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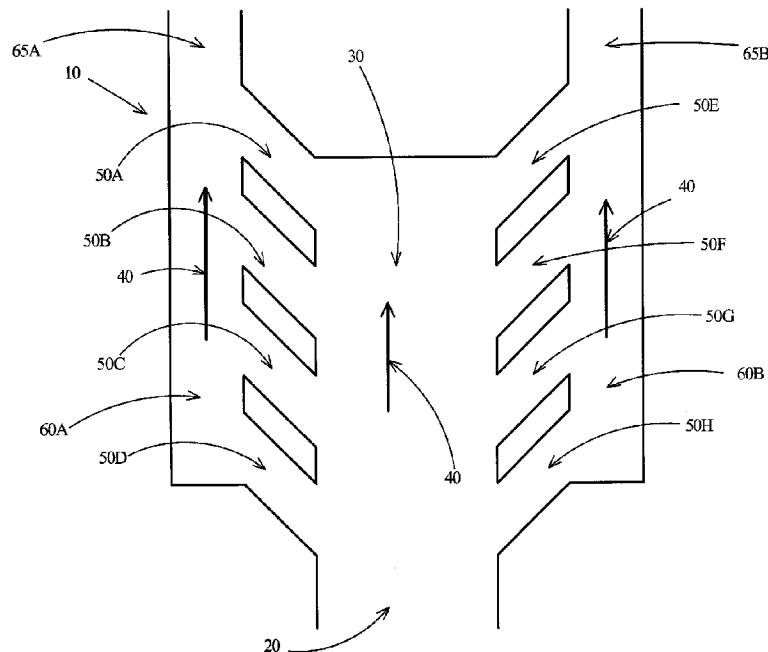
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(54) Titre : INSTALLATION D'ENTRETIEN DE VEHICULE

(54) Title: VEHICLE SERVICE FACILITY



(57) Abrégé/Abstract:

Methods and facilities relating to the washing and/or servicing of vehicles. A facility is provided that has at least one section specifically dedicated to vehicle cleaning or washing. Multiple vehicle bays are provided on either side of a main driveway connected to a single entrance for the section. One of two exit driveways, each parallel to the main driveway, are at the other side of each vehicle bay and lead to their corresponding exits. Each vehicle bay is at an acute angle to the main driveway and is at an obtuse angle to one of the two exit driveways. Customers' vehicles enter through the single entrance, pass through the main driveway and drive into one of the vehicle bays. Once the vehicle has been cleaned and/or serviced, the vehicle can simply drive through the vehicle bay to the corresponding exit driveway. To avoid the build-up of fog within the facility, the facility can be pressurized from within to force out any fog or condensation that forms inside.

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ABSTRACT

Methods and facilities relating to the washing and/or servicing of vehicles. A facility is provided that has at least one section specifically dedicated to vehicle cleaning or washing. Multiple vehicle bays are provided on either side of a main driveway connected to a single entrance for the section. One of two exit driveways, each parallel to the main driveway, are at the other side of each vehicle bay and lead to their corresponding exits. Each vehicle bay is at an acute angle to the main driveway and is at an obtuse angle to one of the two exit driveways. Customers' vehicles enter through the single entrance, pass through the main driveway and drive into one of the vehicle bays. Once the vehicle has been cleaned and/or serviced, the vehicle can simply drive through the vehicle bay to the corresponding exit driveway. To avoid the build-up of fog within the facility, the facility can be pressurized from within to force out any fog or condensation that forms inside.

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VEHICLE SERVICE FACILITY

TECHNICAL FIELD

[0001] The present invention relates to vehicle servicing facilities. More specifically, the present invention relates to a vehicle wash facility which allows easy entrance and exits for vehicles using the facility.

BACKGROUND OF THE INVENTION

[0002] Man's fascination with the automobile has produced multiple industries relating to the care, maintenance, and upkeep of all kinds and types of vehicles. One such industry is that relating to car washes.

[0003] Car wash facilities have been around since at least the 1910s and have developed continuously into the various types seen today. The different types of car wash facilities run the gamut from self-serve facilities, where customers wash their own cars, to automatic car washes where customers merely need to drive into the facility to get their automobiles automatically washed.

[0004] For quite a few car wash facilities, a major issue for customers is the difficulty in entering and leaving the facility. Most self-serve car wash facilities provide car bays into which customers can drive, park, and wash their vehicles. These bays have cleaning tools which the customer may use to clean their automobiles or other vehicles. Thus, sprayers, soap, hoses, and other cleaning related tools are made available to the

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customer. However, once the customer has finished washing his vehicle, the difficulty with exiting the facility begins. The customer has to either back out of the car bay or, if the customer backed into the bay in the first place, he can drive forward out of the bay. However, even driving forward can be problematic as the customer may encounter other vehicles which are trying to either enter or leave their bays. In fact, it is not unheard of for traffic jams and snarls to occur within these facilities.

[0005] The difficulties with manoeuvring at these car wash facilities are bad enough when the facilities are open air or outside facilities. The difficulties actually get much worse when the facility is enclosed, especially in the winter months. The hot water used in the facilities causes fog to form inside and thereby lowers if not eliminates any visibility that the customers may have. As can be imagined, having to back out of the car bays with little or no visibility coupled with the possibility of oncoming traffic is not something that most drivers look forward to.

[0006] From the above, there is a need for methods, facilities, and systems that mitigate if not overcome the limitations of the prior art.

SUMMARY OF INVENTION

[0007] The present invention provides methods and facilities relating to the washing and/or servicing of vehicles. A facility is provided that has at least one section

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specifically dedicated to vehicle washing. Multiple vehicle bays are provided on either side of a main driveway connected to a single entrance for the section. One of two exit driveways, each parallel to the main driveway, are at the other side of each vehicle bay and lead to their corresponding exits. Each vehicle bay is at an acute angle to the main driveway and is at an obtuse angle to one of the two exit driveways. Customers' vehicles enter through the single entrance, pass through the main driveway and drive into one of the vehicle bays. Once the vehicle has been cleaned and/or serviced, the vehicle can simply drive through the vehicle bay to the corresponding exit driveway. To avoid the build-up of fog within the facility, the facility can be pressurized from within to force out any fog or condensation that forms inside.

[0008] In a first aspect, the present invention provides a facility for providing consumers with vehicle wash related services and facilities, the facility comprising at least one section comprising:

- a main driveway;
- a first exit driveway;
- a second exit driveway;
- a single entrance leading to said main driveway;
- a plurality of vehicle bays;

wherein

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- said first and second exit driveways being parallel to said main driveway;
- at least one vehicle bay being between said main driveway and said first exit driveway and being at an acute angle from a forward direction of travel on said main driveway and being at an obtuse angle with a forward direction of travel on said first exit driveway;
- at least one vehicle bay being between said main driveway and said second exit driveway, and being at an acute angle from a forward direction of travel on said main driveway and at an obtuse angle with a forward direction of travel on said second exit driveway.

[0009] In a second aspect, the present invention provides a facility for use in providing services to vehicles, the facility comprising at least one service section comprising:

- a main driveway;
- a first exit driveway;
- a second exit driveway;
- a single entrance leading to said main driveway;
- a plurality of vehicle bays;

wherein

- said first and second exit driveways are parallel to said main driveway;

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- at least one vehicle bay being between said main driveway and said first exit driveway and being at an acute angle from a forward direction of travel on said main driveway and being at an obtuse angle with a forward direction of travel on said first exit driveway;

- at least one vehicle bay being between said main driveway and said second exit driveway, and being at an acute angle from a forward direction of travel on said main driveway and at an obtuse angle with a forward direction of travel on said second exit driveway.

[0010] In a third aspect, the present invention provides a facility for use in providing services to vehicles, the facility comprising at least one service section comprising:

- a main driveway;
- a first exit driveway;
- a second exit driveway;
- a single entrance leading to said main driveway;
- a plurality of vehicle bays;

wherein

- said first and second exit driveways are parallel to said main driveway;

- at least one vehicle bay being between said main driveway and said first exit driveway and being at an angle from a forward direction of travel on said main driveway and being at an angle with a forward direction of travel on said first exit driveway;

- at least one vehicle bay being between said main driveway and said second exit driveway, and being at an angle from a forward direction of travel on said main driveway and at an obtuse angle with a forward direction of travel on said second exit driveway.

[0010a] In a fourth aspect, the present invention discloses a facility for providing consumers with vehicle wash related services and facilities, the facility comprising at least one section comprising:

- a main driveway;
- a first exit driveway;
- a second exit driveway;
- a single entrance leading to said main driveway;
- a plurality of vehicle bays;

wherein

- each of said vehicle bays accommodates, at most, a single car-sized vehicle;
- said first and second exit driveways are parallel to said main driveway;

- said facility is an enclosed, in-door facility;

- at least one of said plurality of vehicle bays is between said main driveway and said first exit driveway and is at an acute angle from a forward direction of travel on said main driveway and is at an obtuse angle with a forward direction of travel on said first exit driveway;

- at least one of said plurality of vehicle bays is between said main driveway and said second exit driveway, and is at an acute angle from a forward direction of travel on said main driveway and is at an obtuse angle with a forward direction of travel on said second exit driveway.

[0010b] In a fifth aspect, the present invention discloses a facility for use in providing vehicle cleaning services to vehicles, the facility comprising at least one service section comprising:

- a main driveway;
- a first exit driveway;
- a second exit driveway;
- a single entrance leading to said main driveway;
- a plurality of vehicles bays;

wherein

- each of said vehicle bays accommodates, at most, a single car-sized vehicle;

- said first and second exit driveways are parallel to said main driveway;
- said at least one service section is an enclosed, in-door section;
- at least one of said plurality of vehicle bays is between said main driveway and said first exit driveway and is at an acute angle from a forward direction of travel on said main driveway and is at an obtuse angle with a forward direction of travel on said first exit driveway;
- at least one of said plurality of vehicle bays is between said main driveway and said second exit driveway, and is at an acute angle from a forward direction of travel on said main driveway and is at an obtuse angle with a forward direction of travel on said second exit driveway.

[0010c] In a sixth aspect, the present invention discloses a facility for use in providing cleaning services to vehicles, the facility comprising at least one service section comprising:

- a main driveway;
- a first exit driveway;
- a second exit driveway;
- a single entrance leading to said main driveway;
- a plurality of vehicle bays;

wherein

- each of said vehicle bays accommodates, at most, a single car-sized vehicle;
- said first and second exit driveways are parallel to said main driveway;
- at least one vehicle bay being between said main driveway and said first exit driveway and being at an angle from a forward direction of travel on said main driveway and being at an angle with a forward direction of travel on said first exit driveway;
- at least one vehicle bay being between said main driveway and said second exit driveway, and being at an angle from a forward direction of travel on said main driveway and at an obtuse angle with a forward direction of travel on said second exit driveway
- said section allows a vehicle to travel from said main driveway to either said first or second exit driveways by driving in a forward direction.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] The embodiments of the present invention will now be described by reference to the following figures, in which identical reference numerals in different figures indicate identical elements and in which:

FIGURE 1 is a plan view of a section of a facility illustrating one aspect of the invention; and

FIGURE 2 is a plan view of a facility with two sections as detailed in Figure 1.

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DETAILED DESCRIPTION OF THE INVENTION

[0012] Referring to Figure 1, a plan view of a section 10 of a car wash facility is illustrated. As can be seen, the section 10 has a single entrance 20 that leads to a main driveway 30. If one is travelling in direction 40 on the main driveway 30, to the left are vehicle bays 50A-50D while to the right are vehicle bays 50E-50H. Vehicle bays 50A-50D connect to and allow vehicles to exit driveway 60A via exit 65A. Similarly, vehicle bays 50E-50H also connect and allow vehicles to exit driveway 60B via exit 65B. These vehicle bays are drive through bays meaning that vehicle can drive in from the main driveway and they can drive through the vehicle bay to the corresponding exit driveway with all the driving being done in a forward manner.

[0013] It should be noted that all the driveways noted above are one-way in that vehicles are only allowed to travel in one direction on them. This single direction of travel is denoted by reference numeral 40 in Figure 1.

[0014] As can be seen in Figure 1, the vehicle bays are at an acute angle (less than 90 degrees) to the direction of travel 40 on the main driveway 30. Similarly, the vehicle bays are at an obtuse angle (more than 90 degrees) to the direction of travel on the exit driveways. It should be noted that these acute or obtuse angles are preferred but not necessary. In fact, the bays may be at right angles to the main driveway or at right angles to one or both of the exit driveways.

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[0015] The arrangement illustrated in Figure 1 ensures that vehicles entering to take advantage of the facility's services only need to travel in one direction. Vehicles no longer need to back up or do U-turns as vehicle flow is unidirectional. Customers' vehicles merely need to queue up at the entrance, follow the main driveway, and drive into an unoccupied vehicle bay. Once there, depending on the facility's services, the vehicle is either cleaned by the facility staff or the customer can use the facility's provided washing tools and implements to clean his or her vehicle. Once the vehicle has been cleaned, the customer can simply drive through the vehicle bay and on to the corresponding exit driveway. Of course, if other customers are exiting at the same time through the same exit driveway, the customer may need to wait for his or her turn to exit.

[0016] It should be noted that, preferably, each exit driveway is provided with its own exit. The section 10 would thus have two exits (one for each exit driveway) and a single entrance. The section can, of course, be part of a larger facility with multiple sections, each configured in a manner similar to the section illustrated in Figure 1.

[0017] Referring to Figure 2, a plan view of a multi-section facility is illustrated. As can be seen, two sections, each being configured as in Figure 1, are disposed side by side. In this implementation, each section is self-contained. Facilities with more than two sections are, of course, possible.

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[0018] It should also be noted that, preferably, the section described above is located at an indoor facility. An indoor facility can provide services at all times of the year and in different types of weather. However, such a configuration may also be used in an outdoor facility.

[0019] Should the car wash facility be an indoor facility, fog may build up due to condensation, especially if warm or hot water is used for cleaning the cars. This can be addressed by having the facility positively pressurized by forcing air into the facility. Such pressurization would therefore force out the warm air inside or keep out the cold air, thereby preventing fog formation.

[0020] In one configuration, each vehicle bay in the section is provided with the accoutrements useful for washing a vehicle. A pressure washer, cleaning cloths, various soaps and detergents, a vacuum cleaner with appropriate attachments, various types and brands of car waxes, and other similar and suitable tools, implements, and accessories may be found in each vehicle bay. Depending on the type of facility, either the customer can clean the vehicle himself or a team provided by the facility may perform the cleaning duties.

[0021] In another configuration, each vehicle bay may take the form of an automated car wash with suitable automated brushes, water jets, and drying blowers. For such a configuration, of course, the vehicle bay may be longer than the configuration which allows for a manual vehicle wash.

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[0022] It should be noted that the configuration illustrated in Figure 1 may be used for any facility that provides services to all types of vehicles, including oil changes, washes, and other vehicle maintenance services. Preferably, the services are high volume services as the configuration is well-suited to quick turnaround services. For such facilities, the service sections with the suitable vehicle bays would be suitably equipped to provide vehicle maintenance services. For a facility that provides oil changes, the vehicle bays would be suitably equipped with equipment for providing quick oil changes. As well, for facilities that provide car window or glass repair services, the vehicle bays would be equipped for servicing vehicle windows and windshields. Of course, some facilities may be equipped to provide multiple disparate services for vehicles. Thus, some vehicles bays may be equipped for vehicle washes, some may be equipped for oil changes, and some may be equipped to service windows and windshields.

[0023] It should further be noted that the facility which includes at least one section similar to that illustrated in Figure 1 may be accessorized to provide a theme to entice customers. A rock and roll based theme may be used by providing decorations, posters, statues, and the like that are suggestive of rock and roll music. These decorations may also further suggest a specific era in rock and roll music such as the 1950s, 1960s, or even the 1970s. Other themes, such as comic book heroes, cars, cartoons, and others may be used.

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[0024] In addition to having a theme, facilities using the section illustrated in Figure 1 may also have other sections that provide other vehicle related services or customer-centric services. In one implementation, the vehicle service/car wash facility has a coffee shop or a diner section where a customer can drop by for coffee or food while their vehicle is being serviced/cleaned. As well, in addition to servicing or cleaning vehicles, the facility may also have a separate section for cleaning and/or servicing larger vehicles such as trucks, transport trailer vehicles, and the like. The facility may also have other vehicle maintenance/cleaning sections that are configured differently from the section illustrated in Figure 1.

[0025] It should also be noted that the above discussion mentions a vehicle bay. Preferably, such a vehicle bay is suitable for use by all types of vehicles including cars, trucks, minivans, vans, SUVs, and other vehicles that may require servicing/cleaning. It should further be noted that the vehicle bay, properly sized in terms of width and length, may be used for even large tractor trailers. When used for tractor trailers (or other vehicles), the vehicle bay may be used for loading/unloading the tractor trailers as well as for servicing the vehicle.

[0026] It should be noted, as well, that the term "car wash facility" is mean to include any and all facilities that provide vehicle washing/cleaning services or vehicle maintenance services.

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[0027] A person understanding this invention may now conceive of alternative structures and embodiments or variations of the above all of which are intended to fall within the scope of the invention as defined in the claims that follow.

What is claimed is:

1. A facility for providing consumers with vehicle wash related services and facilities, the facility comprising at least one section comprising:

- a main driveway;
- a first exit driveway;
- a second exit driveway;
- a single entrance leading to said main driveway;
- a plurality of vehicle bays;

wherein

- each of said vehicle bays accommodates, at most, a single car-sized vehicle;
- said first and second exit driveways are parallel to said main driveway;
- said facility is an enclosed, in-door facility;
- at least one of said plurality of vehicle bays is between said main driveway and said first exit driveway and is at an acute angle from a forward direction of travel on said main driveway and is at an obtuse angle with a forward direction of travel on said first exit driveway;
- at least one of said plurality of vehicle bays is between said main driveway and said second exit driveway, and is at an acute angle from a forward direction of travel on said main driveway and is at an

obtuse angle with a forward direction of travel on
said second exit driveway.

2. The facility according to claim 1, wherein at least one of said plurality of vehicle bays is equipped with equipment suitable for manual cleaning of vehicles.
3. The facility according to claim 1, wherein vehicles are only allowed to travel in said forward direction of travel on said main driveway and on said first and second exit driveways.
4. The facility according to claim 1, wherein each of said first and second exit driveways is provided with a corresponding exit from said facility.
5. The facility according to claim 1, wherein said facility is pressurised to minimize fog formation in said facility.
6. The facility according to claim 1, wherein said facility provides automated vehicle washing services.
7. The facility according to claim 1, wherein at least one of said plurality of vehicle bays is equipped with apparatus for automatically cleaning vehicles.
8. The facility according to claim 1, wherein said facility provides automated vehicle washing services.
9. The facility according to claim 8, wherein at least one of said plurality of vehicle bays is equipped with apparatus for automatically cleaning vehicles.

10. A facility for use in providing vehicle cleaning services to vehicles, the facility comprising at least one service section comprising:

- a main driveway;
- a first exit driveway;
- a second exit driveway;
- a single entrance leading to said main driveway;
- a plurality of vehicles bays;

wherein

- each of said vehicle bays accommodates, at most, a single car-sized vehicle;
- said first and second exit driveways are parallel to said main driveway;
- said at least one service section is an enclosed, in-door section;
- at least one of said plurality of vehicle bays is between said main driveway and said first exit driveway and is at an acute angle from a forward direction of travel on said main driveway and is at an obtuse angle with a forward direction of travel on said first exit driveway;
- at least one of said plurality of vehicle bays is between said main driveway and said second exit driveway, and is at an acute angle from a forward direction of travel on said main driveway and is at an

obtuse angle with a forward direction of travel on
said second exit driveway.

11. The facility according to claim 10, wherein said facility provides vehicle wash services.

12. The facility according to claim 10, wherein said facility also provides vehicle maintenance services.

13. The facility according to claim 10, wherein said facility comprises at least two service sections.

14. A facility for use in providing cleaning services to vehicles, the facility comprising at least one service section comprising:

- a main driveway;
- a first exit driveway;
- a second exit driveway;
- a single entrance leading to said main driveway;
- a plurality of vehicle bays;

wherein

- each of said vehicle bays accommodates, at most, a single car-sized vehicle;
- said first and second exit driveways are parallel to said main driveway;
- at least one vehicle bay being between said main driveway and said first exit driveway and being at an angle from a forward direction of travel on said main

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driveway and being at an angle with a forward direction of travel on said first exit driveway;

- at least one vehicle bay being between said main driveway and said second exit driveway, and being at an angle from a forward direction of travel on said main driveway and at an obtuse angle with a forward direction of travel on said second exit driveway

- said section allows a vehicle to travel from said main driveway to either said first or second exit driveways by driving in a forward direction.

15. The facility according to claim 14, wherein said facility provides vehicle wash services.

16. The facility according to claim 14, wherein said facility provides vehicle maintenance services.

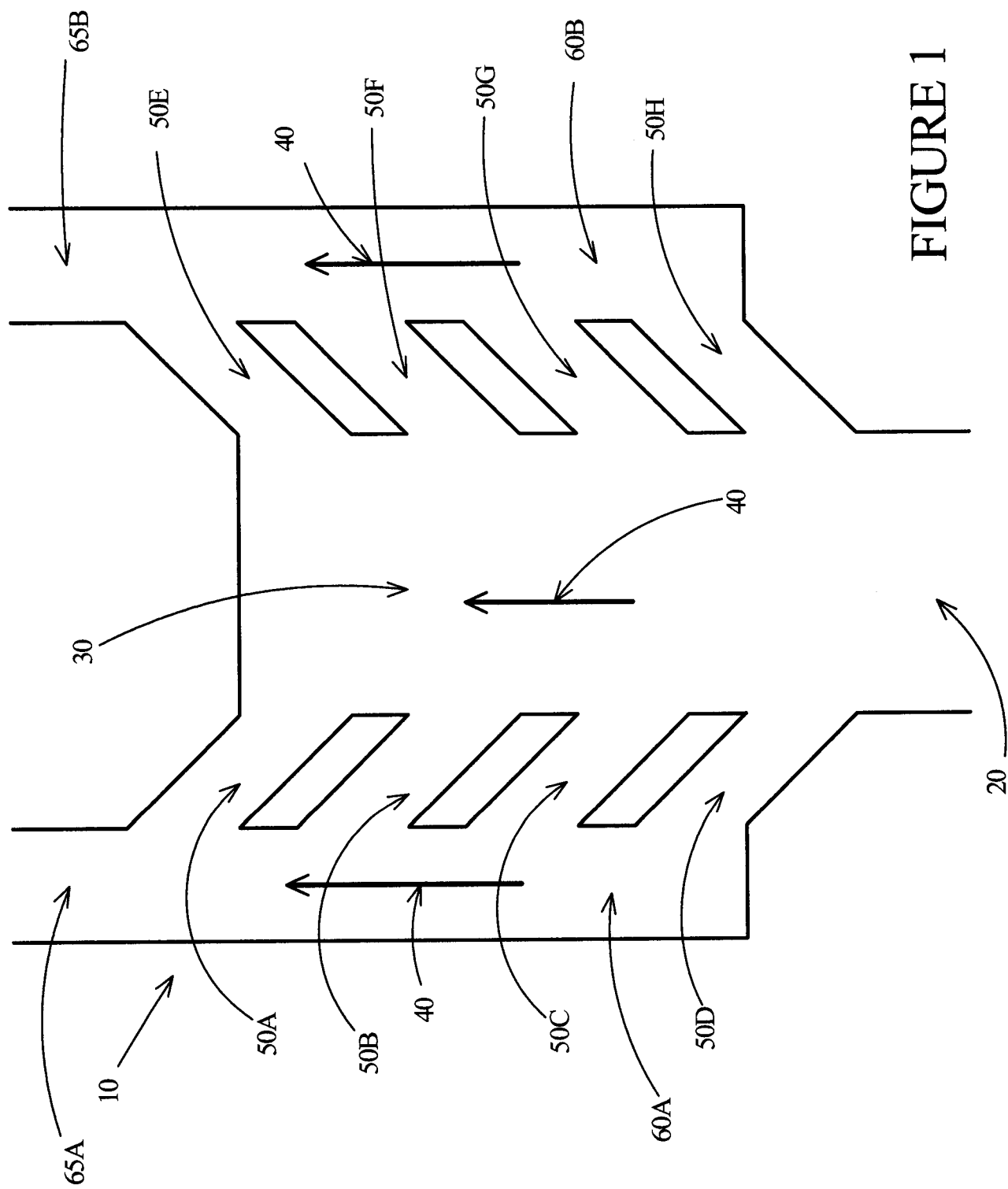


FIGURE 1

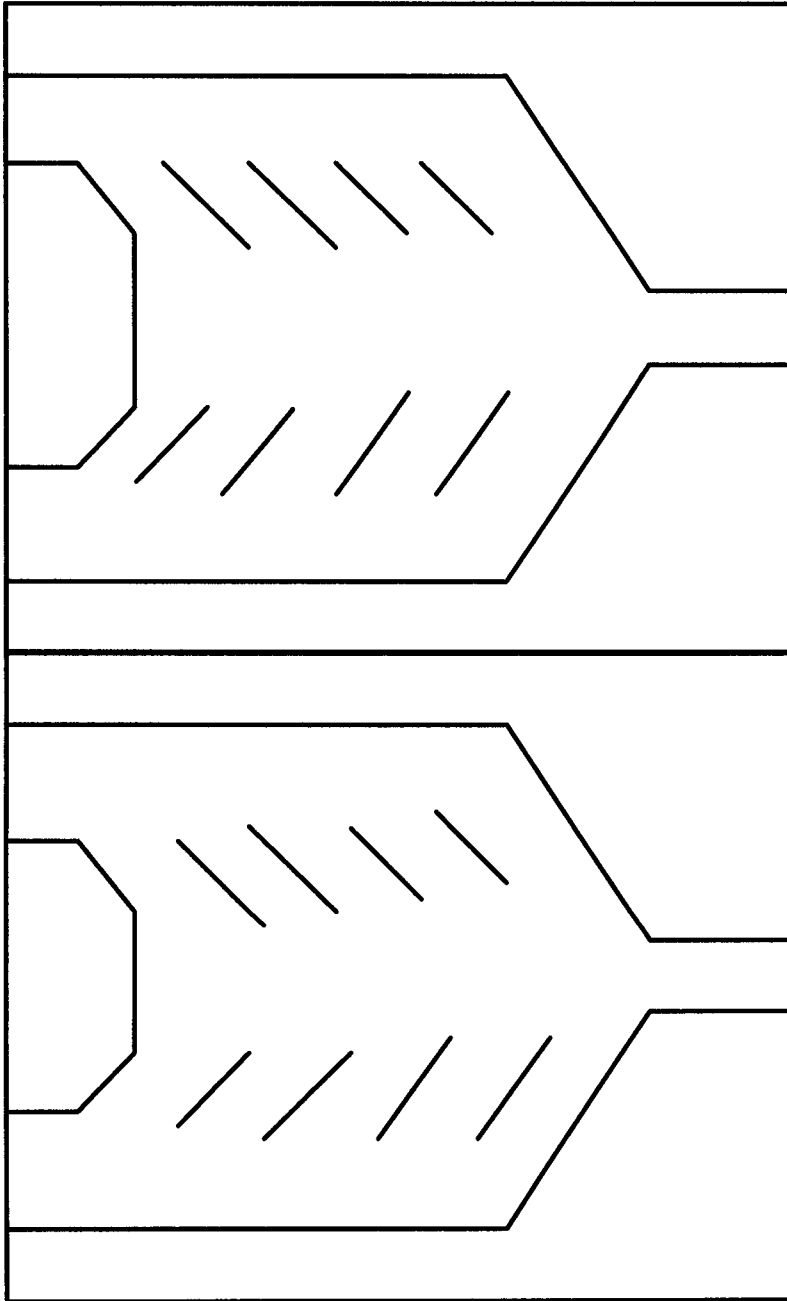


FIGURE 2

