, for the fastening of wings | E05C 9/24 |
| Means for transmitting movements between vertical and horizontal sliding bars, rods, or cables in wings opening about a vertical as well as a horizontal axis | E05D 15/5208 |

E05F 9/00
Means for operating wings by hand rods not guided in or on the frame, including those which also operate the fastening (bolts or fastening devices for wings E05C)

Definition statement
This place covers:
Hand-held rods constructed to operate wing bolts or fastenings and to operate by hand the wings per se.

Relationships with other classification places
Bolts or fastening devices for wings in E05C
Gravity-, or spring-operated closers or openers for wings in E05F 1/00
Power-operated door closers or openers in E05F 15/00
E05F 11/00

Man-operated mechanisms for operating wings, including those which also operate the fastening (connecting mechanisms for a plurality of wings E05F 17/00)

Definition statement

This place covers:

Operating mechanisms in wings, casings or frames constructed to convert the manual force input from a user into movement of a wing, such as belt-, cable-, cord-, or chain-drives, lifting arms, rack and pinion drives or screw and nut arrangements.

Relationships with other classification places

Operating mechanisms for wings constructed to convert the force input from a motor into movement of a wing in E05F 15/603

Operating mechanisms for wings constructed to convert the force input from the weight of a person or vehicle into movement of a wing in E05F 13/00

References

Informative references

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

| Connecting mechanisms for a plurality of wings | E05F 17/00 |

Special rules of classification

It is noted that the main group E05F 11/00 contains a large number of older documents that were classified administratively. These documents have not yet been reclassified to the sub-groups of E05F 11/00 and are indexed with E05Y 2800/00. The presence of these documents should not be construed as an indicator to classify similar documents in E05F 11/00. Rather, the sub-groups always take precedence.

E05F 11/02

for wings in general, e.g. fanlights (E05F 11/36 takes precedence; for windows to be lowered vertically E05F 11/38; for doors E05F 11/54)

References

Limiting references

This place does not cover:

| Mechanisms specially designed for passing through a wall | E05F 11/36 |

Informative references

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

| Mechanisms for sliding windows, e.g. vehicle windows, to be opened or closed by vertical movement | E05F 11/38 |
| Mechanisms for doors | E05F 11/54 |
**E05F 11/32**

with rotary bars guided in the frame (**E05F 11/34** takes precedence)

**References**

*Limiting references*

This place does not cover:

| Screw and nut mechanisms | E05F 11/34 |

**E05F 11/38**

for sliding windows, e.g. vehicle windows, to be opened or closed by vertical movement

**Special rules of classification**

**E05F 15/689** applies in addition to **E05F 11/38** if the operating/transmission mechanism of the vertically sliding window is powered by an electric motor.

**E05F 11/382**

{for vehicle windows (**E05F 11/40** - **E05F 11/52** take precedence)}

**Special rules of classification**

**E05F 11/40** - **E05F 11/52** take precedence.

**E05F 13/00**

Mechanisms operated by the movement or weight of a person or vehicle (through power-operated wing-operating mechanisms **E05F 15/00**)

**Definition statement**

This place covers:

Operating mechanisms for wings constructed to convert the force input from the weight of a person or vehicle into movement of a wing.

**Relationships with other classification places**

Operating mechanisms constructed to convert the manual force input from a user into movement of a wing in **E05F 11/00**

Operating mechanisms for wings constructed to convert the force input from a motor into movement of a wing in **E05F 15/603**
E05F 15/00

Power-operated mechanisms for wings (motor-operated accessories in locks for completing closing or initiating opening of a wing E05B 17/00)

Definition statement

This place covers:
Operating mechanisms for wings constructed to convert the force input from a motor into movement of a wing.
The group furthermore covers safety devices for power-operated wings, such as obstruction detection means, and controlling means, such as remote wireless controls means.

References

Informative references

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

| Operating mechanisms for hatch covers in ships | B63B 19/14 |
| Power-operated mechanisms for elevator doors | B66B 13/00 |
| Power-operated mechanisms for completing closing or initiating opening of a wing | E05B 17/0029 |
| Limit switches | H01H 3/16 |

Synonyms and Keywords

In patent documents, the following words/expressions are often used with the meaning indicated:

"power-operated" " motor-operated ".

E05F 15/40

Safety devices, e.g. detection of obstructions or end positions

References

Informative references

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

| Automatically-acting means, e.g. by photoelectric cells, by electric waves, by thermostats, by rain, by fire | E05F 15/70 |
| Anti-dropping devices | E05D 13/003 |
| Detection of obstructions by current overload | H02H 7/0851 |
**E05F 15/41**

Detection by monitoring transmitted force or torque (**E05F 15/48** takes precedence); Safety couplings with activation dependent upon torque or force, e.g. slip couplings

**References**

*Limiting references*

This place does not cover:

<table>
<thead>
<tr>
<th>Description</th>
<th>CPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection by means of monitoring transmitted force or torque by transmission of mechanical forces, e.g. using rigid, movable members</td>
<td>E05F 15/48</td>
</tr>
<tr>
<td>Detection by means of monitoring transmitted force or torque in pressure medium-operated mechanisms for wings</td>
<td>E05F 15/49</td>
</tr>
</tbody>
</table>

**E05F 15/49**

specially adapted for mechanisms operated by fluid pressure, e.g. detection by monitoring transmitted fluid pressure (**E05F 15/47** takes precedence)

**References**

*Limiting references*

This place does not cover:

<table>
<thead>
<tr>
<th>Description</th>
<th>CPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety edges for power-operated mechanisms for wings using detection by means of monitoring fluid pressure</td>
<td>E05F 15/47</td>
</tr>
</tbody>
</table>

**E05F 15/603**

using rotary electromotors

**References**

*Informative references*

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

<table>
<thead>
<tr>
<th>Description</th>
<th>CPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection of end position by striking, safety couplings</td>
<td>E05F 15/41</td>
</tr>
</tbody>
</table>

**E05F 15/635**

operated by push-pull mechanisms, e.g. flexible or rigid rack-and-pinion arrangements (**E05F 15/652** takes precedence)

**References**

*Limiting references*

This place does not cover:

<table>
<thead>
<tr>
<th>Description</th>
<th>CPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horizontally-sliding wings operated by swinging arms</td>
<td>E05F 15/649</td>
</tr>
<tr>
<td>Horizontally-sliding wings operated by screw mechanisms</td>
<td>E05F 15/652</td>
</tr>
</tbody>
</table>
Horizontally-sliding wings for railway-cars | E05F 15/655, E05Y 2900/51

**E05F 15/643**

operated by flexible elongated pulling elements, e.g. belts, chains or cables (by flexible elongated push-pull mechanisms **E05F 15/635**)

**References**

*Limiting references*

*This place does not cover:*

| Horizontally-sliding wings for railway-cars | E05F 15/655, E05Y 2900/51 |

**E05F 15/649**

operated by swinging arms

**References**

*Limiting references*

*This place does not cover:*

| Horizontally-sliding wings for railway-cars | E05F 15/655, E05Y 2900/51 |

**E05F 15/652**

operated by screw-and-nut mechanisms

**References**

*Limiting references*

*This place does not cover:*

| Horizontally-sliding wings for railway-cars | E05F 15/655, E05Y 2900/51 |

**E05F 15/681**

operated by flexible elongated pulling elements, e.g. belts

**References**

*Limiting references*

*This place does not cover:*

| Flexible rack-and-pinion arrangements | E05F 15/67 |
**E05F 15/71**

responsive to temperature changes, rain, wind or noise

References

*Limiting references*

*This place does not cover:*

- responsive to emergency conditions, e.g. fire

**E05F 15/72**

responsive to emergency conditions, e.g. fire

References

*Informative references*

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

- Operating or controlling mechanisms for physical fire-barriers
  - A62C 2/24
- Locks actuating in response to heat
  - E05B 65/104

**E05F 15/76**

responsive to devices carried by persons or objects, e.g. magnets or reflectors *(E05F 15/77 takes precedence)*

References

*Limiting references*

*This place does not cover:*

- Remote wireless control devices
  - E05F 15/77

**E05F 17/00**

Special devices for shifting a plurality of wings operated simultaneously (for simultaneously moving a plurality of interconnected ventilating lamellae [E06B 7/086])

Definition statement

*This place covers:*

Operating mechanisms for wings constructed to convert the force input from a user, motor, opener or closer into simultaneous movement of several wings.

References

*Informative references*

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

- Simultaneously moving a plurality of interconnected ventilating lamellae
  - E06B 7/086