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(54) **GRINDING MACHINE**

SCHLEIFMASCHINE

MEULEUSE

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Description

FIELD OF THE INVENTION

[0001] The present invention relates to a grinding machine, and particularly to a grinding machine that forms a positive pressure environment between a grinding machine body and a grinding disc to eliminate invasion of dust and moisture.

BACKGROUND OF THE INVENTION

[0002] In current grinding machines, associated industrialists commonly provide a dust sucking structure on the grinding machines. The dust sucking structure sucks dust generated during a process of grinding a material under grinding, as disclosed in TW 439616, CN 1748939, US 6,802,766, US 7,722,438, JP5760892, JP5696488, JP5682410, JP2014217920, JP2014124752, JP2014039975, JP2012210691, EP2479001, EP3028811 and EP2611573 patents.

[0003] US 3,591,989 A discloses a grinding machine according to the preamble of claim 1, wherein a grinding wheel is rotated by a compressed air-driven motor and wherein sound dampening means is formed in a dust shield which surrounds part of the periphery of the grinding wheel and has an air-outlet passage formed between two peripherally extending parts of the dust shield.

[0004] US 3,646,712 A discloses a dust-removing attachment device for rotary disk power grinders or sanders is described wherein a continuous current of air is maintained over and around the grinding or sanding surface to capture and withdraw dust particles and the like into a vacuum chamber. Filtered and pressurized exhaust air from a vacuum cleaner tank is directed through a first plenum to discharge forcefully about the rotary disk at one side, and a vacuum plenum open at the other side of the disk and leading to the input of the vacuum cleaner serves to maintain a strong current of dust capturing circulating air.

[0005] However, in the above implementation method, dust may be inappropriately accumulated on a grinding disc and a transmission member of a power assembly. As a result, friction is constantly produced between the transmission member and dust to cause a temperature rise in the transmission member, which disfavors long-term implementation.

[0006] Further, a grinding environment of the grinding machine is not limited to only dry grinding but also includes wet grinding. If wet grinding is performed using conventional technologies of the above patents, moisture or water, which is not easy to clean, may be drawn by the dust and enter the grinding machine. If the grinding machine is disassembled to allow moisture or water to evaporate each time the grinding machine is used after grinding, more grinding machines need to be purchased in order to use the grinding machines in turn, leading to increased costs. Further, disassembling the grinding machines also causes a waste in working hours. In addition, industries today are gradually evolving into implementation conducted by robots, and working hours of the robots may be reduced if grinding machines installed on the robots need to be disassembled from the robots in the long run.

SUMMARY OF THE INVENTION

[0007] It is a primary object of the present invention to solve issues of the susceptibility to effects of a grinding environment and inappropriate accumulation of dust of a conventional dust sucking structure.

[0008] To achieve the above object, the present invention provides a grinding machine according to claim 1. The grinding machine includes a grinding machine body and a grinding disc connected to the grinding machine body. The grinding machine body is provided with a host housing, a cover body connected to the host housing, a pressure cavity defined by the cover body and arranged at a position facing the grinding disc, and a gas intake pipe corresponding to the pressure cavity and disposed on the cover body. The gas intake pipe is connected to an external gas source, and is adapted to guide a high-pressure gas into the pressure cavity and to create a positive-pressure environment in which a pressure in the pressure cavity is greater than a pressure outside the grinding machine body.

[0009] The grinding machine is characterized in that a lower edge of the grinding machine body is not closely connected to the grinding disc, so as to form a pressure release gap in communication with the pressure cavity, and one side of the cover body which faces the grinding disc is hollow in order to communicate with the pressure release gap, and is adapted to continually release the high-pressure gas in the pressure cavity via the pressure release gap to prohibit external dust from entering the pressure cavity.

[0010] Advantageous embodiments are the subject of the dependent claims.

[0011] In one embodiment, the cover body includes a first end connected to the host housing and a second end facing the grinding disc. The size of the second end is greater than the size of the first end.

[0012] In one embodiment, the grinding machine body includes a connecting member, which is disposed in the cover body and causes the grinding disc to be linked with a power assembly disposed in the host housing.

[0013] In one embodiment, the grinding machine body includes the host housing and a gas guiding pipe. The host housing includes a cavity for disposing the power assembly, a gas intake channel in communication with the cavity and receiving the high-pressure gas from the external gas source, and a gas output channel in communication with the cavity and discharging the high-pressure gas out of the cavity. The gas guiding pipe has its two ends respectively connected to the gas output channel and the gas intake channel to guide the high-pressure

gas into the pressure cavity.

[0014] In one embodiment, the grinding machine body includes a regulating valve connected to the gas output channel and the gas guiding pipe.

[0015] In one embodiment, the grinding machine body includes a coupling tube. The coupling tube includes a first channel connected to the gas output channel and the gas guiding pipe, and a second channel branched from and in communication with the first channel and causing a part of the high-pressure gas to be released.

[0016] In one embodiment, the coupling tube includes a deflation control member disposed in the second channel. The deflation control member includes a plug body and a through hole disposed on the plug body.

[0017] According to the disclosed embodiments of the present invention, the present invention includes following features compared to the prior art. In the present invention, the pressure cavity becomes a positive-pressure environment because of the high-pressure gas, and the high-pressure is caused to be discharged via the pressure release gap, such that not only dust is prohibited from entering the pressure cavity but also the pressure cavity is kept dry. Further, components of the grinding machine disposed in the pressure cavity are provided with better heat dissipation. In addition, while the high-pressure gas is being discharged via the pressure release gap, the high-pressure gas drives the airflow around the grinding machine to further prohibit the dust from entering the pressure cavity.

BRIEF DESCRIPTION OF THE DRAWINGS

[0018]

Fig. 1 is a structural schematic diagram of a grinding machine according to an embodiment of the present invention;

Fig. 2 is a partial sectional structural schematic diagram of a grinding machine according to an embodiment of the present invention;

Fig. 3 is a first schematic diagram of a high-pressure gas in flow according to an embodiment of the present invention;

Fig. 4 is a second schematic diagram of a high-pressure gas in flow according to an embodiment of the present invention;

Fig. 5 is a structural schematic diagram of a grinding machine according to another embodiment of the present invention;

Fig. 6 is a structural schematic diagram of a grinding machine according to another embodiment of the present invention;

Fig. 7 is a structural schematic diagram of a grinding machine according to another embodiment of the present invention;

Fig. 8 is a schematic diagram of a high-pressure gas in flow according to an embodiment of the present invention; and

Fig. 9 is an enlarged partial schematic diagram of Fig. 8 of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0019] Details and technical contents of the present invention are given with the accompanying drawings below.

[0020] Referring to Fig. 1 and Fig. 2, the present invention provides a grinding machine 10, which primarily includes a grinding machine body 11 and a grinding disc 12 connected to the grinding machine body 11. The grinding machine body 11 is provided with a pressure cavity 13 at a position facing the grinding disc 12, and a gas intake pipe 111 corresponding to the pressure cavity 13. The gas intake pipe 111 is in communication with the pressure cavity 13. Further, a lower edge of the grinding machine body 11 is not closely connected to the grinding disc 12, so as to form a pressure release gap 14 in communication with the pressure cavity 13. More specifically, the grinding machine body 11 has its one side facing the grinding disc 12 designed as recessed to form the pressure cavity 13. That is to say, the pressure cavity 13 and the pressure release gap 14 are in fact in communication. Further, in one embodiment, the grinding machine body 11 includes a host housing 112 and a cover body 113 connected to the host housing 112. The cover body 113 is not in close contact with the grinding disc 12, so as to form the pressure release gap 14. Further, the cover body 113 may appear slightly similar to an umbrella to define the pressure cavity 13, and has its one side facing the grinding disc 12 appear hollow to cause the pressure cavity 13 to be in direct communication with the pressure release gap 14. Further, the cover body 113 includes a first end 114 connected to the host housing 112, and a second end 115 connected to and facing the grinding disc 12. In one embodiment, the size of the second end 115 is greater than the size of the first end 114, as shown in Fig. 2. On the other hand, the grinding machine body 11 includes a connecting member 116, which is disposed at the cover body 113 and causes the grinding disc 12 to be linked with a power assembly 15 disposed in the host housing 112. Further, the connecting member 116 is installed on a transmission shaft 151 of the power assembly 15. When the power assembly 15 is activated and rotates, the transmission shaft 151 drives the connecting member 116 to rotate to further rotate the grinding disc 12. Further, the connecting member 116 may be a counterweight to stabilize the rotation of the grinding disc 12 though counterweight.

[0021] The gas intake pipe 111 of the present invention may be connected to an external gas source (not shown), and induces a high-pressure gas to enter the pressure cavity 13 when the external gas source is activated. At this point, the pressure in the pressure cavity 13 suddenly becomes greater than the pressure outside the pressure cavity 13 due to the high-pressure gas induced. That is

too say, the pressure in the pressure cavity 13 is greater than the pressure outside the grinding machine body 11. As such, the pressure cavity 13 becomes a positive-pressure environment. The high-pressure gas is later continually released via the pressure release gap 14, and a flow of the gas pressure is as shown in Fig. 3. Referring to Fig. 4, when the high-pressure gas exists via the pressure release gap 14, gas around the grinding machine body 11 is driven by the high-pressure gas to flow along the direction of the high-pressure gas. As a result, the flow of the airflow of the grinding disc 12 becomes even more obvious to further substantially prohibit dust generated during an operation of the grinding machine 10 from entering the pressure cavity 13. Further, in the present invention, the high-pressure gas is caused to enter the pressure cavity 13, such that moisture or water seeping into the pressure cavity 13 is blown dry by the high-pressure gas when the grinding machine 10 performs wet grinding. Thus, the pressure cavity 13 of the grinding machine 10 can be appropriately kept dry to prevent a part of the components of the grinding machine 10 from corrosion caused by accumulated moisture or water. Further, through such design of the present invention, the grinding machine 10 is adaptable to various grinding environments (e.g., wet grinding or dry grinding), so as to reduce the frequency of post-implementation equipment maintenance and to be readily installed to a mechanical arm (not shown). Further, through the above technical solution, the transmission shaft 151 and nearby structures may be blown by the high-pressure gas during a grinding process, such that thermal exchange may be performed to prevent heat from accumulating on the transmission shaft 151 and the nearby structures.

[0022] Although the grinding machine 10 implemented by a pneumatic approach is illustrated in Fig. 1 as an example, it should be noted that the embodiments of the present invention are not limited to the pneumatic grinding machine 10, and may be applied to the grinding machine 10 implemented by an electric approach.

[0023] In addition to the circular form depicted in Fig. 1 to Fig. 4, the grinding disc 12 of the present invention may also be implemented in a square form, as shown in Fig. 5. When the grinding disc 12 is in a square form, implementation concepts are the same and shall be omitted herein.

[0024] Referring to Fig. 6 and Fig. 8, the host housing 112 includes a cavity 117 for disposing the power assembly 15, an gas intake channel 118 connected to the cavity 117 and for receiving the high-pressure gas from the external gas source, and a gas output channel 119 in communication with the cavity 117 and for discharging the high-pressure gas out of the cavity 117. The gas intake channel 118 receives the high-pressure gas into the cavity 117. The high-pressure gas drives the power assembly 15 to rotate, which further drives the grinding disc 12 to rotate for grinding. Further, in addition to the foregoing gas intake approach, in one embodiment, the grinding machine body 11 includes a gas guiding pipe 16, which has its two ends respectively connected to the gas output channel 119 and the gas intake pipe 111. The gas guiding pipe 16 receives the high-pressure gas discharged from the gas output channel 119, and guides the high-pressure gas into the pressure cavity 13. As such, the high-pressure gas is effectively utilized to prevent the high-pressure gas from becoming waste gas after only a one-time operation.

[0025] Referring to Fig.6, the grinding machine body 11 may further include a regulating valve 17, which is connected between the gas output channel 119 and the gas guiding pipe 16. Through the regulating valve 17, the amount of the high-pressure gas entering the pressure cavity 13 through the gas guiding pipe 16 is controlled. Further, there are numerous types of the regulating valve 17, and associated details shall be omitted herein. During an application process of the regulating valve 17, as shown in Fig. 8, the regulating valve 17 may release a part of the high-pressure gas to reduce the amount of the high-pressure gas entering the gas guiding pipe 16. Referring to Fig. 7 to Fig. 9, in one embodiment, the grinding machine body 11 may further include a coupling tube 18. The coupling tube 18 includes a first channel 181 connected to the gas output channel 119 and the gas guiding pipe 16, and a second channel 182 branched from and remaining in communication with the first channel 181 and allowing a part of the high-pressure to be released. More specifically, an inner channel diameter of the second channel 182 affects the releasable amount of the high-pressure gas. In one embodiment, a deflation control member 183 is disposed in the second channel 182. The deflation control member 183 includes a plug body 184 and a through hole 185 disposed on the plug body 184. The aperture size of the through hole 185 determines a pressure release status of the deflation control member 183. When the aperture of the through hole 185 is larger, the deflation control member 183 releases a larger amount of the high-pressure gas and reduces the amount of the high-pressure gas entering the gas guiding pipe 16. Conversely, when the aperture of the through hole 185 is smaller, the deflation control member 183 is incapable of discharging a large amount of the high-pressure gas, such that the amount of the high-pressure gas entering the gas guiding pipe 16 is larger than that when the aperture of the through hole 185 is larger.

[0026] In summary there is disclosed a grinding machine 10 including a grinding machine body 11 and a grinding disc 12 connected to the grinding machine body 11. The grinding machine body 11 is provided with a pressure cavity 13 at a position facing the grinding disc 12 and a gas intake pipe 111 corresponding to the pressure cavity 13. A pressure release gap 14 in communication with the pressure cavity 13 is formed between the grinding machine body 11 and the grinding disc 12. The gas intake pipe 111 induces a high-pressure gas into the pressure cavity 13, which receives an effect of the high-pressure gas to become a positive-pressure environment. The high-pressure gas is continually released via

the pressure release gap 14 to prohibit external dust from entering the pressure cavity 13. Thus, the grinding machine 10 is capable of preventing dust from accumulating in the pressure cavity 13 as well as effectively preventing moisture from entering the pressure cavity 13 when the grinding machine 10 is applied for wet grinding.

Claims

1. A grinding machine (10), comprising a grinding machine body (11) and a grinding disc (12) connected to the grinding machine body (11), wherein the grinding machine body (11) is provided with a host housing (112), a cover body (113) connected to the host housing (112), a pressure cavity (13) defined by the cover body (113) and arranged at a position facing the grinding disc (12), and a gas intake pipe (111) corresponding to the pressure cavity (13) and disposed on the cover body (113), wherein the gas intake pipe (111) is connected to an external gas source, and is adapted to guide a high-pressure gas into the pressure cavity (13) and to create a positive-pressure environment in which a pressure in the pressure cavity (13) is greater than a pressure outside the grinding machine body (11);
characterized in that a lower edge of the grinding machine body (11) is not closely connected to the grinding disc (12), so as to form a pressure release gap (14) in communication with the pressure cavity (13), and one side of the cover body (113) which faces the grinding disc (12) is hollow in order to communicate with the pressure release gap (14), and is adapted to continually release the high-pressure gas in the pressure cavity (13) via the pressure release gap (14) to prohibit external dust from entering the pressure cavity (13).

2. The grinding machine (10) of claim 1, wherein the cover body (113) comprises a first end (114) connected to the host housing (112) and a second end (115) facing the grinding disc (12), and a size of the second end (115) is greater than a size of the first end (114).

3. The grinding machine (10) of claim 1 or 2, wherein the grinding machine body (11) comprises a connecting member (116), which is disposed at the cover body (113) and causes the grinding disc (12) to be linked with a power assembly (15) disposed in the host housing (112).

4. The grinding machine (10) of one of the preceding claims, wherein the grinding machine body (11) comprises a host housing (112) and a gas guiding pipe (16), the host housing (112) comprises a cavity (117) for disposing a power assembly (15), a gas intake channel (118) in communication with the cavity (117) and for receiving the high-pressure gas from an external gas source, and a gas output channel (119) in communication with the cavity (117) and for discharging the high-pressure gas out of the cavity (117), and two ends of the gas guiding pipe (16) are respectively connected to the gas output channel (119) and the gas intake pipe (111) to guide the high-pressure gas into the pressure cavity (13).

5. The grinding machine (10) of claim 4, wherein the grinding machine body (11) comprises a regulating valve (17) connected between the gas output channel (119) and the gas guiding pipe (16).

6. The grinding machine (10) of claim 4, wherein the grinding machine body (11) comprises a coupling tube (18), which comprises a first channel (181) connected to the gas output channel (119) and the gas guiding pipe (16) and a second channel (182) branched from and in communication with the first channel (181) and allowing a part of the high-pressure gas to be released.

7. The grinding machine (10) of claim 6, wherein the coupling tube (18) comprises a deflation control member (183) disposed in the second channel (182), and the deflation control member (183) comprises a plug body (184) and a through hole (185) disposed on the plug body (184).

8. The grinding machine (10) of one of the claims 4-7, wherein the grinding machine body (11) comprises a cover body (113) connected to the host housing (112), the gas intake pipe (111) is disposed on the cover body (113), and the cover body (113) defines the pressure cavity (13) and has its one side facing the grinding disc (12) appear hollow to allow the high-pressure gas to flow towards the pressure release gap (14).

9. The grinding machine (10) of claim 8, wherein the cover body (113) comprises a first end (114) connected to the host housing (112) and a second end (115) facing the grinding disc (12), and a size of the second end (115) is greater than a size of the first end (114).

10. The grinding machine (10) of the claims 4-9, wherein the grinding machine body (11) comprises a connecting member (116), which is disposed at a cover body (113) and causes the grinding disc (12) to be linked with the power assembly (15) disposed in the host housing (112).

Patentansprüche

1. Schleifmaschine (10) mit einem Schleifmaschinen-

körper (11) und einer mit dem Schleifmaschinenkörper (11) verbundenen Schleifscheibe (12), wobei der Schleifmaschinenkörper (11) mit einem Grundgehäuse (112), einem mit dem Grundgehäuse (112) verbundenen Abdeckkörper (113), einem durch den Abdeckkörper (113) definierten und an einer der Schleifscheibe (12) zugewandten Position angeordneten Druckhohlraum (13) und einem dem Druckhohlraum (13) entsprechenden und am Abdeckkörper (113) angeordneten Gaseinlassrohr (111) versehen ist,

wobei das Gaseinlassrohr (111) mit einer externen Gasquelle verbunden ist und geeignet ist, ein Hochdruckgas in den Druckhohlraum (13) zu leiten und eine Überdruckumgebung zu erzeugen, in der ein Druck im Druckhohlraum (13) größer ist als ein Druck außerhalb des Schleifmaschinenkörpers (11);
dadurch gekennzeichnet, dass eine untere Kante des Schleifmaschinenkörpers (11) nicht eng mit dem Schleifteller (12) verbunden ist, um einen Druckentlastungsspalt (14) in Verbindung mit dem Druckhohlraum (13) zu bilden, und dass eine Seite des Abdeckkörpers (113), die dem Schleifteller (12) zugewandt ist, hohl ist, um mit dem Druckentlastungsspalt (14) in Verbindung zu stehen, und angepasst ist, um das Hochdruckgas in dem Druckhohlraum (13) über den Druckentlastungsspalt (14) kontinuierlich zu entlasten, um zu verhindern, dass externer Staub in den Druckhohlraum (13) eindringt.

2. Schleifmaschine (10) nach Anspruch 1, wobei der Abdeckkörper (113) ein erstes Ende (114), das mit dem Aufnahmegehäuse (112) verbunden ist, und ein zweites Ende (115) aufweist, das der Schleifscheibe (12) zugewandt ist, und eine Größe des zweiten Endes (115) größer ist als eine Größe des ersten Endes (114).

3. Schleifmaschine (10) nach Anspruch 1 oder 2, wobei der Schleifmaschinenkörper (11) ein am Deckelkörper (113) angeordnetes Verbindungselement (116) aufweist, das die Verbindung der Schleifscheibe (12) mit einem im Aufnahmegehäuse (112) angeordneten Aggregat (15) bewirkt.

4. Schleifmaschine (10) nach einem der vorhergehenden Ansprüche, wobei der Schleifmaschinenkörper (11) ein Aufnahmegehäuse (112) und ein Gasführungsrohr (16) umfasst, wobei das Aufnahmegehäuse (112) einen Hohlraum (117) zur Anordnung einer Leistungsbaugruppe (15), einen Gaseinlasskanal (118), der mit dem Hohlraum (117) in Verbindung steht und das Hochdruckgas von einer externen Gasquelle aufnimmt und einen Gasauslasskanal (119), der mit dem Hohlraum (117) in Verbindung steht und zum Auslassen des Hochdruckgases aus dem Hohlraum (117) dient, und zwei Enden des Gasführungsrohrs (16) sind jeweils mit dem Gasauslasskanal (119) und dem Gaseinlassrohr (111) verbunden, um das Hochdruckgas in den Druckhohlraum (13) zu führen.

5. Schleifmaschine (10) nach Anspruch 4, wobei der Schleifmaschinenkörper (11) ein Regelventil (17) umfasst, das zwischen dem Gasausgabekanal (119) und dem Gasführungsrohr (16) angeschlossen ist.

6. Schleifmaschine (10) nach Anspruch 4, wobei der Schleifmaschinenkörper (11) ein Kupplungsrohr (18) umfasst, das einen ersten Kanal (181), der mit dem Gasauslasskanal (119) und dem Gasführungsrohr (16) verbunden ist, und einen zweiten Kanal (182) umfasst, der von dem ersten Kanal (181) abzweigt und mit diesem in Verbindung steht und es ermöglicht, einen Teil des Hochdruckgases freizugeben.

7. Schleifmaschine (10) nach Anspruch 6, wobei das Kupplungsrohr (18) ein im zweiten Kanal (182) angeordnetes Entleerungssteuerungselement (183) umfasst und das Entleerungssteuerungselement (183) einen Steckerkörper (184) und ein am Steckerkörper (184) angeordnetes Durchgangsloch (185) umfasst.

8. Schleifmaschine (10) nach einem der Ansprüche 4 bis 7, wobei der Schleifmaschinenkörper (11) einen Abdeckkörper (113) umfasst, der mit dem Hauptgehäuse (112) verbunden ist, wobei das Gaseinlassrohr (111) auf dem Abdeckkörper (113) angeordnet ist und der Abdeckkörper (113) den Druckhohlraum (13) definiert und seine eine Seite, die der Schleifscheibe (12) zugewandt ist, hohl erscheint, damit das Hochdruckgas zum Druckentlastungsspalt (14) strömen kann.

9. Schleifmaschine (10) nach Anspruch 8, wobei der Abdeckkörper (113) ein erstes Ende (114), das mit dem Aufnahmegehäuse (112) verbunden ist, und ein zweites Ende (115) aufweist, das der Schleifscheibe (12) zugewandt ist, und eine Größe des zweiten Endes (115) größer ist als eine Größe des ersten Endes (114).

10. Schleifmaschine (10) nach einem der Ansprüche 4 bis 9, wobei der Schleifmaschinenkörper (11) ein Verbindungselement (116) aufweist, das an einem Deckelkörper (113) angeordnet ist und eine Verbindung der Schleifscheibe (12) mit der im Aufnahmegehäuse (112) angeordneten Leistungsbaugruppe (15) bewirkt.

Revendications

1. Une meuleuse (10), comprenant un corps de meuleuse (11) et un disque de meulage (12) relié au corps de meuleuse (11), dans lequel le corps de meuleuse (11) est pourvu d'un boîtier hôte (112), un corps de couvercle (113) relié au carter hôte (112), une cavité de pression (13) définie par le corps de couvercle (113) et disposé à une position face au disque de meulage (12), et un conduit d'admission de gaz (111) correspondant à la cavité de pression (13) et disposé sur le corps de couvercle (113), dans lequel le conduit d'admission de gaz (111) est raccordé à une source de gaz externe, et est adapté pour guider un gaz haute-pression dans la cavité de pression (13) et pour créer un environnement de pression positive dans laquelle une pression dans la cavité de pression (13) est supérieure à une pression à l'extérieure du corps de meuleuse (11) ;
caractérisé en ce qu'un bord inférieur du corps de meuleuse (11) n'est pas raccordé de manière proche au disque de meulage (12), de façon à former un espace de détente de pression (14) en communication avec la cavité de pression (13), et un côté du corps de couvercle (113) qui fait face au disque de meulage (12) est creux afin de communiquer avec l'espace de détente de pression (14), et est adapté pur détendre de manière continue le gaz haute pression dans la cavité de pression (13° via l'espace de détente de pression (14) pour empêcher la poussière externe de pénétrer à l'intérieur de la cavité de pression (13).

2. La meuleuse (10) de la revendication 1, dans laquelle le corps de couvercle (113) comporte une première extrémité (114) reliée au boîtier hôte (112) et une seconde extrémité (115) faisant face au disque de meulage (12), et une dimension de la seconde extrémité (115) est supérieure à une dimension de la première extrémité (114).

3. La meuleuse (10) de la revendication 1 ou 2, dans laquelle le corps de meuleuse (11) comprend un élément de raccordement (116), qui est disposé au niveau du corps de couvercle (113) et amène le disque de meulage (12) à être relié à un ensemble de puissance (15) disposé dans le boîtier hôte (112).

4. La meuleuse (10) de l'une des revendications précédentes, dans laquelle le corps de meuleuse (11) comprend un boîtier hôte (112) et un tuyau de guidage de gaz (16), le boîtier hôte (112) comprend une cavité (117) pour disposer un ensemble de puissance (15), un canal d'admission de gaz (118) en communication avec la cavité (117) et pour recevoir le gaz à haute pression d'une source de gaz externe, et un canal de sortie de gaz (119) en communication avec la cavité (117) et pour évacuer le gaz à haute pression hors de la cavité (117), et deux extrémités du tuyau de guidage de gaz (16) sont respectivement reliées au canal de sortie de gaz (119) et au tuyau d'admission de gaz (111) pour guider le gaz à haute pression dans la cavité de pression (13).

5. La meuleuse (10) de la revendication 4, dans laquelle le corps de meuleuse (11) comprend une vanne de régulation (17) connectée entre le canal de sortie de gaz (119) et le tuyau de guidage de gaz (16).

6. La meuleuse (10) de la revendication 4, dans laquelle le corps de meuleuse (11) comprend un tube de couplage (18), qui comprend un premier canal (181) relié au canal de sortie de gaz (119) et au tuyau de guidage de gaz (16) et un deuxième canal (182) dérivé et en communication avec le premier canal (181) et permettant de libérer une partie du gaz à haute pression.

7. La meuleuse (10) de la revendication 6, dans laquelle le tube de couplage (18) comprend un élément de commande de dégonflage (183) disposé dans le second canal (182), et l'élément de commande de dégonflage (183) comprend un corps de bouchon (184) et un trou traversant (185) disposé sur le corps de bouchon (184).

8. La meuleuse (10) de l'une des revendications 4 à 7, dans laquelle le corps de meuleuse (11) comprend un corps de couvercle (113) relié au boîtier hôte (112), le tuyau d'admission de gaz (111) est disposé sur le corps de couvercle (113), et le corps de couvercle (113) définit la cavité de pression (13) et dont un côté faisant face au disque de meulage (12) apparaissant creux pour permettre au gaz à haute pression de s'écouler vers l'espace de détente de pression (14).

9. La meuleuse (10) de la revendication 8, dans laquelle le corps de couvercle (113) comprend une première extrémité (114) reliée au boîtier hôte (112) et une seconde extrémité (115) faisant face au disque de meulage (12), et une dimension de la seconde extrémité (115) est supérieure à une dimension de la première extrémité (114).

10. La meuleuse (10) des revendications 4 à 9, dans laquelle le corps de meuleuse (11) comprend un élément de raccordement (116), qui est disposé au niveau d'un corps de couvercle (113) et amène le disque de meulage (12) à être relié avec l'ensemble de puissance (15) disposé dans le boîtier hôte (112).

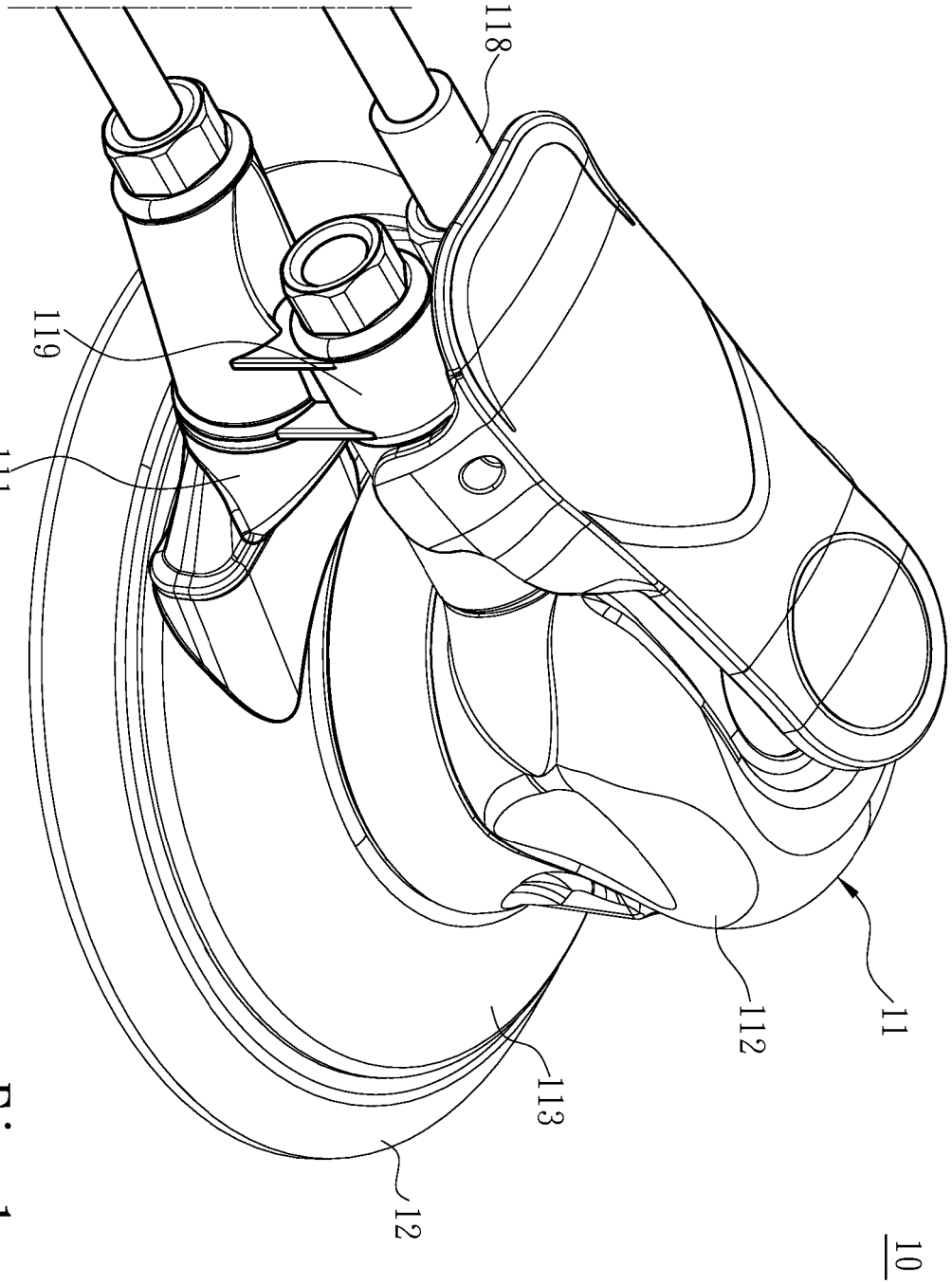

Fig. 1

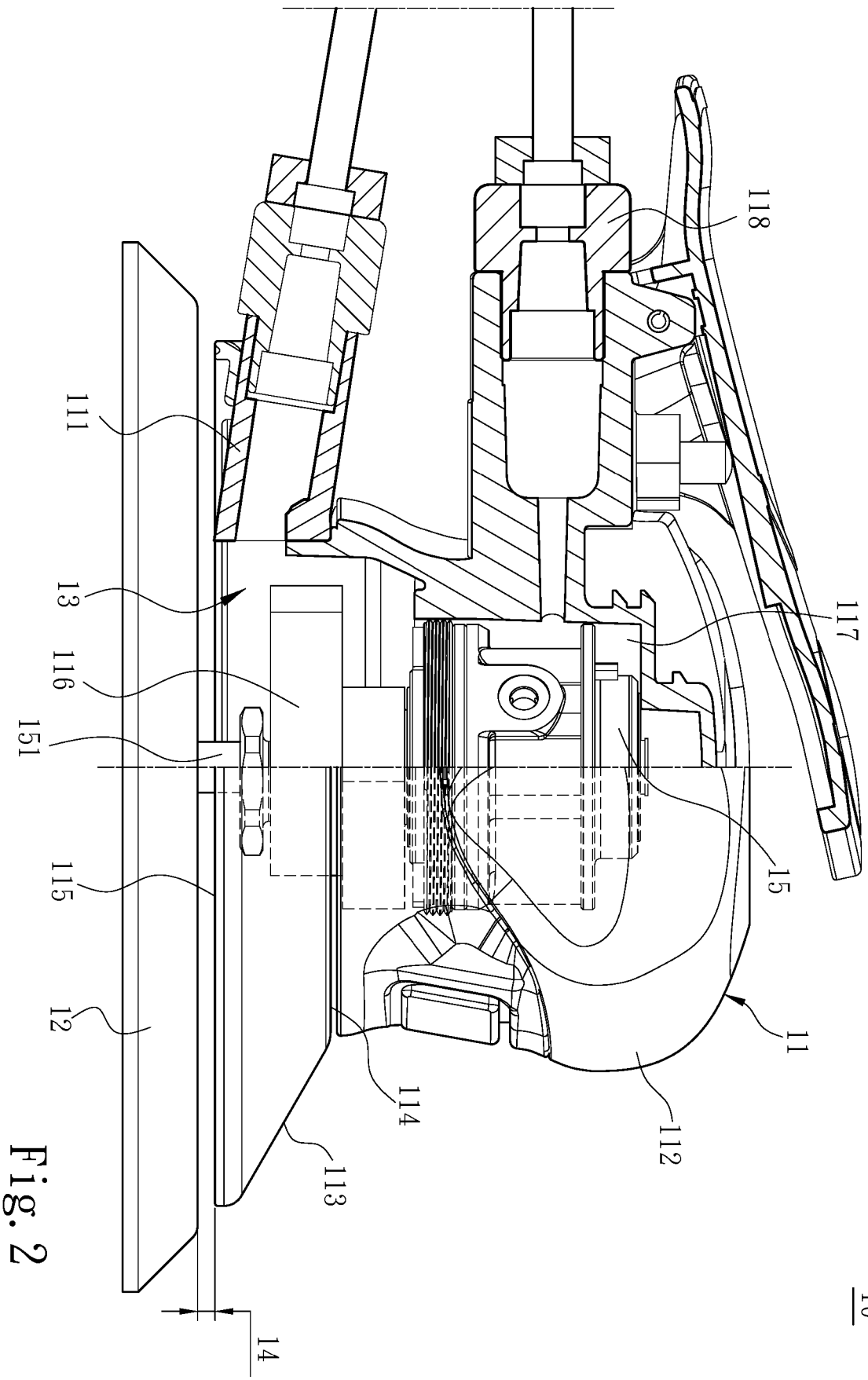

Fig. 2

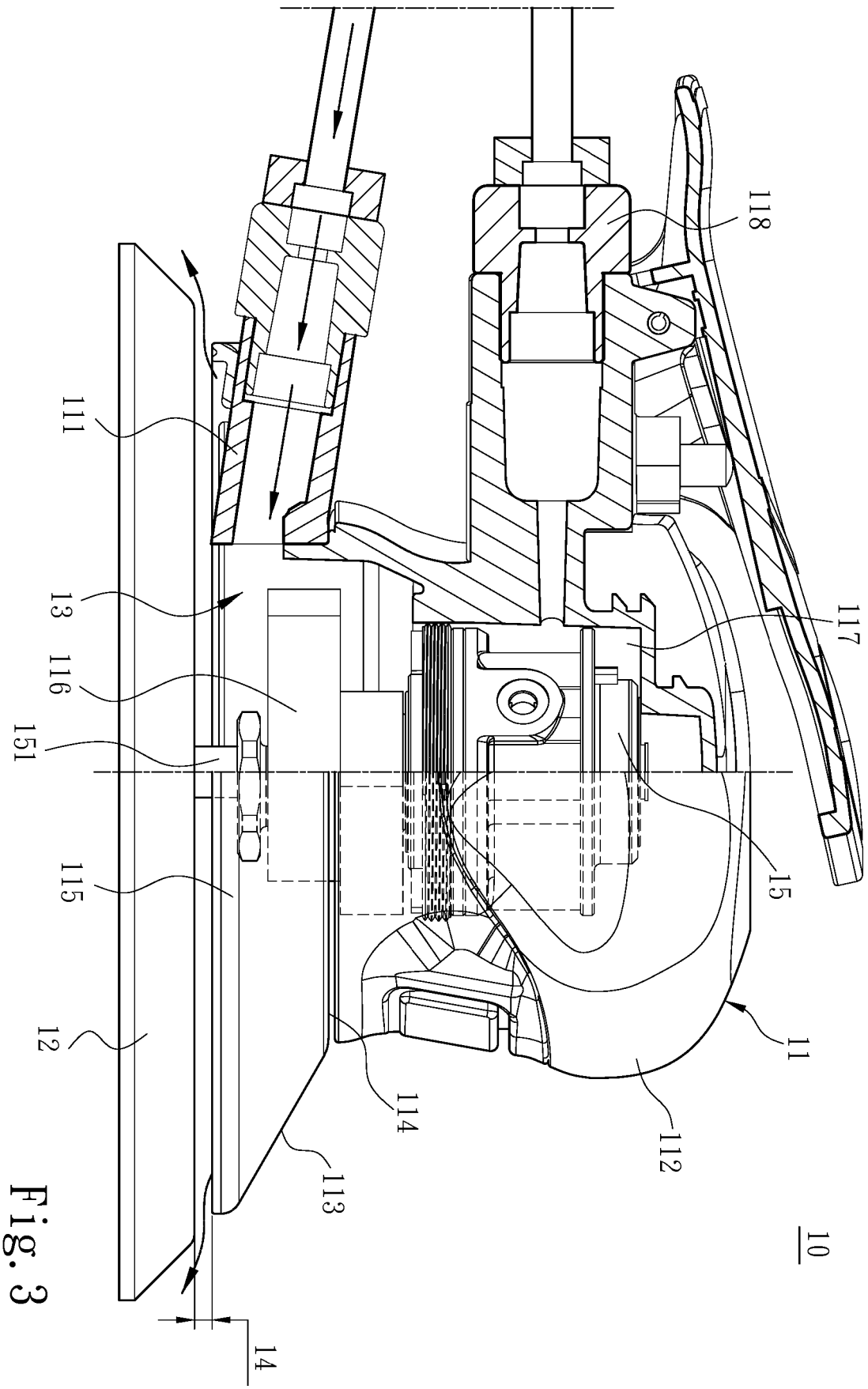

Fig. 3

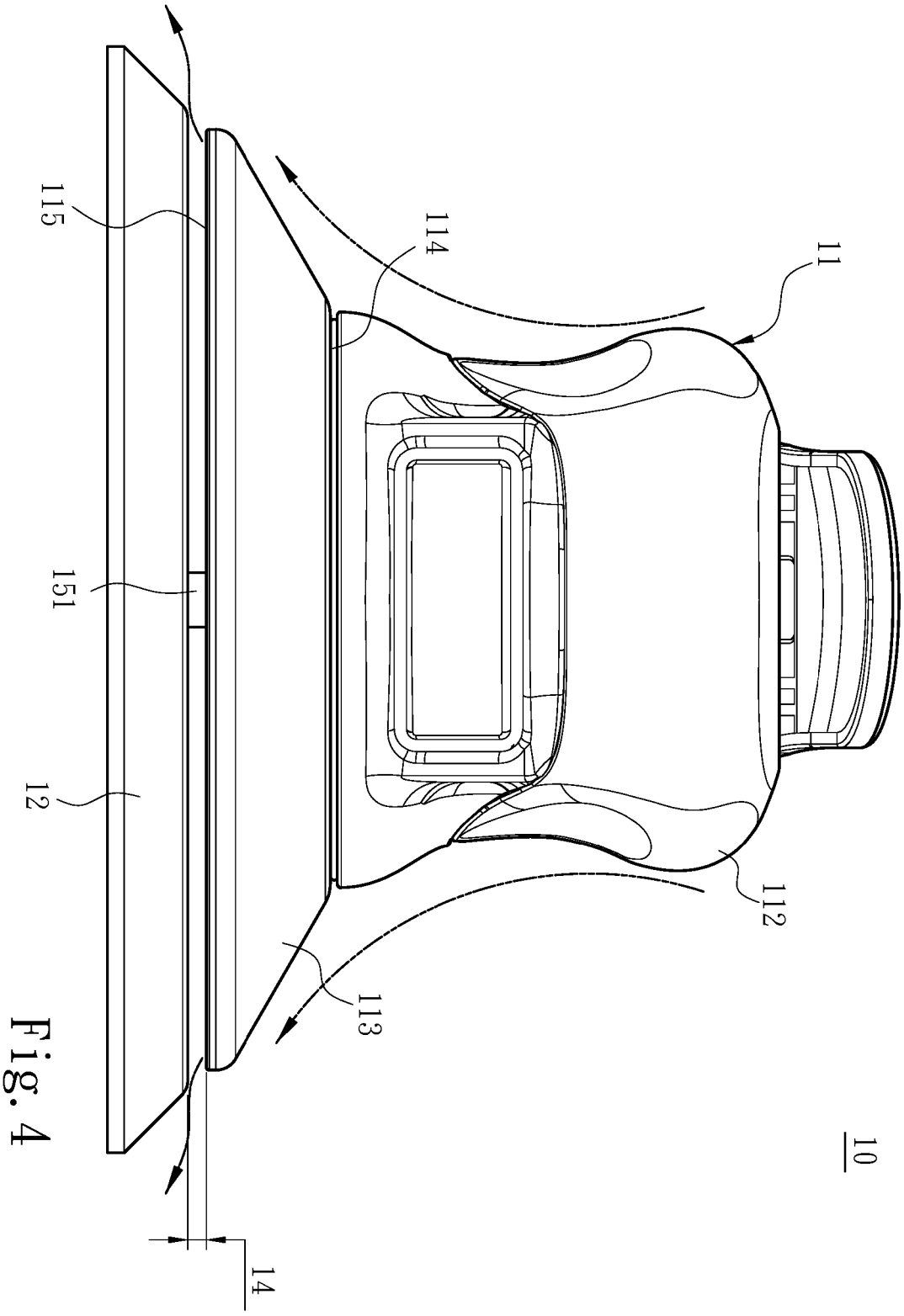

Fig. 4

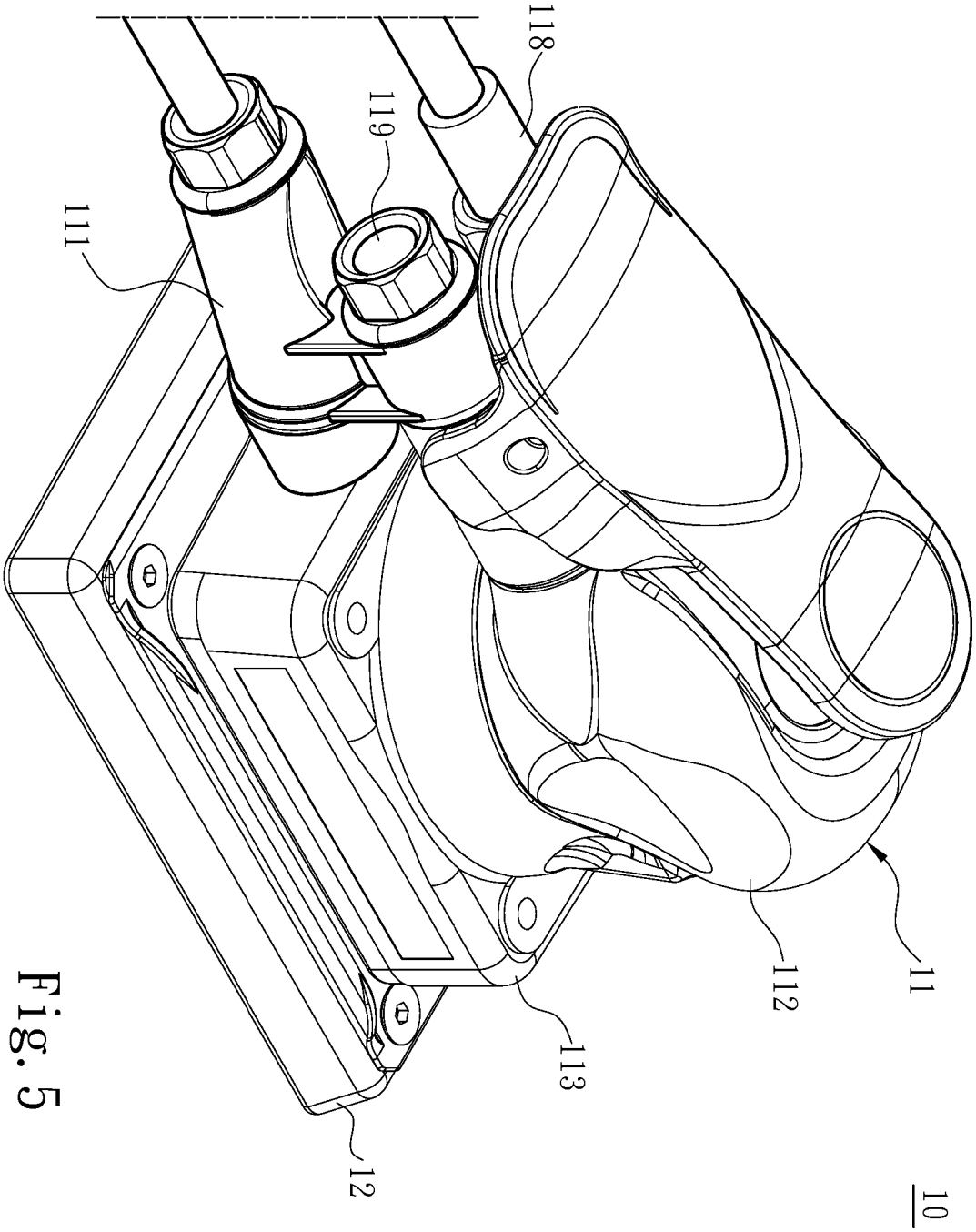

Fig. 5

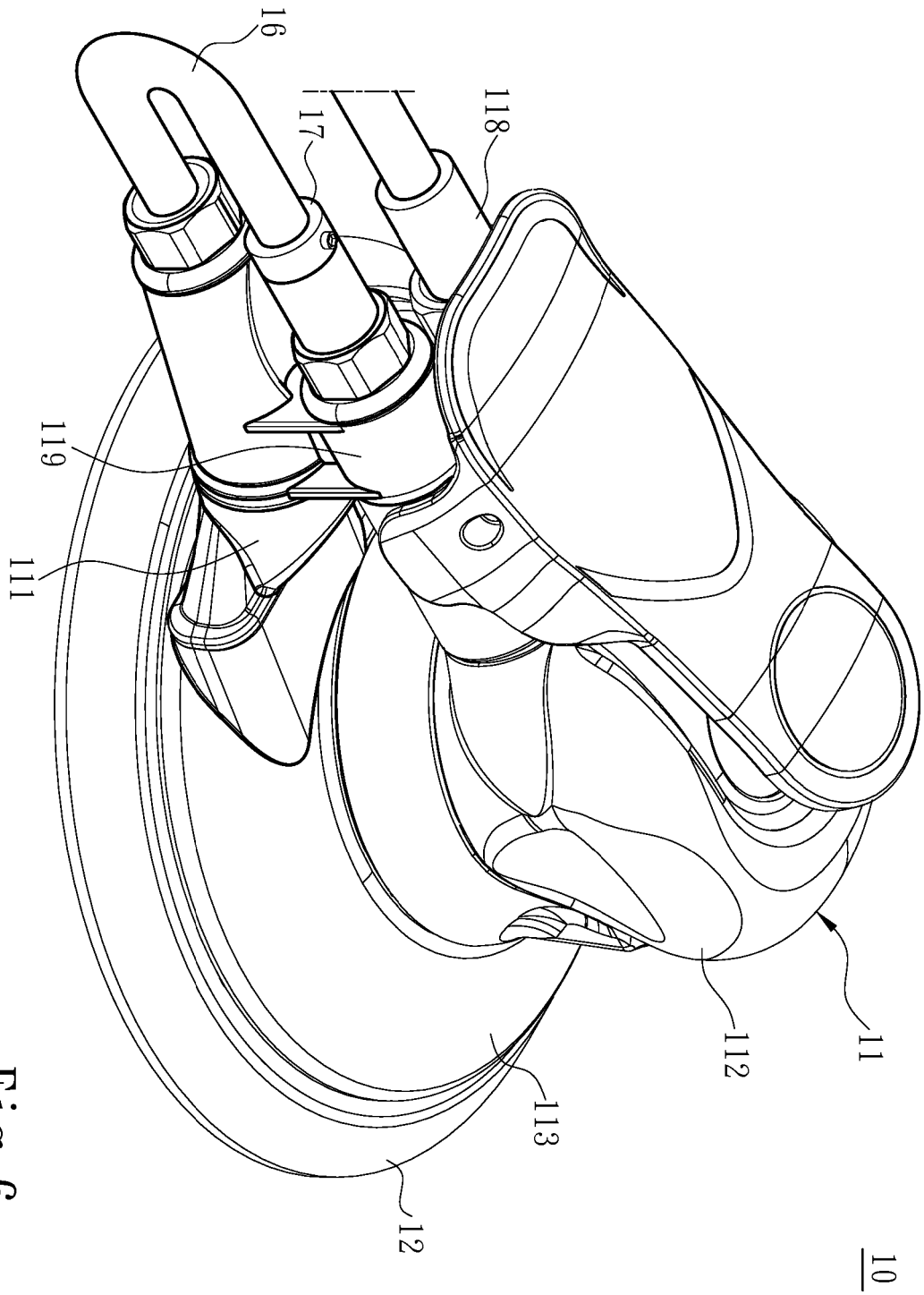

Fig. 6

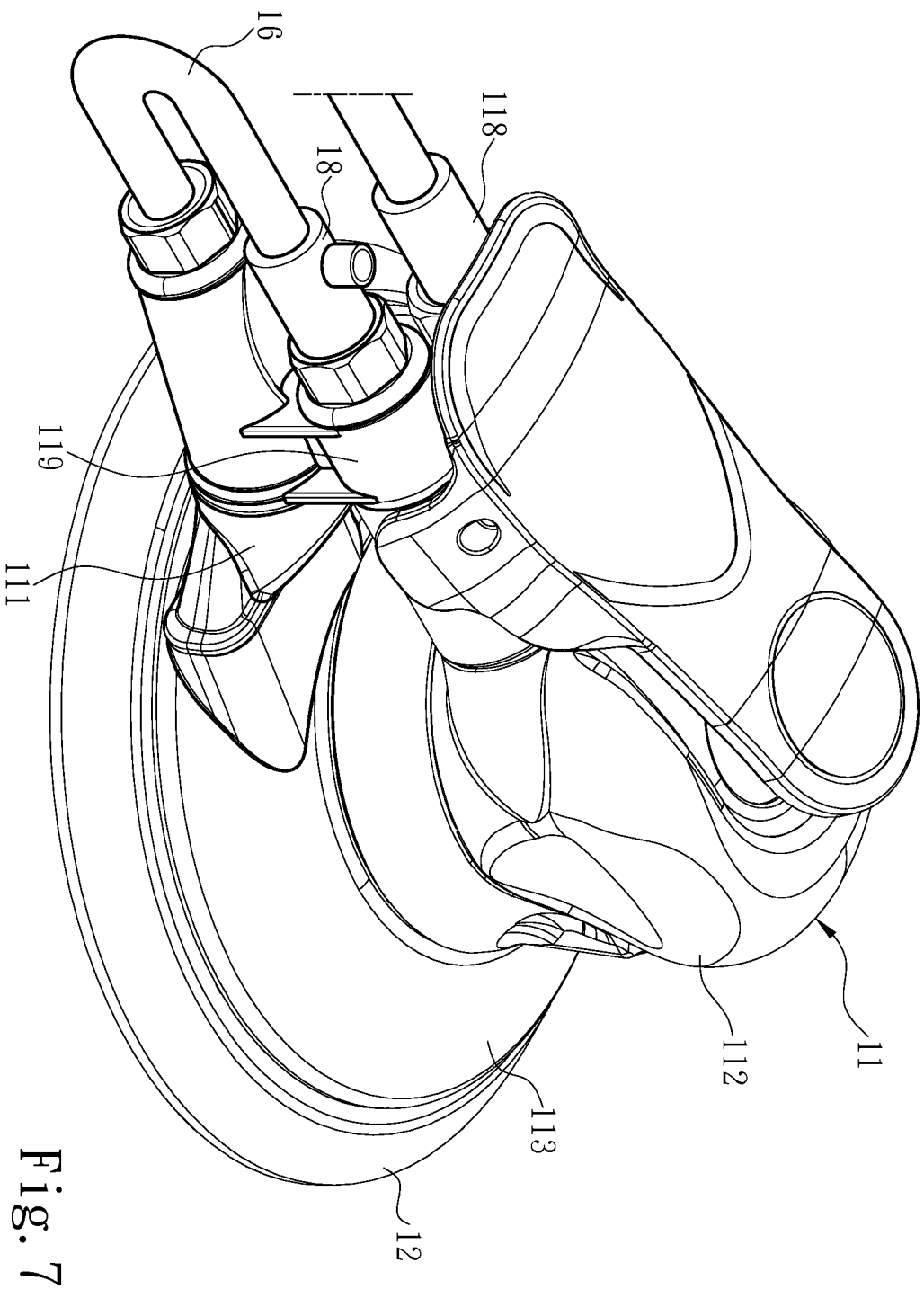

Fig. 7

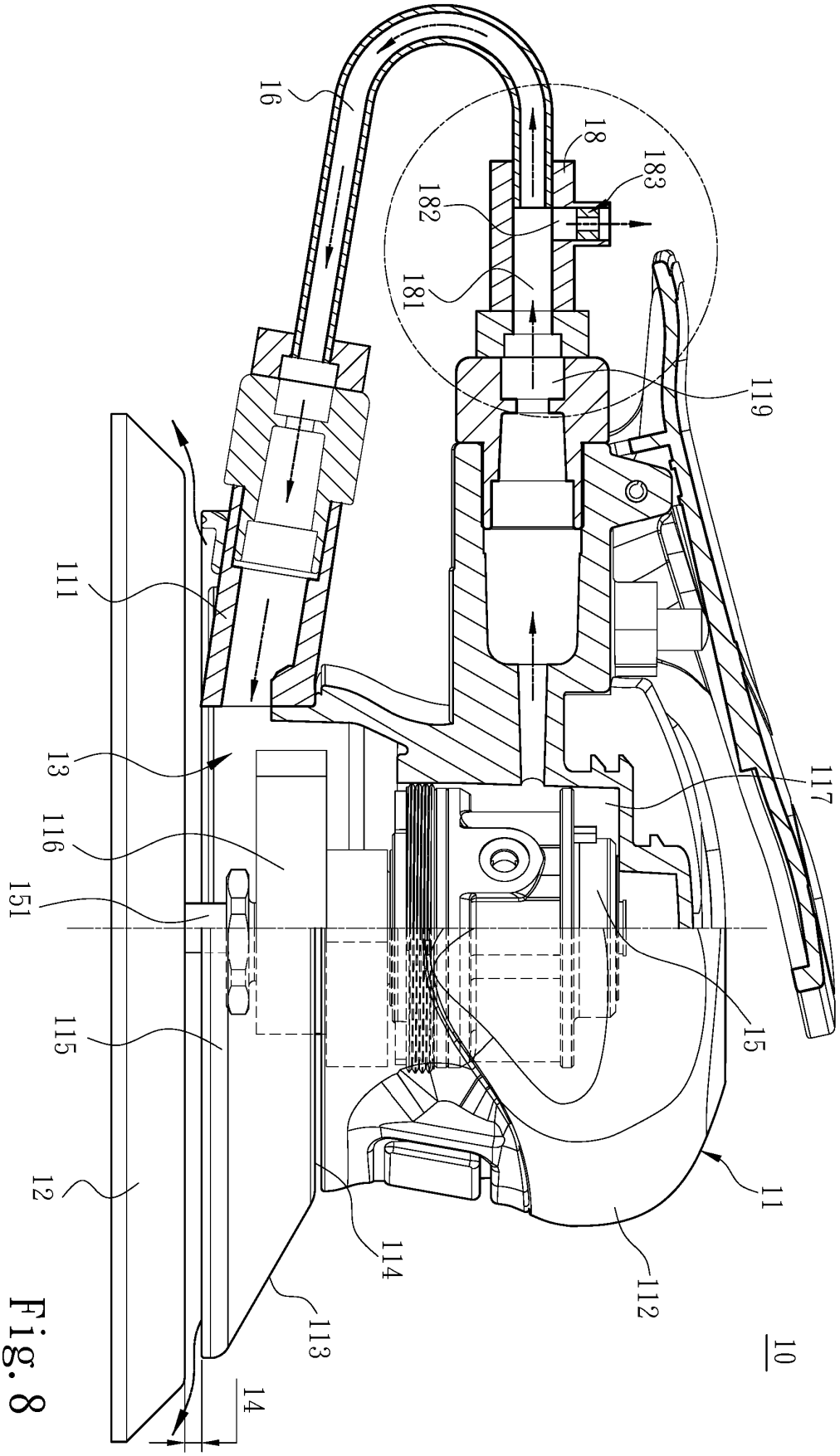
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Fig. 8

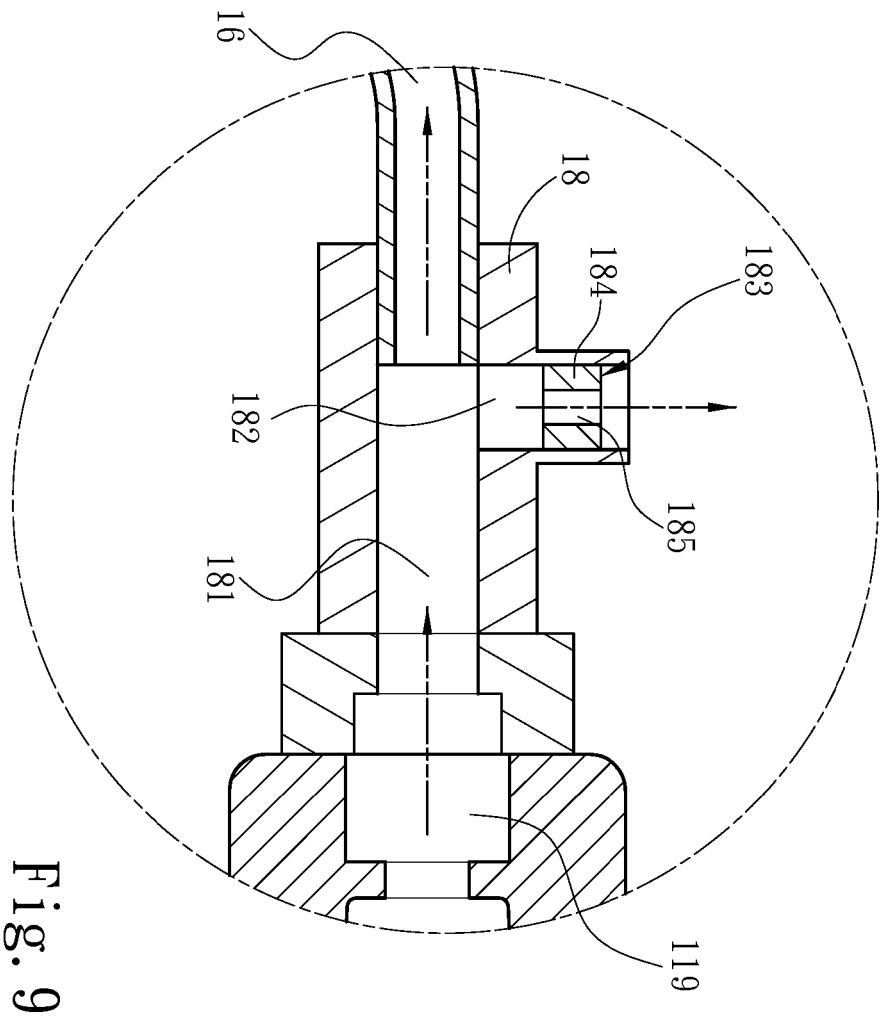

Fig. 9

REFERENCES CITED IN THE DESCRIPTION

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