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Seat unit with a folding privacy shield

Abstract

The present invention relates to an aircraft seat unit having: a seat that can be moved between a seated position and a reclining position, a privacy shield extending at least partly around the seat, the privacy shield with a fixed portion and a movable portion that can be moved relative to the fixed portion, the movable portion being movable between: a retracted position in which the movable portion delimits, with the fixed portion, a partially enclosed space around the seat to give the passenger privacy and a deployed position in which the movable portion is at a distance from the seat so as to free up space for accessing the seat.

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References Cited

U.S. PATENT DOCUMENTS

Patent No.	Issued Date	Patentee Name	U.S. Cl.	CPC
7721990	12/2009	Jaeger	244/118.6	B64D 11/0606
8979189	12/2014	Henshaw	297/135	B64D 11/0604
10246192	12/2018	Prasad	N/A	B60N 2/20
11299274	12/2021	Davis	N/A	B64D 11/0644
2006/0097553	12/2005	Spurlock	244/118.6	B64D 11/06
2020/0369387	12/2019	Yaghoubi	N/A	B64D 11/0604

FOREIGN PATENT DOCUMENTS

Patent No.	Application Date	Country	CPC
3546357	12/2018	EP	B64D 11/0601
2015155687	12/2014	WO	N/A
2018093825	12/2017	WO	N/A

OTHER PUBLICATIONS

International Patent Application No. PCT/EP2021/084743, International Search Report and Written Opinion, dated Mar. 14, 2022. cited by applicant

International Patent Application No. PCT/EP2021/084743, English Translation of the Written Opinion of the International Searching Authority, dated Jun. 10, 2023. cited by applicant

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Background/Summary

CROSS REFERENCE TO RELATED APPLICATIONS

(1) This application is a the United States national phase application of International Patent Application PCT/EP2021/084743 (“the '743 application”), filed on Dec. 8, 2021 and titled “SEAT UNIT WITH A FOLDING PRIVACY SHIELD,” which application is related to and claims priority benefits of France Patent Application No. 2101591, filed on Feb. 18, 2021 (“the '591 application”) and Europe patent application No. 20213063.9 (“the '639 application”), filed on Dec. 10, 2020. The ′743, ′591, and '639 applications are hereby incorporated in their entireties by this reference.

FIELD OF THE INVENTION

(2) The present invention relates to a seat unit provided with a folding privacy shield. The invention finds a particularly advantageous application with seating units of “business class” and “first class” type.

BACKGROUND

(3) In a manner known per se, such seat units each comprise a seat associated with a side console provided with storage compartments and a shield extending at least partly around the seat so as to delimit a semi-enclosed space around the passenger. Such a configuration makes it possible to guarantee the privacy of the passenger on the seat.

(4) The seat offers the passenger different positions of comfort, from a “seated” position to a “lying” position, in which the seat defines a substantially horizontal sleeping surface so that the passenger can lie down. Intermediate comfort positions are also offered, such as the “relax” position in which the seat back is strongly reclined. Generally, these intermediate positions are obtained by the inclination of the pivoting seat back around a horizontal axis perpendicular to an axis of extension of the seat.

(5) Conventionally, an aircraft cabin has groups of several columns of seat units one behind the other. Inside a column of seat units, the distance between two successive seat units (known as “pitch”) is relatively small, in particular when the seats are arranged at an angle with respect to an axis of the aircraft cabin in order to optimize filling. Such a configuration therefore makes access to the seat difficult for people with reduced mobility that need to be transferred from their wheelchair to their seat by the flight crew.

BRIEF SUMMARY OF THE INVENTION

(6) The invention aims to effectively remedy this drawback by proposing an aircraft seat unit comprising: a movable seat between a seated position and a lying position; and a privacy shield extending at least partly around the seat; the privacy shield comprising a fixed part and a movable part relative to the fixed part; the mobile part being mobile between: a retracted position in which the movable part delimits with the fixed part a semi-enclosed space around the seat to provide privacy to the passenger; and a deployed position in which the movable part is remote from the seat so as to clear an access space to said seat.

(7) The invention thus makes it possible, thanks to the folding privacy shield via its movable part, to increase the dimension of access to the seat for configurations with a short pitch so as to facilitate the installation of a person with reduced mobility. The invention also makes it possible to

facilitate access to the equipment of the seat, in particular access to the actuators or to the power boxes, in the event of maintenance operations.
(8) According to one embodiment of the invention, the movable part is remote from the seat when it is in its deployed position, so that the seat in the lying position can extend beyond a vertical projection onto the floor of the semi-enclosed space delimited by the privacy shield when said privacy shield is in the retracted position.
(9) According to one embodiment of the invention, the mobile part of the privacy shield comprises: a primary openable panel; a secondary openable panel; a first pivot connection being arranged between the primary flap and the secondary flap so as to allow rotation of the secondary flap relative to the primary flap about a first axis of rotation; a second pivot connection being arranged between the primary flap and the fixed part of the privacy shield so as to allow rotation of the primary flap relative to the fixed part about a second axis of rotation.
(10) According to one embodiment of the invention, a pivot connection is formed by at least one hinge, in particular three hinges.
(11) According to one embodiment of the invention, the hinge or hinges are of the invisible type.
(12) According to one embodiment of the invention, said seat unit comprises a rod having a first end rotatably mounted with respect to the primary flap and a second end rotatably mounted with respect to a slider able to slide along a slide arranged on a lower portion of the fixed part of the privacy shield.
(13) According to one embodiment of the invention, said seat unit comprises a device for locking and unlocking in rotation the secondary flap relative to the fixed part of the privacy shield.
(14) According to one embodiment of the invention, the locking and unlocking device comprises a latch able to selectively cooperate with a striker in a locked state or to be disengaged from the striker in an unlocked state.
(15) According to one embodiment of the invention, said seat unit comprises a device for locking and unlocking in rotation the primary flap relative to the fixed part of the privacy shield.
(16) According to one embodiment of the invention, the locking and unlocking device comprises a finger able to partly surround in a selective manner a stud in a locked state and to be disengaged from the stud in an unlocked state.
(17) According to one embodiment of the invention, said seat unit comprises a carriage carrying the movable part of the privacy shield, and at least one sliding connection allowing translational movement of the carriage relative to the fixed part in order to pass from the retracted position to the deployed position and vice versa.
(18) According to one embodiment of the invention, the sliding connection(s) has/have a longitudinal direction parallel to or coinciding with an axis of the seat so as to allow movement of the movable part along the axis of the seat.
(19) According to one embodiment of the invention, the movable part comprises two panels forming a non-zero angle relative to each other.
(20) According to one embodiment of the invention, said seat unit comprises a device for locking and unlocking in translation the movable part relative to the fixed part of the privacy shield.
(21) According to one embodiment of the invention, the locking and unlocking device comprises a hook-shaped lock movable in rotation between a locking position in which said lock cooperates with a corresponding locking pin integral with the movable part and an unlocking position in which said lock is disengaged from the locking pin.
(22) According to one embodiment of the invention, the lock is arranged on a fixed upright.
(23) According to one embodiment of the invention, the locking pin is arranged on a movable upright integral with the movable part.
(24) According to one embodiment of the invention, the movable upright comprises at least one centering pin for cooperating with a corresponding shape in the fixed upright.
(25) According to one embodiment of the invention, said seat unit comprises an access shutter to

the locking and unlocking device.
(26) According to one embodiment of the invention, an actuating means, such as a lever or a button, is capable of controlling movement of the mobile shutter from a closed position in which the shutter closes an access space to the locking and unlocking device to an open position in which the shutter opens the access space to the locking and unlocking device.
(27) According to one embodiment of the invention, a cam device is mechanically connected on the one hand to the actuating means via a connecting rod and on the other hand to the shutter.
(28) According to one embodiment of the invention, the locking and unlocking device comprises a clamping device on a support pallet of the seat.

Description

(1) The present invention will be better understood and other characteristics and advantages will become apparent on reading the following detailed description comprising embodiments given by way of illustration with reference to the appended figures, presented by way of non-limiting examples, which may be used to complete the understanding of the present invention and the presentation of its realization and, if necessary, contribute to its definition, wherein:
BRIEF DESCRIPTION OF THE DRAWINGS
(2) FIG. **1***a* is a perspective view of a first embodiment of a seat unit according to the invention provided with a privacy shield having a primary flap and a secondary flap hinged relative to each other;
(3) FIG. **1***b* is a perspective view illustrating the deployment of the secondary flap of the seat unit in FIG. **1***a;*
(4) FIG. **1***c* is a perspective view illustrating the deployment of the primary flap of the seat unit in FIG. **1***a;*
(5) FIG. **1***d* is a perspective view of the privacy shield of the seat unit in FIG. **1***a* in the deployed position with the seat in the extended position in order to facilitate installation for a person with reduced mobility;
(6) FIGS. **2***a* to **2***d* illustrate the evolution of the angles between the primary flap and the secondary flap during deployment of the movable part of the privacy shield;
(7) FIG. **3** is a perspective view of a structure forming the fixed part and the movable part of the privacy shield;
(8) FIGS. **4***a* and **4***b* are respectively perspective and top views of a hinge of “invisible” type used to form the pivot connections of the flaps of the movable part;
(9) FIG. **5** is a perspective view of a rod/sliding connection assembly for supporting the cantilever of the movable part of the privacy shield;
(10) FIG. **6** is a bottom view of the primary and secondary flaps of the movable part of the privacy shield showing devices for locking and unlocking in rotation the flaps;
(11) FIG. **7***a* is a perspective view of a second embodiment of a seat unit according to the invention provided with a privacy shield having a movable part mounted on a carriage that is movable in translation;
(12) FIG. **7***b* is a perspective view showing the movable part of the privacy shield in a deployed position;
(13) FIG. **8** is a rear view of the seat unit in FIG. **7***a* showing the detail of a device for locking and unlocking in translation the movable part arranged vertically along the fixed part;
(14) FIGS. **9***a* to **9***c* are perspective views illustrating the various stages of deployment of an access shutter to the device for locking and unlocking in translation the movable part of the privacy shield;
(15) FIG. **10** is a detailed view of a clamping device on a seat support pallet used for locking the movable part of the privacy shield;

(16) FIG. **11** is a perspective view of the seat unit without the seat so as to make visible the carriage supporting the movable part of the privacy shield;
(17) FIG. **12** is a perspective view of a fixed upright of the seat unit according to the invention carrying a locking hook for the movable part of the privacy shield according to the invention;
(18) FIG. **13** is a perspective view of the structural elements mechanically connected to the movable part of the privacy shield according to the invention;
(19) FIGS. **14***a* and **14***b* are perspective views respectively of a column of seat units according to the first embodiment and a column of seat units according to the second embodiment.

DETAILED DESCRIPTION

(20) It should be noted that the structural and/or functional elements common to the different embodiments have the same references. Thus, unless otherwise stated, such elements have identical structural, dimensional and material properties.
(21) Furthermore, in the rest of the description, the relative terms such as “front”, “rear”, “horizontal” or “vertical” are understood by reference to the common meaning given to them by a passenger on a seat in the unit seat according to the invention.
(22) FIG. **1***a* shows a seat unit **10** comprising a seat **11** associated with a side console **12** extending along one side of the seat **11**. In addition, a so-called privacy shield **13** extends at least partly around the seat **11** so as to delimit a semi-enclosed space **14** around the passenger. Such a configuration makes it possible to guarantee the privacy of the passenger on the seat **11**. A video screen **15** of a multimedia system or IFE (for Inflight Entertainment System) could be installed on a rear part of the privacy shield **13** so as to be usable by a rear passenger, as shown in FIG. **8**.
(23) The seat **11** is advantageously provided with a kinematics allowing it to be movable between a “seated” position, in which the seat **11** is configured to define a seated position for a passenger, and a “lying” position, in which the seat **11** is configured to define a sleeping surface for the passenger, advantageously substantially horizontal. Intermediate comfort positions are also offered, such as the “relax” position in which a seat back of the seat **11** is strongly inclined.
(24) The seat **11** has an axis of extension X**1** defined by the intersection of a horizontal plane and a vertical median plane of the seat **11** corresponding to a plane of symmetry of the seat **11**. The axis of extension X**1** of the seat **11** may form a non-zero angle relative to a central axis X**2** of the aircraft cabin, for example of about 45 degrees. In this case, the seat **11** is turned towards the axis X**2**. As a variant, the seat **11** could be turned in a direction opposite to the axis X**2**.
(25) In the example shown, the console **12** comprises a horizontal upper wall **17** forming a table surface on which a passenger can place objects. On the side of its rear end, a vertical storage space **18** may be provided that comprises one or more elements among a literature pocket, a bottle holder, or a minibar. The choice of storage compartments is configurable according to the wishes of the airline. In addition, a portion **20** of the console **12** may have an armrest function.
(26) The console **12** may also include a housing **21**, said foot housing, having a horizontal inner face forming a footrest (or ottoman) for a passenger installed on a seat **11** in a rear seat unit **10**. The foot housing is clearly visible in FIGS. **7***a* and **8**.
(27) A control unit **22** (called “PCU” for ‘Passenger Control Unit”) is arranged near the passenger. The control unit **22** makes it possible to control the selection of a position of the seat **11** as well as the environment of the seat **11**, namely a video system, a heating device, a lighting ambiance, or any other parameter of the environment of the seat **11**.
(28) The privacy shield **13** comprises a fixed part **23** and a mobile part **25** with respect to the fixed part **23**. The fixed part **23** comprises one panel or more integral with the console **12**.
(29) The movable part **25** is movable between a retracted position shown in FIG. **1***a* or **7***a* in which the movable part **25** delimits with the fixed part **23** the semi-enclosed space **14** around the seat **11** to confer privacy to the passenger and a deployed position shown in FIG. **1***c* or **7***b* in which the privacy shield **13** is remote from the seat **11** so as to clear an access space to the seat **11**. The distance of the movable part **25** from the seat **11** is appreciated relative to the position occupied by

the movable part **25** in the retracted position.
(30) Advantageously, the movable part **25** is remote from the seat **11** when it is in the deployed position, so that the seat **11** in the lying position can extend beyond the semi-enclosed space **14** delimited by the movable part **25** in the retracted position to facilitate installation of a person with reduced mobility. In particular, as can be seen in particular in FIG. **1***d*, the seat **11** in the lying position extends beyond a vertical projection onto the ground of the semi-enclosed space **14** shown in hatched lines and delimited by the shield privacy **13** when said privacy shield **13** is in the retracted position.
(31) In the embodiment in FIGS. **1***a*-**1***d*, **2***a*-**2***d*, and **3**, the movable part **25** of the privacy shield **13** comprises a primary flap **26** and a secondary flap **27**. A first pivot connection **29.1** is arranged between the primary flap **26** and secondary flap **27** so as to allow rotation of the secondary flap **27** relative to the primary flap **26** around a first axis of rotation X**3**. A second pivot connection **29.2** is arranged between the primary flap **26** and the fixed part **23** of the privacy shield **13** so as to allow rotation of the primary flap **26** relative to the fixed part **23** around a second axis of rotation X**4**.
(32) In the retracted position, the primary flap **26** forms a non-zero angle with respect to the secondary flap **27**, in particular an angle of about 90 degrees. The flaps **26**, **27** thus have a configuration making it possible to at least partially surround the seat **11** so as to confer privacy on the passenger.
(33) As can be seen in FIG. **3**, a flap **26**, **27** may be constituted by vertical uprights **31** (at least two at each of its ends), horizontal crosspieces **32**, and two metal sheets **33** arranged on either side of this structural assembly formed by the uprights **31** and the crosspieces **32**. The metal sheets **33** may be covered with internal and external lining panels, the finish of which is ensured in particular by means of a painted film or material. Alternatively, a flap **26**, **27** may take the form of a panel made of a composite material.
(34) A support structure **24** of the primary flap **26** is formed here by two panels **28.1**, **28.2**. The panel **28.1** is intended to be mechanically connected to a wall of the console **12** at the level of the foot housing **21**. The panel **28.2** is fixed to a structural element of the console **12** so as to form at least a portion of the fixed part **23** of the privacy shield **13**.
(35) Advantageously, a pivot connection **29.1**, **29.2** is formed by at least one hinge **30**, in particular three hinges **30**, as shown in FIG. **3**. Thus, three hinges **30** are provided between the primary flap **26** and the secondary flap **27** and three hinges **30** between the primary flap **26** and the fixed part **23** of the privacy shield **13**.
(36) As illustrated by FIGS. **4***a* and **4***b*, a hinge **30** of so-called “invisible” type comprises two portions **34** hinged relative to each other around an axis **37**. Each portion **34** comprises a projecting element **40**, so-called knuckle eye, intended to be inserted inside a housing of corresponding shape provided in a thickness of a flap **26**, **27**. Each portion **34** also comprises a fixing interface **45** comprising passage holes for fasteners, such as screws. The fixing interface **45** may be covered by a cover **46** so as to hide the screw heads.
(37) Such a configuration makes it possible to improve the perceived quality of the assembly by minimizing the play between the articulated elements in line with the cutout lines.
(38) Advantageously, as can be seen in FIG. **5**, the seat unit **10** comprises a rod **35** having a first end rotatably mounted relative to the primary flap **26** and a second end rotatably mounted relative to a slider **36** adapted to slide along a slide **38** disposed on a portion of the fixed part **23**. Such a configuration ensures the support of the mass and the cantilever of the secondary flap **27** in the deployed position.
(39) In this case, the slide **38** is arranged on a lower portion **39** of the fixed part **23** of the privacy shield **13**. The lower portion **39** is intended to be fixed to the floor of the aircraft cabin. The lower portion **39** comprises two walls forming a non-zero angle between them corresponding to the angle formed between the flaps **26**, **27** when the movable part **25** is in the retracted position.
(40) As can be seen in FIG. **6**, the seat unit **10** comprises a device **41** for locking and unlocking in

rotation the secondary flap **27** with respect to the fixed part **23** of the privacy shield **13**, in particular with respect to the lower portion **39**.
(41) The locking and unlocking device **41** comprises a latch **43** able to selectively cooperate with a striker **44** in a locked state or to be disengaged from the striker **44** in an unlocked state. The latch **43** can be manipulated by a member of the crew or a maintenance team. The latch **43** is for example arranged on the movable part **25**, more precisely the secondary flap **27**, while the striker **44** is arranged on a protective element **49** with regards to external shocks, called “bumper” fixed on the lower portion **39**. As a variant, the structure could be reversed, that is to say that the latch **43** is arranged on the protection element **49** while the striker **44** is arranged on the movable part **25**.
(42) Optionally, the seat unit **10** also comprises a device **42** for locking and unlocking in rotation the primary flap **26** with respect to the fixed part **23** of the privacy shield **13**. The locking and unlocking device **42** comprises a finger **47** able to partly surround in a selective manner a stud **48** in a locked state and to be disengaged from the stud **48** in an unlocked state. The transition from one state to another is naturally effected by a snapping operation without any action from an operator other than the rotation of the primary flap **26**. The finger **47** is for example disposed on the movable part **25** while the stud **48** is arranged on the protective element **49**. Alternatively, the structure could be reversed, that is to say that the finger **47** is arranged on the protective element **49**, while that stud **48** is arranged on mobile part **25**. This “finger **47**-stud **48**” assembly also performs a mechanical force absorption function.
(43) It is described below, with reference to FIGS. **1***a*-**1***d* and **2***a*-**2***d*, the operation of the privacy shield **13** of the seat unit **10** according to the invention able to deploy by rotation in two successive phases.
(44) Initially, as shown in FIGS. **1***a* and **2***a*, the movable part **25** of the privacy shield **13** is in the retracted position.
(45) A crew member can then actuate the locking and unlocking device **41** so as to allow rotation of the secondary flap **27** with respect to the primary flap **26** around the axis X**3**.
(46) As can be seen in FIGS. **1***b* and **2***b*, the rotation of the secondary flap **27** is allowed until the angle A**1** formed by the secondary flap **27** with respect to its retracted position reaches a limit angle, for example about 45 degrees. By “about” it is meant a variation of plus or minus 10 percent with respect to the value indicated.
(47) Once the limit angle has been reached, the finger **47** of the device **41** disengages from the stud **48** so as to allow the rotation of primary flap **26**.
(48) As can be seen in FIG. **2***c*, the rotation of the primary flap **26** is allowed until the angle A**2** formed by the primary flap **26** with respect to its retracted position reaches a threshold angle, for example about 30 degrees, from which the rod **35**-slide connection **38** system begins to deploy when the angle A**2** increases.
(49) As shown in FIG. **2***d*, the slider **36** is then able to slide in translation along the slide **38**, so that the angle A**2** of the primary flap **26** can increase until it reaches a limit angle of about 55 degrees. In the deployed position, the rod **35** can then support the significant mass generated by the cantilever of the movable part **25** thus separated from the seat **11**.
(50) When the mobile part **25** is in the deployed position, the crew member can command a movement of the seat **11** via the seat control unit **22**, so as to lower the seat back 180 degrees to make the seat **11** pass from the seated to lying position and facilitate the installation of the passenger on the seat **11**.
(51) Once the passenger has been transferred to the seat **11**, the crew member can perform the reverse operations so as to raise the seat back to return the seat **11** to the seated position and then to return the movable part **25** of the shield **13** to retracted position to provide passenger privacy.
(52) In the embodiment in FIGS. **7***a*, **7***b*, **8**, and **10**, the movable part **25** is movable in translation relative to the fixed part **23**. For this purpose, the seat unit **10** comprises a carriage **53** carrying the movable part **25** of the privacy shield **13** and at least one slide connection **54**, in this case two slide

connections **54**, allowing a translational movement of the carriage **53** relative to the fixed part **23** to pass from the retracted position to the deployed position and vice versa.
(53) A slide connection **54** is advantageously installed between the carriage **53** and a support pallet **56** of the seat visible in FIG. **11**. The support pallet **56** in particular provides a fastening interface between the seat **11** and the floor of the aircraft cabin.
(54) A slide connection **54** has a longitudinal direction parallel to or coincident with the axis X**1** of the seat so as to allow movement of the movable part **25** along the axis X**1** of the seat **10**, as illustrated in FIG. **7***b*. This axis X**1** here forms a non-zero angle with respect to the axis X**2** of the aircraft cabin, for example of about 45 degrees.
(55) A slide connection **54** may be formed by longitudinal guides capable of sliding relative to each other, rails, or any other means suitable for producing a slide connection **54**.
(56) Furthermore, the mobile part **25** comprises two panels **59**, **60** forming a non-zero angle relative to each other, in particular an angle of about 90 degrees. A panel **59**, **60** is preferably made in one piece with the other panel **59**, **60**, so that the set of two panels **59**, **60** forms a single part constituting the movable part **25** of the privacy shield **13**. The structure of a panel **59**, **60** is similar to that of a flap **26**, **27** described previously.
(57) In order to mechanically connect the movable part **25** to the carriage **53**, said carriage **53** comprises fixing interfaces **62** visible in FIG. **13** and provided with other passage holes for fastener, such as screws, bolts or rivets or any other fastener suitable for the application.
(58) As can be seen in FIG. **8**, the seat unit **10** includes a device **63** for locking and unlocking in translation the movable part **25** relative to the fixed part **23** of the privacy shield **13**.
(59) The locking and unlocking device **63** comprises a hook-shaped lock **65** movable in rotation between a locking position in which said lock **65** cooperates with a corresponding locking pin **67** secured to the movable part **25** and an unlocking position in which said lock **65** is disengaged from locking pin **67**.
(60) As can be seen in FIG. **12**, the lock **65** may be arranged on a fixed upright **68** mechanically connected to the console **13**. The fixed upright **68** carries two panels **69**.**1**, **69**.**2** similar to the panels **28**.**1** and **28**.**2** in FIG. **3**. The panel **69**.**1** is intended to be mechanically connected to a wall of the console **12** at the level of the foot housing **21**. The panel **69**.**2** is fixed to a structural element of the console **12** so as to form a portion of the fixed part **23** of the privacy shield **13**.
(61) The locking pin **67** is arranged on a movable upright **70** secured to the movable part **25**, as shown in FIG. **13**. Advantageously, this movable upright **70** also includes centering pins **72**, in this case three centering pins **72**, intended to cooperate with corresponding shapes in the fixed amount **68**.
(62) Advantageously, as can be seen in FIGS. **8** and **12**, there is provided an access shutter **73** to the locking and unlocking device **63**.
(63) An actuating means **75**, such as a lever or a button, which can be manipulated by a crew member, is capable of controlling a movement of the mobile shutter **73** from a closed position in which the shutter **73** closes an access space to the device **63** to an open position in which the shutter **73** opens the access space to the device **63**.
(64) For this purpose, a cam device **76** shown in FIGS. **9***a* to **9***c*, is mechanically connected on the one hand to the actuating means **75** via a connecting rod **77** and on the other hand to the shutter **73** of whose rotation is controlled.
(65) As illustrated in FIG. **9***a*, a manipulation of the actuating means **75** by a crew member causes a rotation of a cam **80**, which moves a cam with groove **81** so that a lug **82** can pass a point blocking **83** of the groove **84**. As shown in FIG. **9***b*, a spring hinge **87** then acts on the shutter **73** and causes a movement of the lug **82**. As shown in FIG. **9***c*, the shutter **73** moves into the open position and the lug **82** comes into abutment against one end of the groove **84**. The crew member can then have access to the lock **65**.
(66) It is also possible to provide a clamping device **89** on a support pallet **56** of the seat **11**, as

shown in FIG. **10**. The clamping device **89** is intended to cooperate with a hook of corresponding shape on the movable part **25** in a locked state and to be disengaged from the hook on the movable part **25** in an unlocked state.
(67) It is described below the operation of the privacy shield **13** of the embodiment in FIGS. **7***a* to **13** comprising a movable part **25** mounted on the carriage **53** able to deploy according to a translational movement.
(68) Initially, as shown in FIG. **7***a*, the movable part **25** of the privacy shield **13** is in the retracted position. In the retracted position, the mobile part **25** is located in an extension of the fixed part **23**.
(69) A crew member can then manipulate the actuating means **75** so as to open the shutter **73** to access the locking and unlocking device **63**. The crew member can then release the lock **65** from the locking pin **67**.
(70) The crew member also opens the clamping device **89** so as to allow a translation of the mobile part **25** relative to the fixed part **23**.
(71) The movable part **25** can then move into its deployed position by sliding the carriage **53** along the slide connection **54**, as shown in FIG. **7***b*. The displacement of the mobile part **25** can be carried out manually or automatically if the carriage **53** is equipped with an electric motor. In the deployed position, the mobile part **25** is located at a distance from the fixed part **23**.
(72) When the mobile part **25** is in the deployed position, the crew member can command a movement of the seat **11** via the PCU control module so as to lower the seat back 180 degrees to move the seat **11** from the seated position to the lying position and facilitate the installation of the passenger on the seat **11**.
(73) Once the passenger has been transferred to the seat **11**, the crew member can carry out the reverse operations so as to raise the seat back to return the seat **11** to the seated position and then to return the mobile part **25** of the shield to the retracted position to confer privacy on passenger.
(74) FIGS. **14***a* and **14***b* illustrate a column of three seat units **10** arranged one behind the other. These figures show that the two embodiments of the movable part **25** of the privacy shield **13** make it possible to increase the access space to the seat **11** compared to a configuration of conventional seat units **10** with a fixed privacy shield (cf. access space E with a fixed privacy shield and access space E′ obtained thanks to the mobile part **25** of the privacy shield **13** in the deployed position.)
(75) The privacy shield **13** may, if necessary, incorporate a curtain airbag on the rear façade.
(76) The fixed part **23** of the privacy shield **13** may also include a removable door on the side of a passageway of the aircraft cabin.
(77) Of course, the different features, variants and/or embodiments of the present invention can be associated with each other in various combinations insofar as they are not incompatible with each other or exclusive of each other.
(78) Furthermore, the invention is not limited to the embodiments described above and provided solely by way of example. It encompasses various modifications, alternative forms and other variants that a person skilled in the art may consider in the context of the present invention and in particular all combinations of the various modes of operation described previously, which may be taken separately or in combination.

Claims

1. An aircraft seat unit comprising: a seat that is movable between a seated position and a lying position, and a privacy shield extending at least partly around the seat: the privacy shield comprising a fixed part and a movable part relative to the fixed part, the movable part being movable between: a retracted position in which the movable part delimits with the fixed part a semi-enclosed space around the seat to confer privacy on the passenger, and a deployed position in which the movable part is moved away from the seat so as to clear an access space to said seat, wherein the movable part of the privacy shield comprises: a primary flap, a secondary flap, a first

pivot connection being arranged between the primary flap and the secondary flap so as to allow rotation of the secondary flap relative to the primary flap around a first axis of rotation, a second pivot connection being arranged between the primary flap and the fixed part of the privacy shield so as to allow rotation of the primary flap relative to the fixed part around a second axis of rotation.

2. The seat unit according to claim 1, wherein the movable part is remote from the seat when it is in the deployed position, so that the seat in the lying position extends beyond a vertical projection onto a floor of the semi-enclosed space delimited by the privacy shield when said privacy shield is in the retracted position.

3. The seat unit according to claim 1, wherein the first pivot connection and the second pivot connection are each formed by at least one hinge.

4. The seat unit according to claim 3, wherein the at least one hinge is of the invisible type.

5. The seat unit according to claim 1, further comprising a rod having a first end rotatably mounted relative to the primary flap and a second end rotatably mounted relative to a slider able to slide along a slide arranged on a lower portion of the fixed part of the privacy shield.

6. The seat unit according to claim 1, wherein the seat unit further comprises a device for locking and unlocking in rotation the secondary flap with respect to the fixed part of the privacy shield.

7. The seat unit according to claim 6, characterized in that the device for locking and unlocking in rotation the secondary flap comprises a latch able to selectively cooperate with a striker in a locked state or to be disengaged from the striker in an unlocked state.

8. The seat unit according to claim 1, wherein the seat unit further comprises device for locking and unlocking in rotation the primary flap with respect to the fixed part of the privacy shield.

9. The seat unit according to claim 8, wherein the device for locking and unlocking in rotation the primary flap comprises a finger capable of partially surrounding in a selective manner a stud in a locked state and being disengaged from the stud in an unlocked state.