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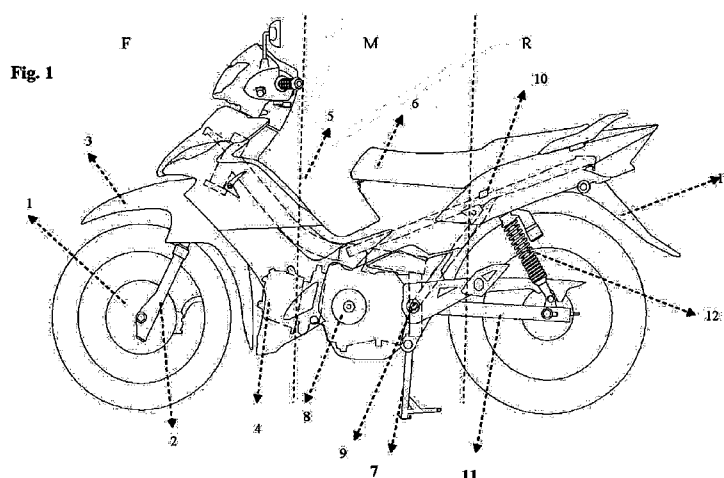
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Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))
- of inventorship (Rule 4.17(iv))

[Continued on next page]

(54) Title: GRILLE STRUCTURE FOR A BODY COVER OF A MOTORCYCLE



(57) Abstract: Describe herein is a replaceable grille lower for both left and right front cover structure of a step through motorcycle comprising a louvered structure in which longitudinal or cross-sectional grills are formed, the structure being provided with locating lugs and so as to enable snap fitting of the said grille on to the side covers of motorcycle.



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GRILLE STRUCTURE FOR A BODY COVER OF A MOTORCYCLE

FIELD OF INVENTION

This invention relates to a grille to be used with leg shield lower and cover main pipe lower of a step through motorcycle. The said grille will be referred to as “grille lower” hereinafter.

PRIOR ART

In the prior art, a step through vehicle includes a leg shield arranged to cover front portions of legs of a driver riding the vehicle. This leg shield is made into upper leg shield and lower leg shield and leg shield center to provide easy assembly and also improve the serviceability of the vehicle. These components of leg shield are made as multi – level surface structures to improve the aesthetic appearance of the step through vehicle. Further improving the aesthetics and getting different surface levels require high cost tooling.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a grille lower connecting the leg shield lower and cover main pipe lower which will act as a structural member and also make the servicing or final quality checking of the vehicle easy.

It is a further object of the invention to provide a grille lower which is snap fitted after all the quality checking are over and also improve the time taken for assembling.

BRIEF DESCRIPTION OF THE ACCOMPANYING DRAWINGS

Fig. 1 illustrates a conventional step through motorcycle;

Fig.2 illustrates the assembled lower grille;

Fig.3 illustrates lower grille assembly position;

Fig.4 illustrates snap mounting;

Fig.5 illustrates extra mounting position; and

Figs. 6A and 6B illustrate the outer and inner view of the grille structure.

DETAILED DESCRIPTION OF THE INVENTION

Any known motorcycle, as illustrated in Fig. 1, can be divided into three major portions, the front portion **F**, the middle portion **M** and the rear/tail portion **R**. The front portion **F** comprises of the steering, front wheel with necessary brakes 1, front suspension 2, fender 3, and side cover 4; the middle portion **M** comprises of the step through portion 5, rider seat 6, stand 7, engine 8, gear shift lever 9 etc; and the rear/tail portion **R** comprises of petrol tank 10, swinging arm 11, back wheel and suspension 12 and rear fender 13.

Step through motorcycles are fitted with body panels or covers generally made up of engineering plastics and are used to hide the frame and the structural parts of the vehicle. They cover the side portion, rear portion and the handle bar. They also accommodate lamps viz. the headlamp, tail lamp, position lamp, turn signal indicators and speedometer. The headlamp and speedometer console along with front and rear covers are fitted with handle bars.

Leg shields, side covers and rear fender are fitted on to the frame with interconnecting snap fittings. Front fender is fitted on front fork independently. The leg shield and the side covers are further divided into left and right sides. The central portion is covered by center covers fitted with the side covers of left and right. The portion above front wheel and below handle bar is covered by leg shield upper and lower, which may house the turn signal lamps.

Rear fender is fitted below the seat. The grille is mounted on a body cover of the motorcycle. In assembling such a motorcycle, especially the body cover, there are many sub assemblies and these are independently mounted onto the frame at different locations. This type of independent

mountings of sub assemblies of body cover on to the frame results in gaps between mating parts, increase in cost of the assembling, and complication of rework during assembly for reducing gaps which takes more time for reassembly and results in productivity losses.

Grille lower 14 proposed by the present invention forms a part of the side cover portion of any step through vehicle and the same can be snap fitted after assembling of the side cover 4.

The step through motorcycle consists of the leg shield upper 16 and the leg shield lower 15 used to cover the front portion of the vehicle. The cover main pipe upper 17' and the cover main pipe lower 17 is arranged to cover the main pipe and the frame members of the vehicle.

The grille lower of the present invention will now be described with reference to figs. 2 to 6. The grille lower 14 is snap fitted in between the leg shield lower 15, leg shield upper 16 and cover main pipe lower 17. A grille upper 19 which acts as a structural member is also mounted on leg shield upper 16. The cover main pipe upper 17' is connected to the turn signal lamp 18 and grille lower 14. From Fig. 3 it can be seen that the grille lower is snap fitted after the assembling of the side cover in the place indicated by reference numeral 20.

The side cover 4, as illustrated in Figs. 2 and 3 comprises of the side cover left 4, the leg shield upper 16, leg shield lower 15, cover main pipe upper 17', cover main pipe lower 17 and the grille lower 14.

All the abovementioned covers are together mounted on to the frame (not shown in figure). The cover main pipe upper 17' and cover main pipe lower 17, is mounted directly on the frame.

Similarly, side cover 4, leg shield upper 16 and leg shield lower 15 are also mounted directly to the frame. Grille lower 14 is mounted between the abovementioned parts viz. the cover main pipe upper 17', cover main pipe lower 17 and the side cover 4, leg shield upper 16 and leg shield lower 15. Thus the Grille lower 14 is not connected or mounted directly to the frame.

What has been illustrated is only with reference to the left side cover and the right side is a mirror image of the left side with necessary modifications.

This simple construction and the positioning of grille L & R, and means of mounting the same on to the side covers, ensure servicing and checking of engine parts by removal of grilles alone without disturbing the other connected parts.

Figs. 4 and 5 illustrate the provision of locating lug 21 and 22 and extra mounting openings 23 & 24. Since the grille lower is snap fitted, the grille lower is placed in its position after assembling the carburetor, etc along with the side cover in the assembly line and after finishing the required quality checking. Figs. 6a and 6b illustrates the grille lower 14 with the locating lugs 21 and 22 and extra mounting openings 23 & 24.

It may be noted that the grill can be designed to suit the vehicle styling and the shape can be rectangular, square or any other shape. The grill can also be the one with holes.

Claims:

1. A replaceable grille lower for both left and right front cover structure of a step through motorcycle comprising a louvered structure in which longitudinal or cross-sectional grills are formed, the structure being provided with locating lugs and so as to enable snap fitting of the said grille on to the side covers of the motorcycle.
2. The replaceable grille lower as claimed in claim 1 wherein the grille is made of polymer.
3. The replaceable grille lower as claimed in claim 1 wherein the structure has a trapezoidal shape.
4. The replaceable grille lower as claimed in claim 1 wherein the said grille is provided with extra mounting openings to enable fastening with side covers.
5. Front cover structure for a step through motorcycle comprising left and right side covers, upper and lower leg shields and main pipe cover and a grille lower for both right and left side, said grille comprising a louvered structure in which longitudinal or cross-sectional grills are formed, the structure being provided with locating lugs and extra mounting openings so as to enable snap fitting of the said grille on to the side covers of the motorcycle.
6. Front cover structure for a step through motorcycle as claimed in Claim 5, wherein the said grille is provided with extra mounting openings to enable fastening with side covers.
7. A step through motorcycle characterized in that the replaceable grilles lower are placed on either side of the carburetor placed between side covers, said grilles comprising a louvered structure in which longitudinal or cross-sectional grills are formed, the structure being provided with locating lugs and so as to enable snap fitting of the said grille on to the side covers of the motorcycle.

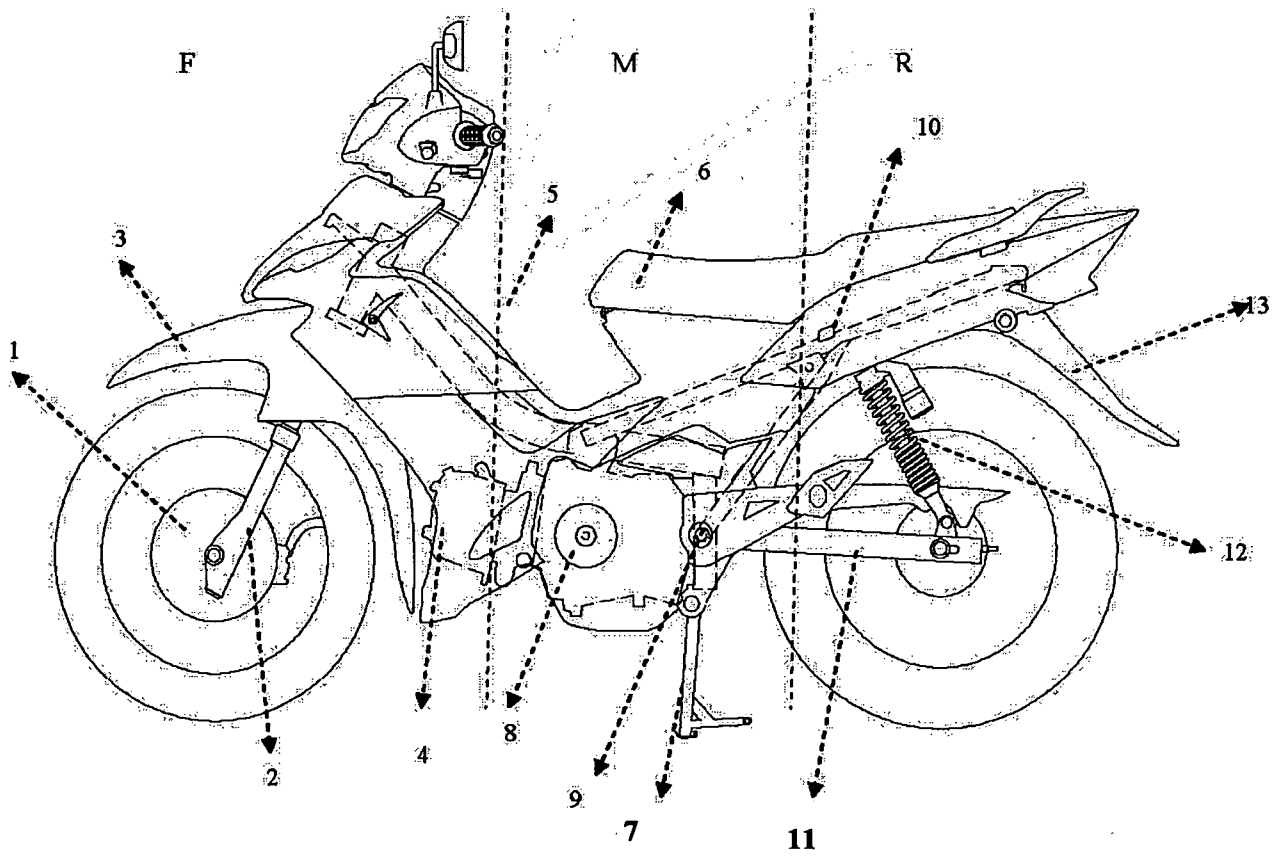


Fig. 1

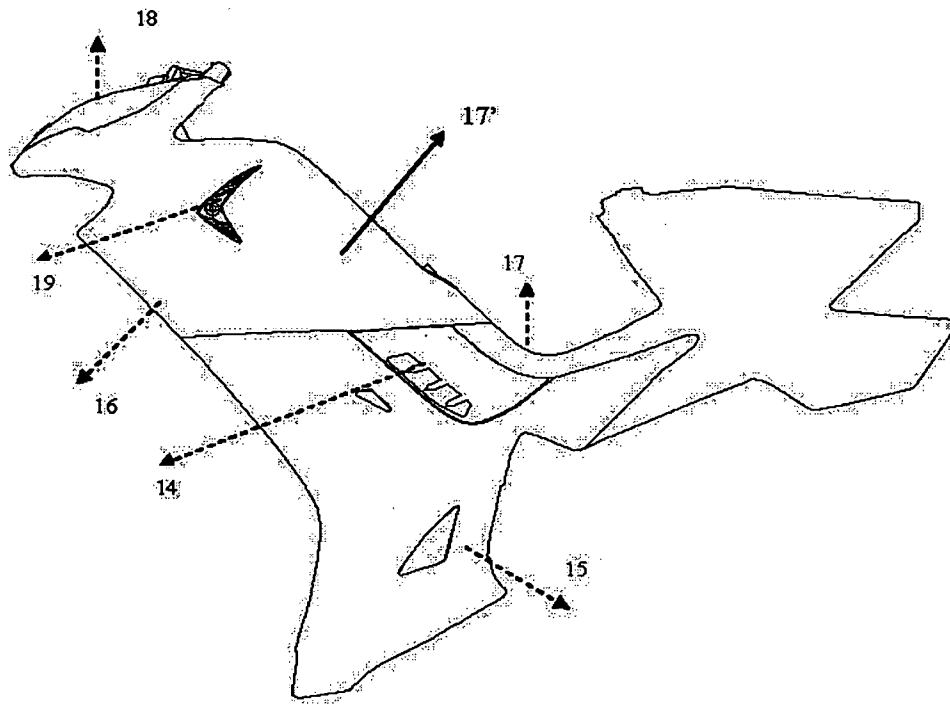


Fig. 2

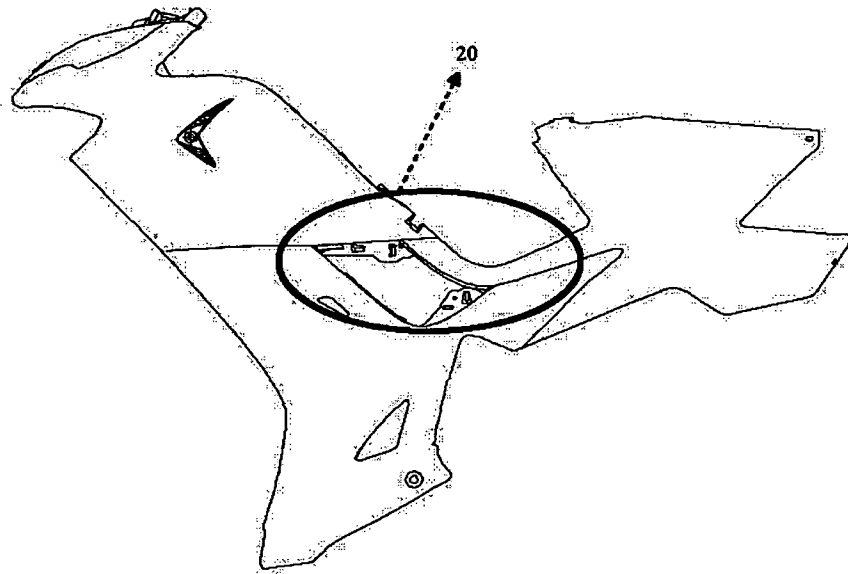


Fig. 3

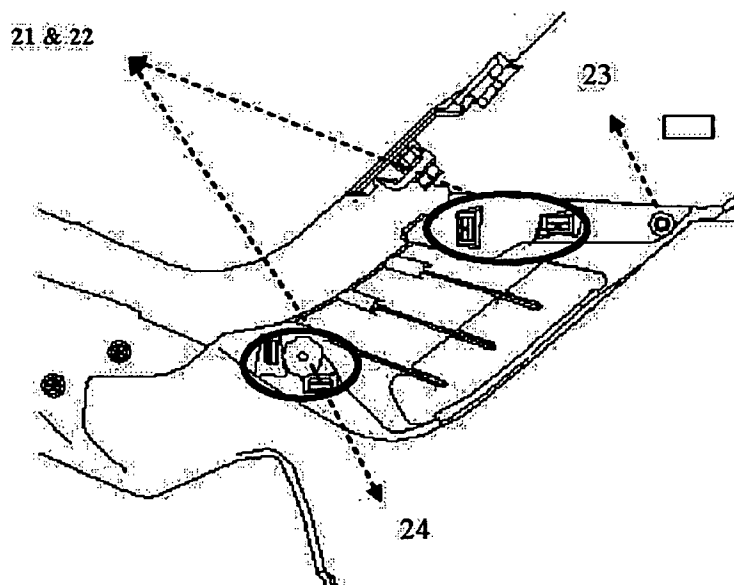


Fig. 4

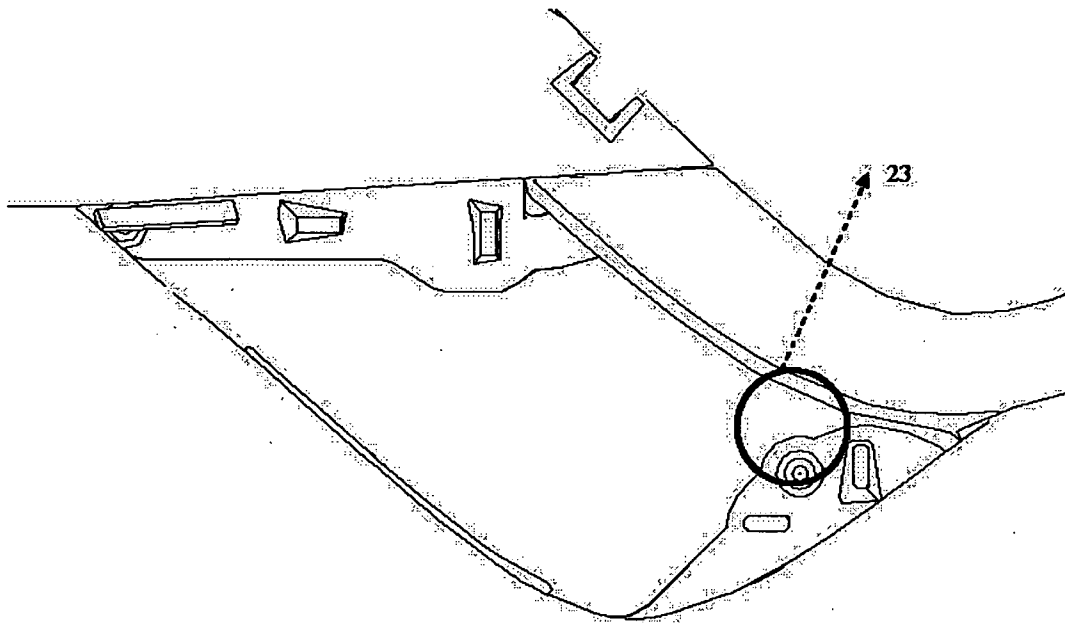


Fig. 5

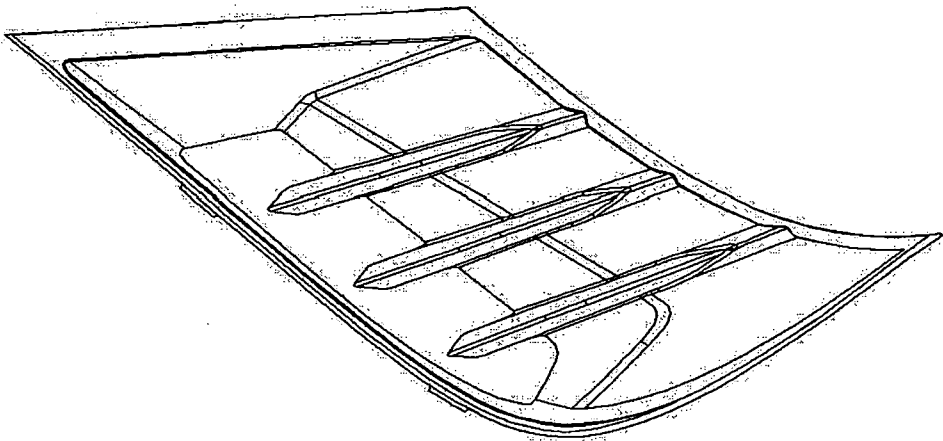


Fig. 6a

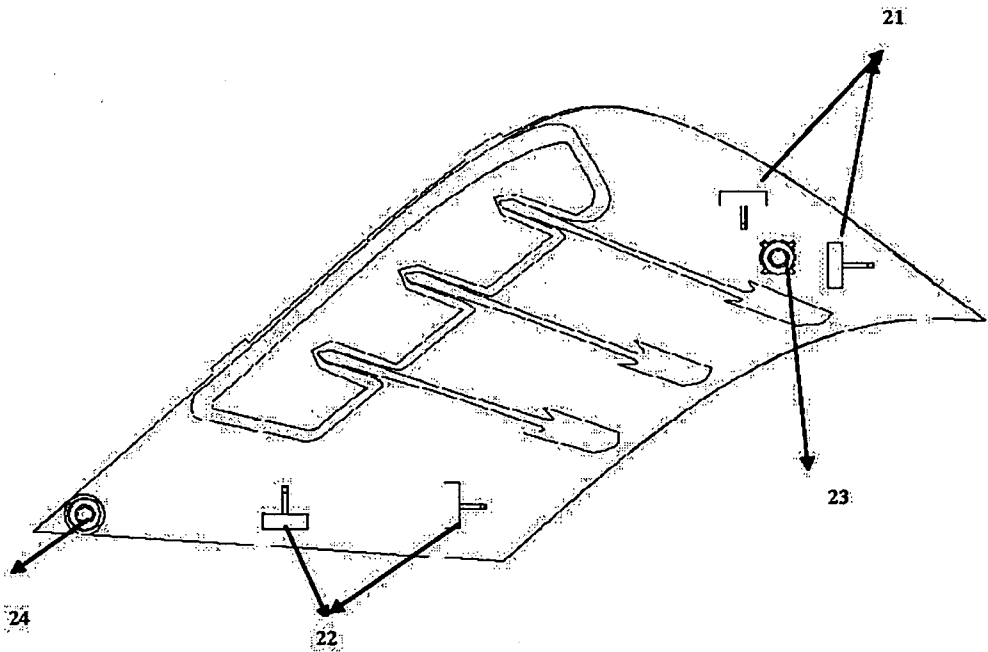


Fig. 6b