Sept. 17, 1963 M. KRONE 3,104,131

ARM REST AND STORAGE RECEPTACLE

Filed March 13, 1962 2 Sheets-Sheet 1

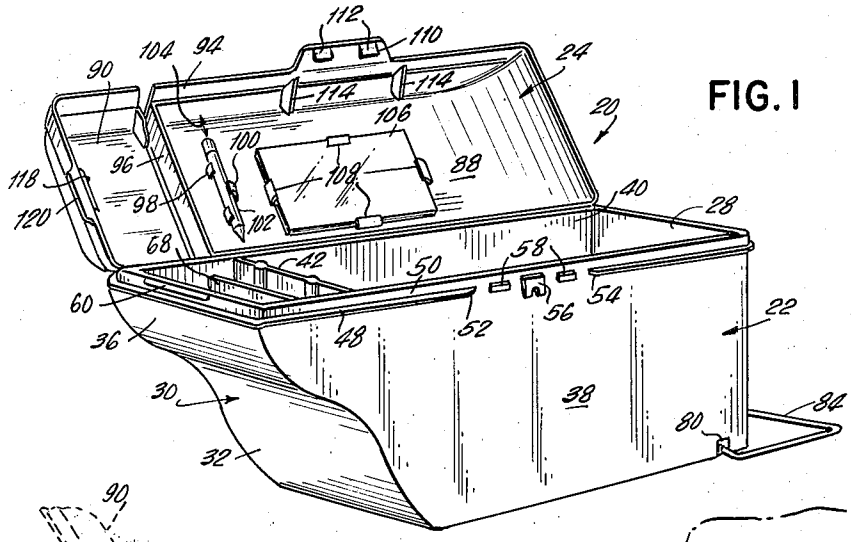


FIG. 1

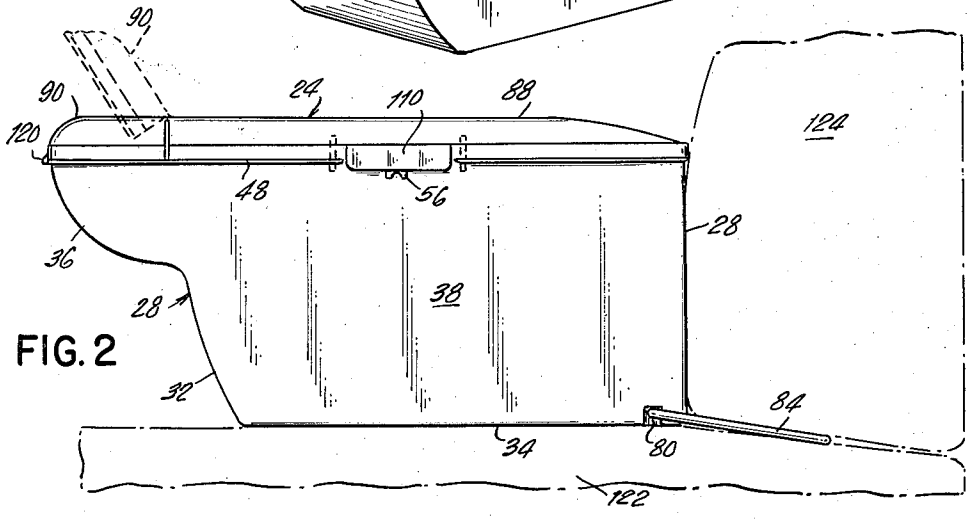


FIG. 2

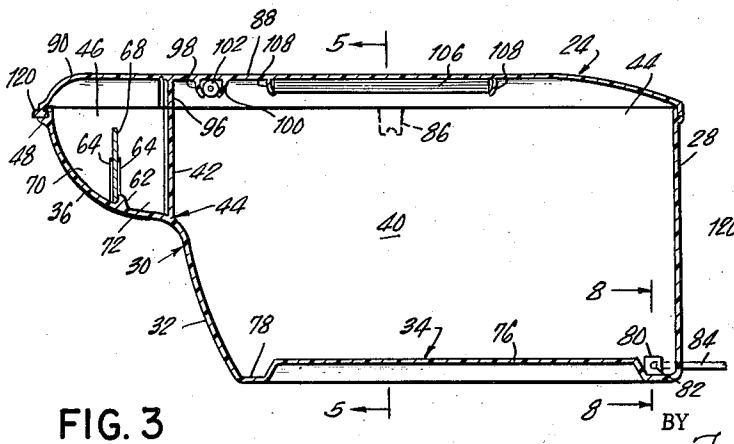


FIG. 3

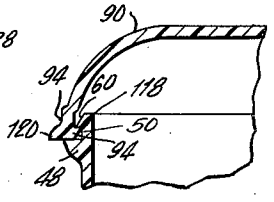


FIG. 4

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FIG. 5

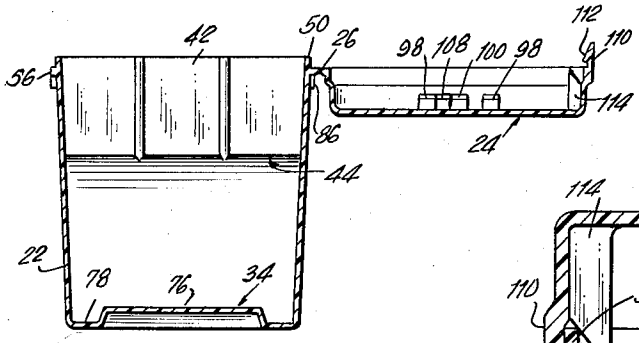
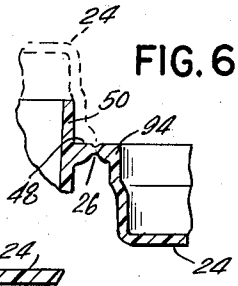


FIG. 6



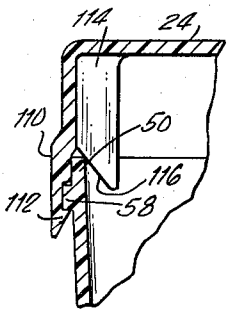


FIG. 7

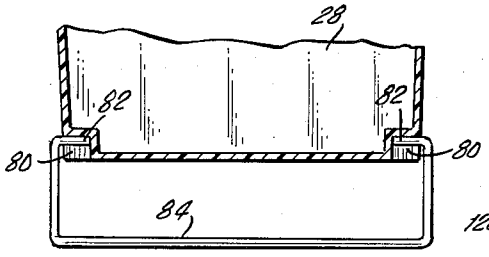


FIG. 8

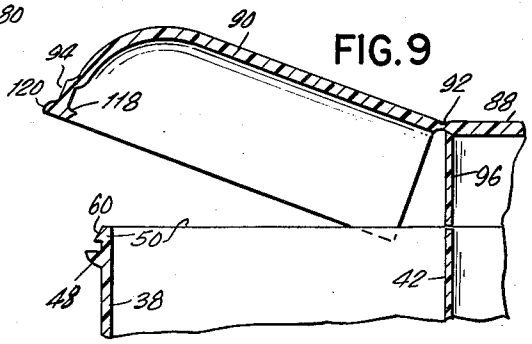


FIG. 9

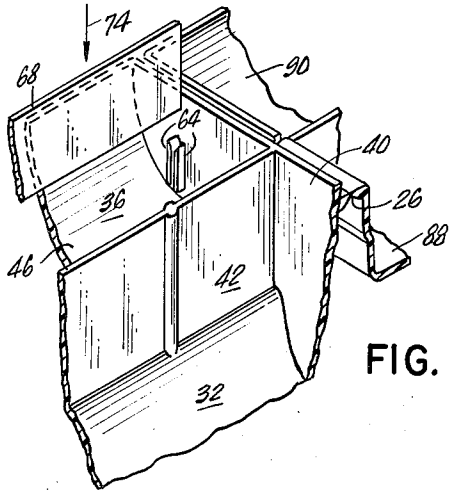


FIG. 10

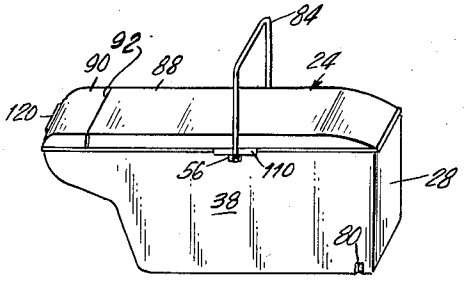


FIG. 11

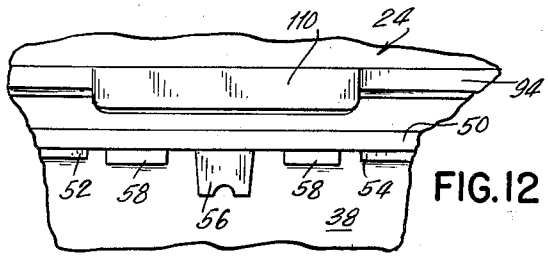


FIG. 12

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ARM REST AND STORAGE RECEPTACLE

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6 Claims. (Cl. 297—414)

The present invention relates to an arm rest and storage compartment and in particular to a portable arm rest which is provided with storage facilities.

It is an object of the present invention to provide an arm rest for the seats of an automobile or the like which can be installed or placed in position without the necessity of making any alterations whatsoever to the seat structure, and which can be readily removed from its operative disposition on the seat as may be desired.

It is a further object of the present invention to provide an arm rest of the described type which can be utilized either as a fixed or a portable storage compartment or receptacle.

It is an object of the present invention to provide an arm rest of the described type which can be manufactured from relatively inexpensive material and sold at a relatively low price and which will have a long and useful life.

It is a still further object of the present invention to provide an arm rest of the described type which is relatively simple and integral in construction and yet which is highly efficient for its intended utilization.

Other and further objects and advantages of the present invention will be readily apparent to one skilled in the art from a consideration of the following specifications taken in connection with the appended drawings.

In the drawings which illustrate the best mode presently contemplated for carrying out the invention;

FIGURE 1 is a perspective view of an arm rest pursuant to the present invention, the arm rest being shown in its open position for access to the storage compartment or compartments thereof;

FIGURE 2 is a side elevation view of the arm rest;

FIGURE 3 is a cross-sectional view of the arm rest;

FIGURE 4 is a fragmentary view on an enlarged scale of a portion of the arm rest illustrated in FIGURE 3.

FIGURE 5 is a sectional view taken on the line 5—5 of FIGURE 3, the cover of the arm rest being shown in its open position.

FIGURE 6 is a fragmentary detailed view on an enlarged scale of a portion of FIGURE 5.

FIGURE 7 is a fragmentary detailed view of a portion of FIGURE 5 on an enlarged scale with the cover of the arm rest being in its closed position with the snap-catch locked;

FIGURE 8 is a sectional view on an enlarged scale taken on the line 8—8 of FIGURE 3;

FIGURE 9 is a view similar to FIGURE 4 with the associated front cover portion being in a partially open position thereof;

FIGURE 10 is a fragmentary view of the auxiliary storage compartment with the cover being shown in entirely open condition;

FIGURE 11 is a perspective view of the arm rest of the present invention showing the latter when utilized as a portable storage unit;

FIGURE 12 is a fragmentary detailed view, on an enlarged scale, of the portion of the arm rest indicated by the arrow 12 in FIGURE 2, with the cover being shown in partially open condition.

Referring now to the drawings in detail, there is illustrated an arm rest 20 pursuant to the present invention. The arm rest, as here shown comprises a body or receptacle 22 and an associated cover 24. The receptacle and the cover are interconnected by an integral hinge 26, said elements being formed of a suitable plastic, as for example polypropylene and forming a single unit fabricated by a single suitable moulding operation.

The receptacle 22 is provided with a planar rear wall 28 and with a shaped front wall 30. The front wall 30 has a lower portion 32 which tapers downwardly and inwardly toward the base 34 of the receptacle 22. The front wall 30 is provided also with an upper wall portion 36 which is of generally arcuate conformation and which projects upwardly and laterally from the lower front wall portion 32. The receptacle is provided also with the opposing side walls 38 and 40 which interconnect the end walls 28 and 30. The receptacle 22 is provided with an integral transverse partition 42 which extends between the opposing side walls 38 and 40 along the shoulder 44 defined by the common boundary of the lower and upper portions 32 and 36 respectively of the front wall 30.

As best seen in FIGURE 3, the rear wall 28 and the opposing partition 42 and lower front wall portion 32, as well as the opposing portions of the side walls 38 and 40 which extend from the partition and lower front wall portion to the rear wall 28 define a main storage compartment 44, the bottom of which is defined by the base 34. An auxiliary storage compartment is defined by the upper front wall portion 36, the partition member 42 and the associated portions of the side walls 38 and 40. The receptacle 22 is provided also at its upper open end with a peripheral flange 48 and with the rim 50 which extends upwardly from the flange 48. The flange 48 is interrupted substantially centrally of the side wall 38 to provide between the opposing flange ends an inverted U-shaped support 56 formed between a pair of spaced detents or locking elements 58. An additional detent or locking element 60 is formed on the rim 50 above the upper front wall portion 36. Said front wall portion 36 is provided on its upper or inner surface with a detent 62 as best seen in FIGURE 3 which is associated with a pair of laterally spaced vertically extending projections 64 provided on the inner surface of the side wall 40 at the auxiliary storage compartment 46, as best seen in FIGURE 10, and with a similar pair of integral vertical projections formed on the opposing inner surface portion of the side wall 38. The companion projections 64 define a slot 66 therebetween which is adapted to receive a removable partition member 68 for dividing the auxiliary storage compartment 46 into a front storage compartment 70 and a rear storage compartment 72. As best seen in FIGURE 3, it will be noted that the removable partition member 68, which can be formed of any suitable material, extends from the slot 66 provided on the inner surface of the side wall 40 to a similar slot 66 provided in opposition on the inner surface of the side wall 38 and is engaged along its bottom by the detent 62 provided on the upper or inner surface of the upper front end wall portion 36. It will be understood that the removable partition 68 may be readily inserted into the slots from a position thereabove by moving the partition member downwardly into the slots as indicated by the arrow 74 in FIGURE 10. The side edges of the partition may be advantageously lapsed for this purpose.

The bottom wall or base 34 is inwardly or upwardly offset as at 76 to provide an inner peripheral recess 78, the latter being provided with a pair of opposed inwardly extending recesses 80, as best seen in FIGURE 8, adjacent the rear end wall 28. The recesses 80 are adapted to removably receive the inturned ends 82 of a U-shaped preferably wire member 84, the function of which will presently appear. In addition to the previously mentioned inverted U-shaped support 56, provision is made for a companion opposing inverted U-shaped support 86 provided on the outer surface of the side walls 40 as best seen in FIGURE 3. It will be understood that the companion inverted U-shaped supports 56 and 86 are

adapted to be removably releasably engaged by the inturned ends 82 of the wire member 84 as hereinafter explained in detail.

The previously mentioned cover 24 for the body of receptacle 22 is provided with a main cover portion 88 for the main storage compartment 44 and with an auxiliary cover portion 90 for the auxiliary storage compartment 46. Said main and auxiliary cover portions are connected by an integral hinge 92 as best seen in FIGURE 9. Said integral hinge 92 permits the auxiliary cover 90 to be moved to its open position when the main cover portion 88 is in its closed position. The cover 24 is provided with a peripheral rim 94 which is adapted to overlie the previously mentioned rim 50 provided on the receptacle. The previously mentioned integral hinge 26 interconnects the rim 94 at the main cover portion 88 and the flange 48 at the main storage compartment 44, as best shown in FIGURE 6. On its inner surface adjacent the hinge 92 the main cover portion 88 is provided with a transverse partition member 96 which is integral therewith and which is adapted to engage the upper marginal edge of the fixed or integral partition member 42 provided in receptacle 22 when the main cover portion 88 is in its closed position as best shown in FIGURES 3 and 9. Said engagement of the integral partition members provides assurance that the main storage compartment 44 is completely enclosed when the main cover portion 88 is in its closed position and when the auxiliary portion 90 is in its open position as best shown in FIGURE 9. The main cover portion 88 is provided also on its inner surface with a pencil or pen holding means and with a paper or pad holding means. More specifically, adjacent the partition 96 the main cover portion is provided with a pair of aligned projections 98 and with a laterally offset intermediate projection 100. Adapted to releasably retain a pencil 102 or the like in position on the inner surface of the cover portion 88 as best shown in FIGURES 1 and 3. It will be understood that the pencil 102 may be inserted into position between the projections 98 and 100 or removed therefrom by sliding the pencil along the inner surface of the main cover portion 88 as indicated by the arrows 104 in FIGURE 1. In order to hold a pad of paper 106 the main cover portion 88 is provided on its surface with the quadrilaterally related projections 108 as best shown in FIGURE 1.

In order to releasably lock the main cover portion 88 in the closed condition thereof, provision is made on the rim 94 thereof with an integral projection 110 which is provided with a pair of laterally spaced locking elements 112 which are adapted to releasably engage the previously mentioned detent elements 58 as best shown in FIGURES 7 and 12. The main cover portion 88 is provided also on its inner surface with a pair of projections 114 which straddle the previously mentioned projection 110, as best shown in FIGURES 1 and 7. The projections 114 are each provided with a camming edge 116 which is adapted to engage the upper end of the rim 50 provided on the receptacle 22 when the main cover portion 88 is in the closed position thereof, as best seen in FIGURE 7. In order to open the main cover portion 88 inward pressure or force is applied to the side wall 38 immediately below the inverted U-shaped support 56 thereof so as to disengage the detents 58 from their snap-engagement with the associated locking elements 112. Said inward pressure in addition to effecting said disengagement urges the adjacent rim portions 50 against the associated camming edges 116 of the projections 114 so as to cam the main cover portion 88 to effect a snap disengagement of the locking elements 112 from the detents 58 so as to provide a substantially instantaneous movement of the cover to the open position thereof indicated in FIGURE 12. As previously indicated, the auxiliary cover portion 90 may be opened independently of the main cover portion 88 when the latter is in the closed condition thereof so as to obtain access to the auxiliary compartment 46. In

order to releasably lock the auxiliary cover in the closed condition thereof provision is made for the previously mentioned detent element 60 integrally provided on the rim 50 above the upper end wall portion 36. The detent portion 60 is adapted to be releasably engaged by a cooperating locking element 118 provided on the cover rim 94 above the end wall 28. FIGURE 4 illustrates the locking element 118 engaged by the detent 60. In order to open the auxiliary cover 90 when it is in closed or locked condition, provision is made for a fingerpiece 120 which is provided on the outer surface of the cover rim 94 in opposition to the locking element 118. It will be readily apparent by raising the fingerpiece 120, the cover 90 for the auxiliary compartment 26 may be disengaged from its closed or locked position.

In order to mount or position the arm rest 20 in operative position thereof on the seat of an automobile or the like, the wire member or handle 84 is inserted into the bottom recesses 80 of the arm rest 20 as shown in FIGURE 2. The base 34 is disposed on the seat 122 of the automobile and the rear end wall 28 is disposed in abutment with the back rest 124 of the seat 122. The wire member 84 is inserted between the back rest and the seat as indicated in FIGURE 2 so as to releasably secure the arm rest 20 in position. It will be readily apparent that the arm rest 20 may be adjusted laterally of the seat 122 into any desired position. When the arm rest is disposed as illustrated in FIGURE 2, with the cover 24 closed, the arm rest is well suited to serve its function as an arm rest. Without disturbing the function of the unit 20 as an arm rest, access may be readily had to the auxiliary storage compartment 46 or to the sub-compartments 70 and 72 thereof by merely opening the auxiliary cover 90. This is illustrated in the dotted line position of the auxiliary cover in FIGURE 2, it being noted that the main cover 88 remains closed. However, when it is desired to obtain access to the main storage compartment 44, the cover 88 is opened, as previously indicated by pressing inwardly on the side wall 38 below the inverted support 56. In addition to its prescribed function as a stationary arm rest and stationary storage compartment, the arm rest 20 may also be utilized as a portable storage compartment. This is accomplished merely by disengaging the ends 82 of the handle 84 from the enclosures 80 in which they are engaged in the condition of the unit 20 illustrated in FIGURE 2 and inserting said ends 82 into the inverted U-shaped supports 56 and 86 as best illustrated in FIGURE 11. In this position of the member 84 the latter functions as a handle to carry the unit 20 as may be desired.

In view of the foregoing, it will be apparent that pursuant to the present invention there has been provided a highly novel and efficient unit 20 which may serve either as an arm rest or as a stationary storage compartment in an automobile or the like or which may be utilized as a portable storage compartment when so desired. The unit may be readily and inexpensively manufactured by molding from a suitable plastic such as polypropylene to provide an integral unit which includes the hinges 26 and 92 both of which will actually grow stronger with use by reason of increased molecular orientation, so as to provide a long-lived and efficient article of manufacture.

I have here shown and described a preferred embodiment of my invention. It will be apparent, however, that this invention is not limited to this embodiment, and that many changes, additions and modifications can be made in connection therewith without departing from the spirit and scope of the invention as herein disclosed and hereinafter claimed.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. An arm rest for a seat having a back rest, said arm rest comprising

receptacle means defined by a base,

a substantially planar rear end wall and a shaped front end wall extending upwardly from said base, and opposing side walls interconnecting said end walls,

said shaped front wall having a lower portion which tapers inwardly to said base and an upper portion which projects laterally outwardly from said lower portion and defines a transverse shoulder therewith,

a partition member extending along said shoulder to define a main storage compartment with said rear wall and an auxiliary storage compartment with said front wall,

a cover for said main compartment, said cover being hinged to one of said side walls, and

a cover for said auxiliary compartment hinged to said main cover.

2. An arm rest as in claim 1, said base, end walls, side walls, partition member, and covers being in integral relation.

3. An arm rest as in claim 2, and means extending from said receptacle means rearwardly of said rear end wall for insertion between the seat and arm rest.

4. An arm rest as in claim 3, said extending means being releasably engageable with said receptacle means and comprising handle means additionally releasably engageable with said receptacle means to extend upwardly thereof.

5. An arm rest as in claim 1, and a removable partition member for said auxiliary compartment.

6. An arm rest as in claim 3, and means releasably engageable with said arm rest adjacent to said planar end wall.

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