Office de la Propriété Intellectuelle du Canada
Un organisme d'Industrie Canada

Canadian Intellectual Property Office
An agency of Industry Canada

CA 2614690 C 2011/01/11

(11)(21) 2 614 690

(12) BREVET CANADIEN
CANADIAN PATENT

(13) C

(22) Date de dépôt/Filing Date: 2007/12/14

(41) Mise à la disp. pub./Open to Public Insp.: 2009/06/14

(45) Date de délivrance/Issue Date: 2011/01/11

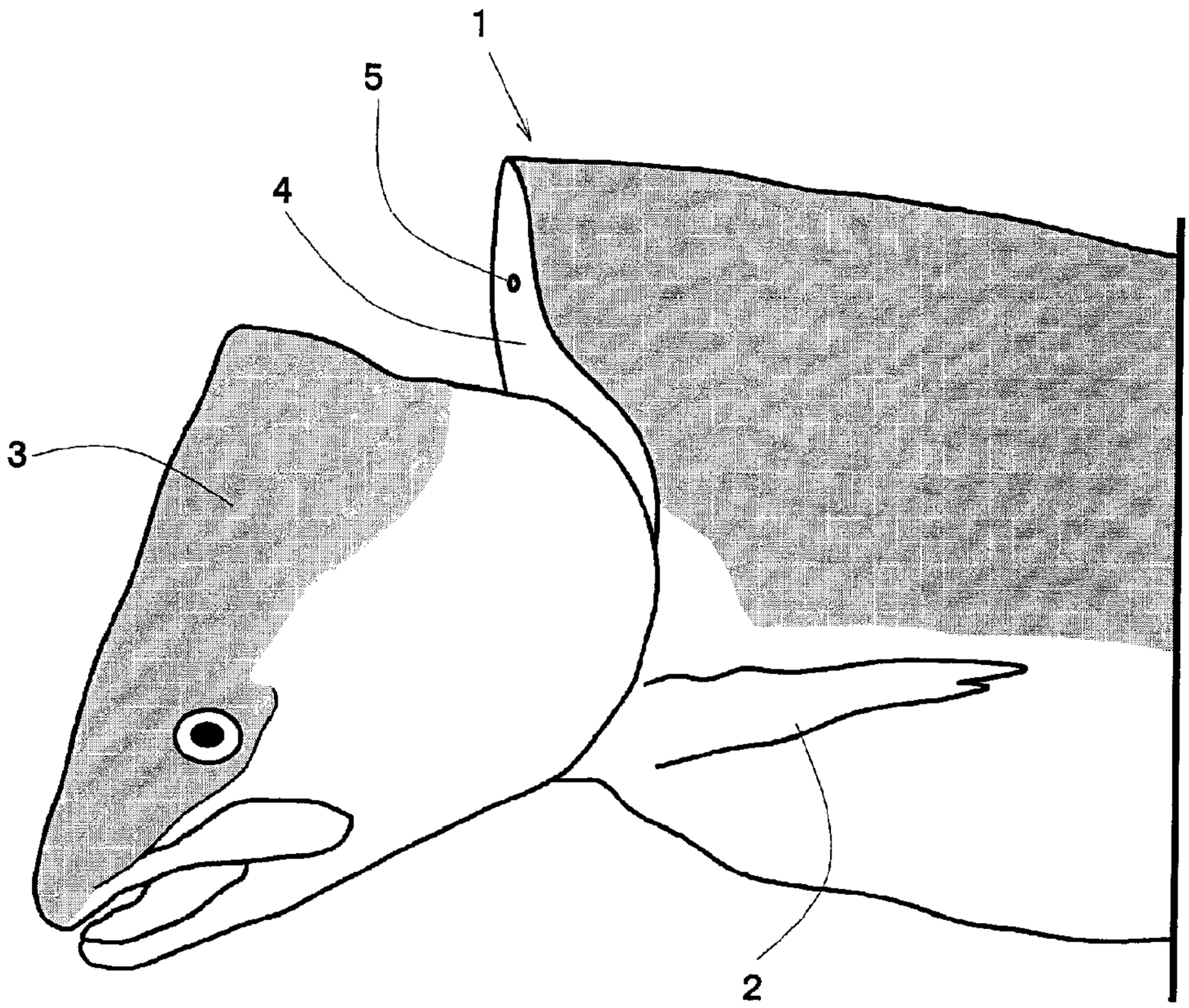
(51) Cl.Int./Int.Cl. *A22C 25/00* (2006.01), *A22C 25/10* (2006.01), *A22C 25/14* (2006.01)

(72) Inventeur/Inventor:
YAMADA, NOAKI, JP

(73) Propriétaire/Owner:
WAKAYAMA KYOUWASUISAN CO., LTD., JP

(74) Agent: MCCARTHY TETRAULT LLP

(54) Titre : PROCEDE DE TRANSFORMATION DU POISSON
(54) Title: FISH PROCESSING METHOD



(57) Abrégé/Abstract:
An embodiment provides a method of processing a fish. In the method, a head of live fish is cut at nearby a branchi by a blade to cause the fish to an immediate death, and to cut off the nerves, artery and vein. Next, the medulla spinalis nearby a tail fin is cut. Then, a needle made of a piano wire is inserted into a nerve portion of the backbone, which is exposed in cut surfaces nearby the head and the tail fin. The needle is moved back and forth along an axial direction to destruct and remove the jelly-like nerves and a medullar oblongate in the nerve portion.

ABSTRACT

An embodiment provides a method of processing a fish. In the method, a head of live fish is cut at nearby a branchi by a blade to cause the fish to an immediate death, and to cut off the nerves, artery and vein. Next, the medulla spinalis nearby a tail fin is cut. Then, a needle made of a piano wire is inserted into a nerve portion of the backbone, which is exposed in cut surfaces nearby the head and the tail fin. The needle is moved back and forth along an axial direction to destruct and remove the jelly-like nerves and a medullar oblongate in the nerve portion.

FISH PROCESSING METHOD

FIELD OF DISCLOSURE

The present disclosure relates to a fish processing method for keeping fish fresh for longer hours.

BACKGROUND OF THE INVENTION

It is extremely important to keep caught fish fresh for as many hours as possible until they are cooked and eaten. The caught fish progressively change in the order of getting stiff, softening and rotting, after they die. The fish, after death, slowly begin to get stiff and become completely stiff, as time goes. The complete stiffness lasts for some hours and then it melts. Then, the fish rot, after experiencing an initial stage of rotting in which the fish begin to soften and emit abnormal odour. In general, the market recognizes fish as fresh until the stiffness begin to melt.

Conventionally, the caught fish were put to sleep by being dropped in ice water, then the blood of the fish is drawn by cutting a branchi portion thereof. However, according to this conventional method, the blood drawing process of the capillary blood vessels was done insufficiently, or the blood drawing process took long hours, due to thin blood vessels in the branchi portion.

As the fish die with insufficient blood drawing process, it requires longer hours for the fish to die, causing the fish to waste much energy. This accelerates the initiation of the stiffness of the fish, and softens fleshy substance of the fish. That makes the fish being fresh for shorter hours. This is because when blood remains in the blood vessels, adenosine triphosphoric acid, the substance that indicates energy consumption in muscle contraction exercise, is consumed. Thus, as described above, much energy is consumed and the flesh substance of the fish degrades.

The function of the capillary blood vessels of the fish operates depending on the nerves running mainly within the backbone, so that a sufficient blood drawing operation can be completed by destructing the nerves in the backbone. That is, a breakdown of the peripheral nerves by the destruction of the central nerves inhibits the blood from moving into the capillary blood vessels. This can hollow out the capillary blood vessels.

It is desirable to provide a method for preparing fish that addresses at least some of the deficiencies in the art.

SUMMARY OF THE INVENTION

An aspect of the present embodiment addresses at least some deficiencies with conventional fish processing methods.

It is an aspect of an embodiment to provide a fish processing method, which keeps fish fresh for longer hours as possible.

According to an embodiment, a head of live fish is cut at nearby a branchi by a blade to cause the fish to an immediate death, and to cut off the nerves, artery and vein. This immediate death allows the fish to consume less energy, so that the initiation of the stiffness of the fish can be delayed, remaining the adenosine triphosphoric acid high. Next, the medulla spinalis nearby a tail fin is cut.

Then, a needle made of a piano wire is inserted into a nerve portion of the backbone, which is exposed in cut surfaces nearby the head and the tail fin. The needle is moved back and forth along an axial direction to destruct and remove the jelly-like nerves and a medullar oblongate in the nerve portion. The "nerve portion" is an attached structure having much gelatinous texture, and is called "shinkei-kyumon" in Japanese.

The destruction of the nerves in the backbone causes the capillary blood vessels of the fish to terminate its function, so that the blood drawing process of the capillary blood vessels can be completed efficiently. That is, the process of cooling the fish followed by the above-mentioned process allows the blood to smoothly draw from the cut artery, vein and capillary blood vessels.

The above-mentioned nerve removing process can be completed not only by inserting the needle made of a piano wire, but also by shooting an air gun in the nerve portion. Further, the process can be done by pressing any compressed fluid such as water and air into the nerve portion.

In other aspects, various combinations of sets and subsets of the above aspects are provided.

BRIEF DESCRIPTION OF THE DRAWINGS

Embodiments will now be described, by way of example only, with reference to the accompanying drawings, in which:

Fig. 1 is a schematic diagram a fish being processed by a method according to an embodiment;

Fig. 2 is a schematic diagram of the fish of Fig. 1 being further processed by a method according to an embodiment;

Fig. 3 is a schematic diagram of the fish of Fig. 1 being further processed by a method according to an embodiment; and

Fig. 4 is a schematic diagram of the fish of Fig. 1 being further processed by a method according to an embodiment.

DETAILED DESCRIPTION OF EMBODIMENTS

The description which follows and the embodiments described therein are provided by way of illustration of an example or examples of particular embodiments of the principles of the present disclosure. These examples are provided for the purposes of explanation and not limitation of those principles and of embodiments. In the description which follows, like parts are marked throughout the specification and the drawings with the same respective reference numerals.

Referring to Figs. 1 to 4, the drawings illustrate a processing method of salmon, in which a head 3 of the salmon 1 is cut at nearby a branchi 2, remaining a part of it, and exposing a nerve portion 5 of a backbone in the cut surface 4. Further, a portion nearby a tail fin 6 is cut, remaining, a part of it, and exposing the nerve portion 5 of the backbone in a cut surface 7.

Then, a needle 8 which may be made of a piano wire 8 is inserted in the exposed nerve portion 5 of the backbone to destruct and remove the nerves and the medulla oblongate.

The fish processing method according to the present embodiment brings the fish to an immediate or (very) rapid death, and draws the blood in the capillary blood vessels by immediately or rapidly destructing the nerve, medulla oblongate running in the backbone and the central nerves constructed by the brain, etc. Thus, the present embodiment may keep the

fish fresh for longer hours, and provide tasty fish with solid flesh. Further, the process of destructing the nerves may be performed with the needle of a piano wire, an air gun, or a press-fitting of compressed fluid, e.g., water and air, so that the process can be readily completed.

The present embodiment has many advantages including those described above. The present embodiment is defined by the claims appended hereto, with the foregoing description being merely illustrative of embodiments. Those of ordinary skill may envisage certain modifications to the foregoing embodiments which, although not explicitly discussed herein, do not depart from the scope of the embodiments, as defined by the appended claims.

CLAIM

1. A fish processing method comprising the steps of:

cutting a head of live fish at nearby branchi by a blade to cut off a modulla oblongate and to bring the fish to an immediate or rapid death;

cutting a medullar spinalis nearby a tail fin; and

shooting an air gun into a nerve portion exposed in cut surfaces nearby the head and the tail fin, thereby destructing and removing a jelly-like nerve and the medulla oblongate in the nerve portion.

Fig. 1

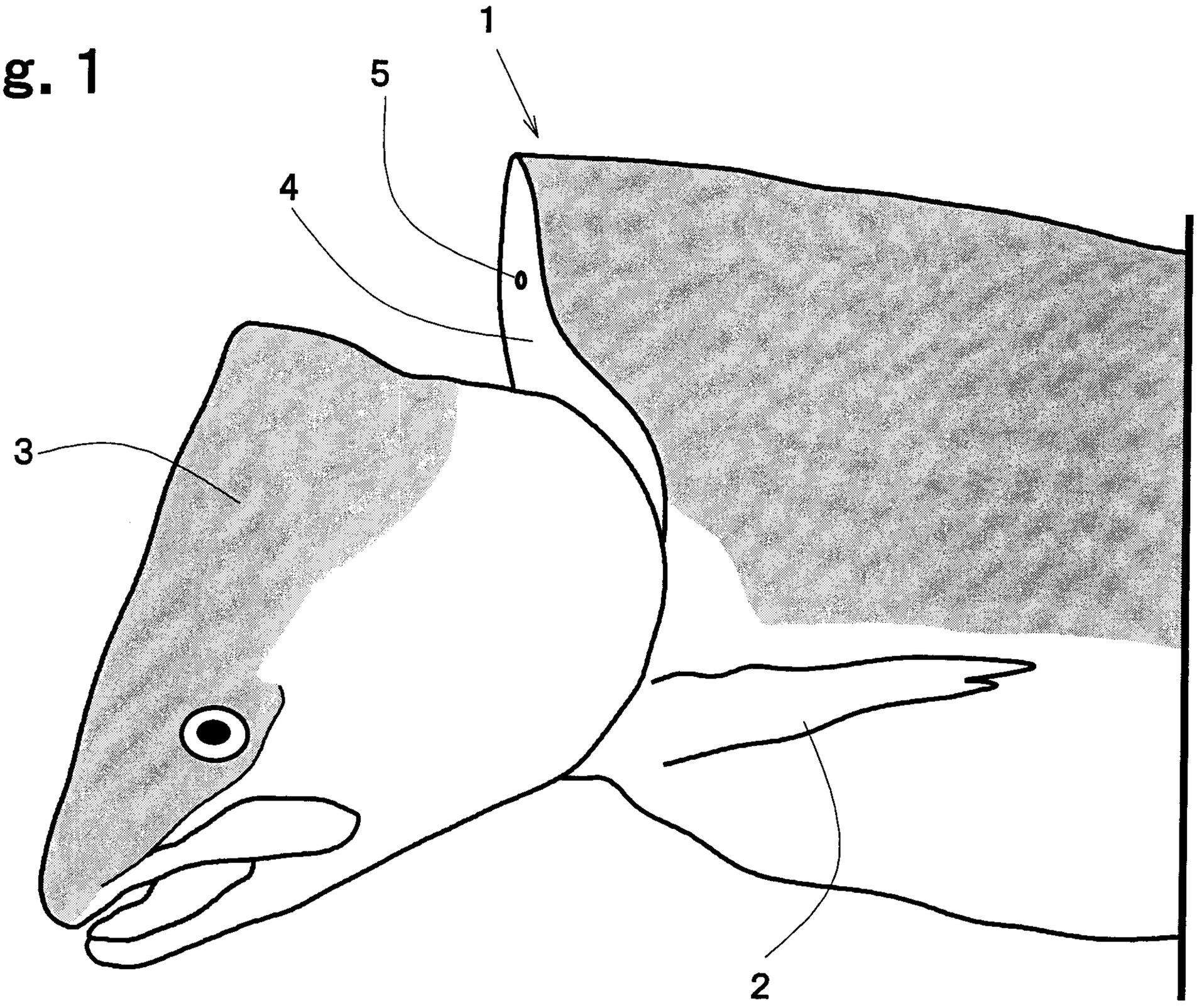


Fig. 2

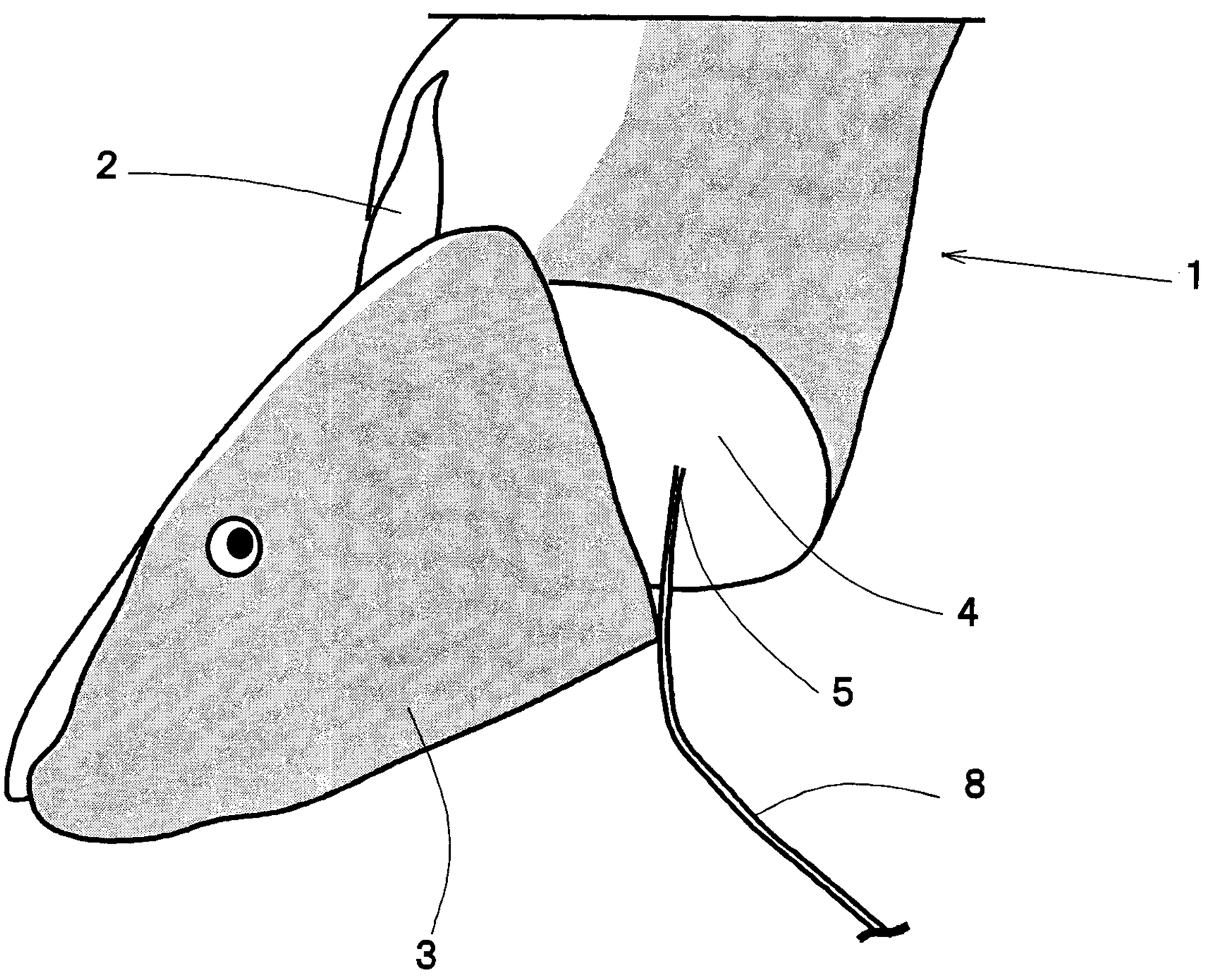


Fig. 3

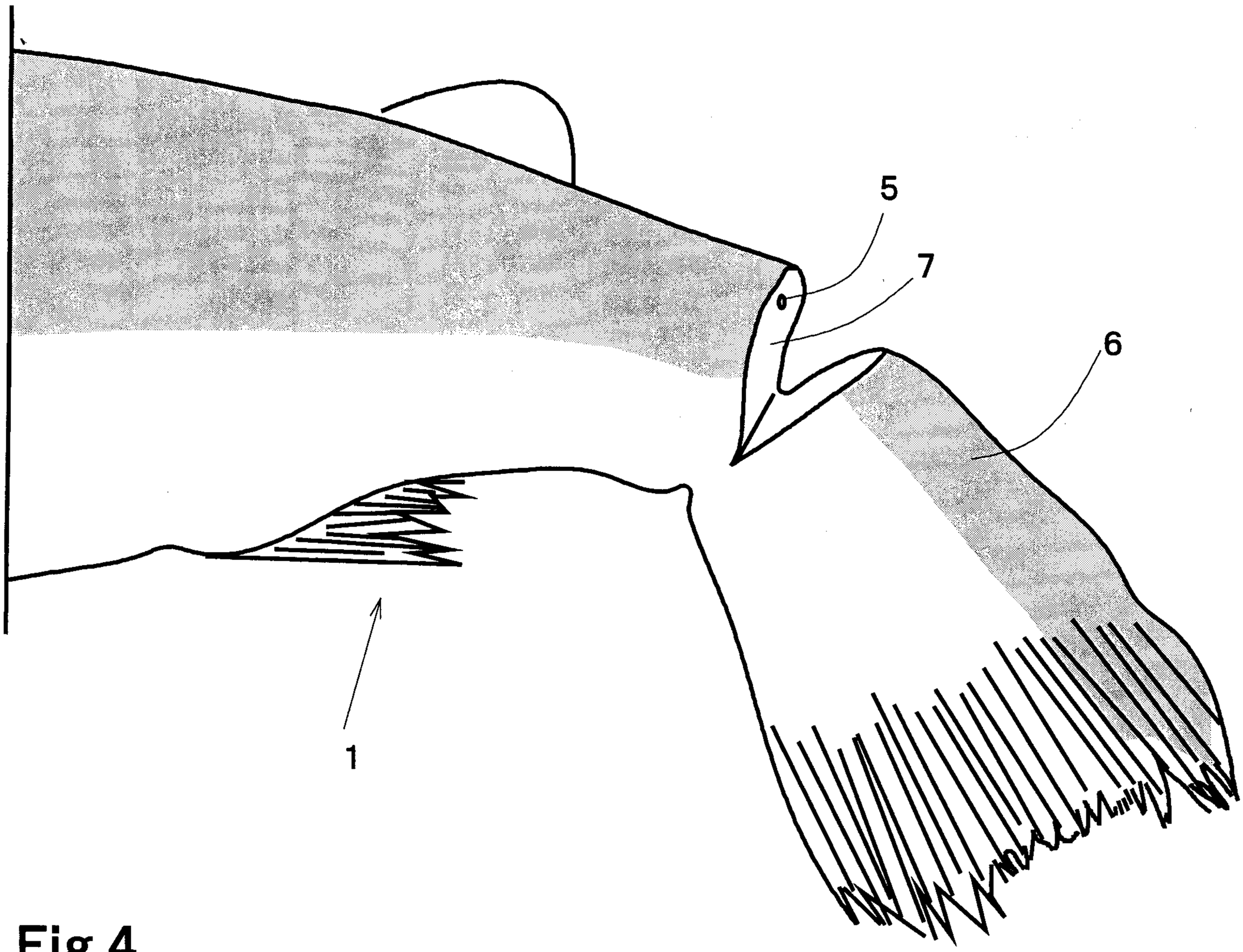
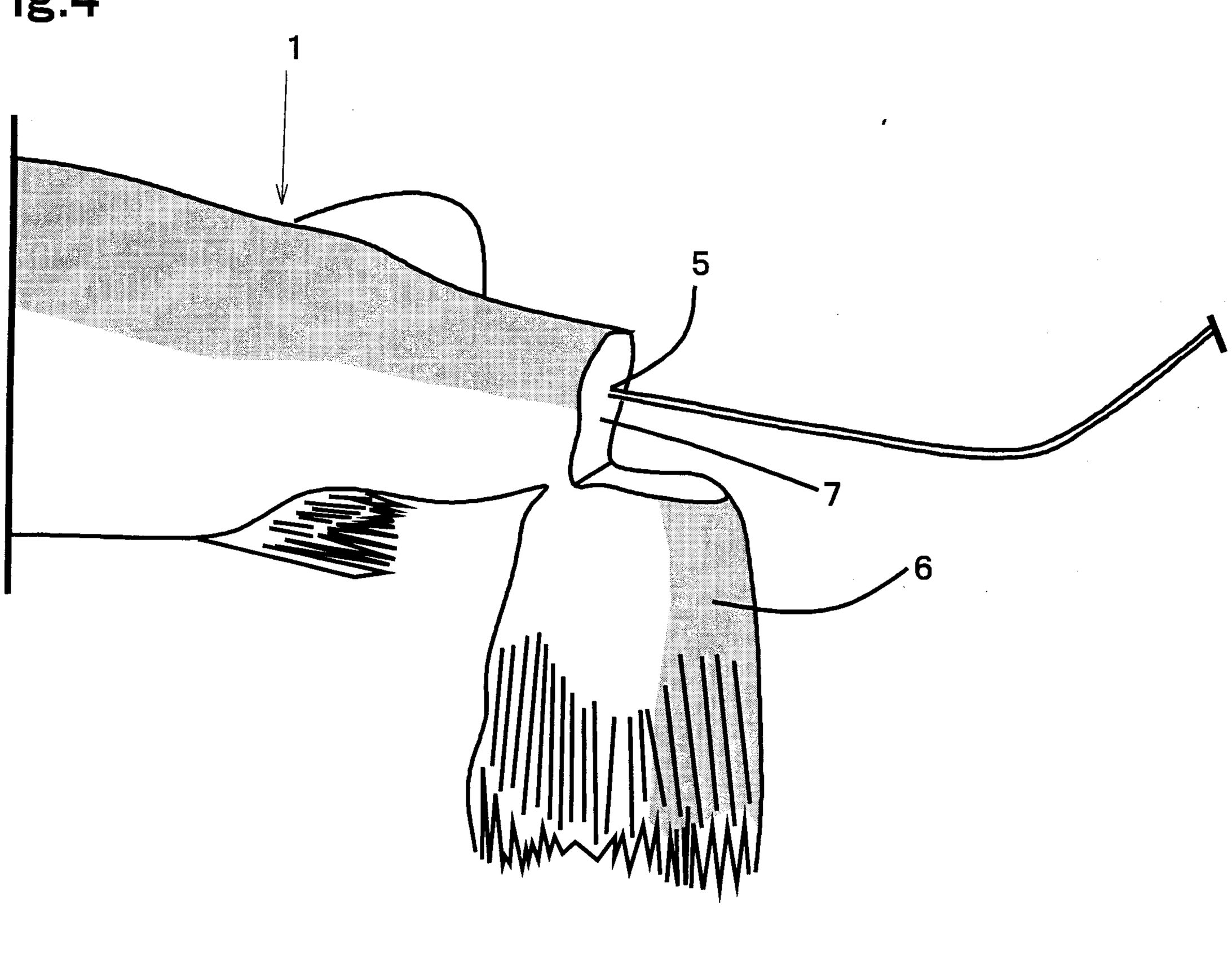
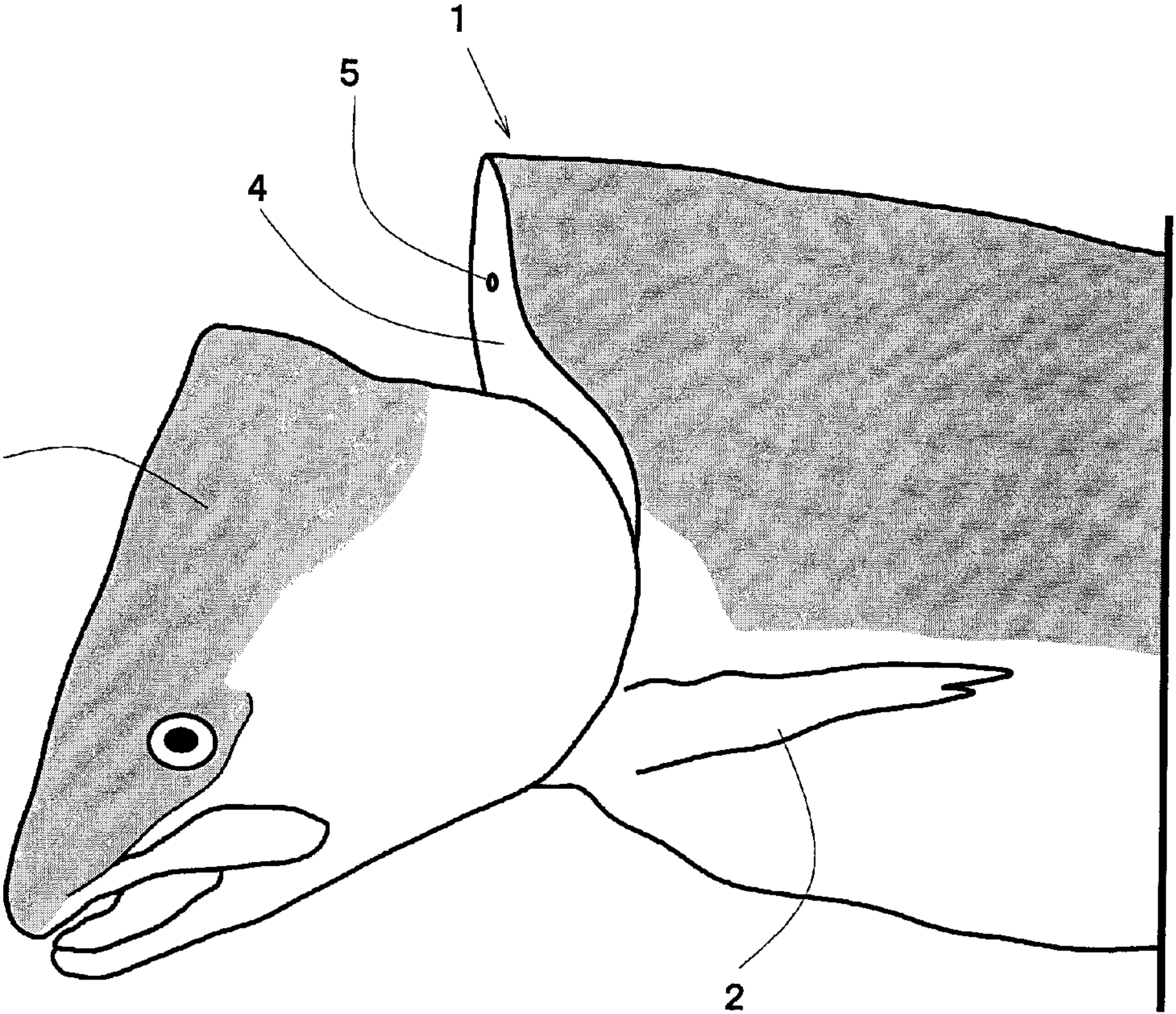


Fig.4




1
5
4
3
2