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(54) SUPPORT FOR A RECEPTACLE FOR ARTIFICIAL INSEMINATION OF PIGS

(57) A container support for the artificial insemination of pigs, taking the form of a saddlebag provided with two side pouches of padded material that house the counterweights. From the middle area of the rear edge of the saddlebag three straps branch out which come together at their free rear end, where they terminate in a fastener, preferably of the "velchro" type, to

secure the receptacle container the dose of semen, with the result that the special arrangement of the three straps and the tendency towards linearity of the catheter due to elastic recovery cause said container to adopt a raised position centred in respect of the vertical, longitudinal and medial plane of the sow's body

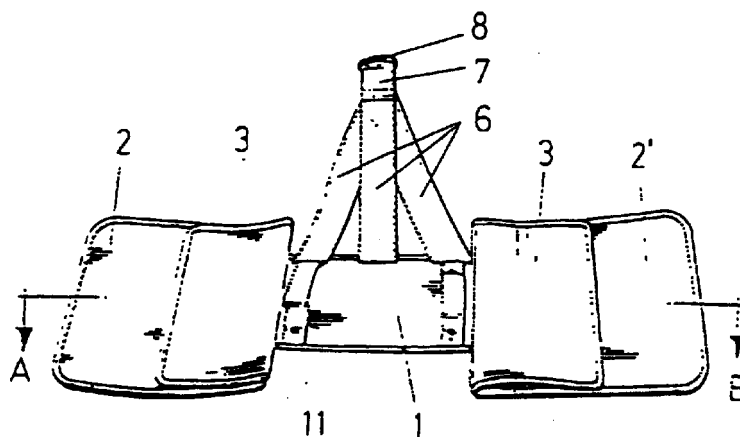


FIG.-1

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Description**OBJECT OF THE INVENTION**

[0001] This invention refers to a support to keep the semen container receptacle stable during the operation of artificially inseminating a sow, leaving the operator's hands free, so that he only has to perform a task of surveillance, thus achieving a substantial saving in labour, which considerably increases output, especially on farms with a large number of daily inseminations.

[0002] Secondly, the support improves insemination conditions from the animal's standpoint by stimulating it and reducing reflux during and after insemination and, therefore, improving the reproductive results obtained by the inseminator

BACKGROUND OF THE INVENTION

[0003] For pig insemination use is made of a catheter of considerable length, which terminates at one of its ends with a head, while the other may be coupled to the sealed end of the container receptacle, after prior cutting, so that, by keeping the container raised in respect of the sow's body, insemination takes place throughout a variable period depending on the sow's absorption capacity

[0004] This solution means that the operator has to keep the receptacle containing the dose of semen stable in his hand throughout the whole insemination phase, so the results obtained depend on the diligence, motivation and state of mind of the operator, who often forces the rate of insemination to finish sooner, which has an unfavourable impact on the effect of reflux during and after insemination

[0005] Furthermore, the insemination conditions also largely depend on the degree of stimulation of the sow, which is stimulated in natural mating on the one hand by detecting the smell of the boar and on the other by the latter's body load during copulation. The first stimulus is replaced by spraying the sow's snout with pheromone, while for the second the operator sometimes resorts to his own weight on the sow's body, which complicates the insemination process even further

[0006] In an attempt to overcome this problem it is common practice to use "insemination straps" which are secured to the sow's body like a belt and possess devices to hold the semen container during the insemination phase in a raised inverted position after coupling to the catheter, but this solution does not overcome the problem of body load on the sow's body for stimulation purposes, so that the immobilisation reflex is much weaker and, in addition, the operator has to enter the sow's pen in order to fit this belt, which involves a considerable loss of time on farms with a large number of animals

DESCRIPTION OF THE INVENTION

[0007] The support proposed by the invention offers a fully satisfactory solution to the foregoing problems in the different aspects mentioned.

[0008] For this purpose and more specifically said support takes the form of a kind of saddlebag of an appropriate size to fit snugly over the sow's back, a saddlebag provided with two side pouches designed to hold appropriate and suitably balanced counterweights, which may range, for instance, from 8 Kg to 15 Kg in all, a saddlebag intended to be positioned on the sow's lumbar area, on which the boar normally supports itself in natural mating.

[0009] These counterweights may in practice take the form of discs of any appropriate material, which are housed in the respective pouches with a thick layer of padding material placed in between so that, besides softening its impact on the sow's body, it contributes to the animal's comfort during insemination.

[0010] Ancillary to the above-described structure, three straps branch out from the middle area of the back edge of the saddlebag belts and come together at their free rear end, where they terminate in a fastener, preferably of the "velchro" type, to secure the container holding the dose of semen, with the result that the special arrangement of these three straps and the tendency towards linearity of the catheter due to elastic recovery cause this container to adopt a raised and perfectly centred position in respect of the vertical, longitudinal and medial plane of the sow's body

[0011] The saddlebag constituting the support proposed by this invention offers a series of advantages that may be summarised essentially in the following aspects

- It stimulates the immobility reflex for the detection of rut
- It stimulates the sow during insemination.
- It reduces reflux during and after insemination.
- It improves the sow's well-being during insemination through the weight being appropriate to its body condition
- It conserves and improves the reproductive results obtained by the inseminator
- It saves time and labour.
- Approximate insemination time is 5 minutes.
- Dose absorption time ranges from 2 - 10 minutes, depending on the sow's absorption capability

DESCRIPTION OF THE DRAWINGS

[0012] To supplement the description being given and in order to make it easier to understand the features of the invention, in accordance with a preferential example of a practical embodiment thereof, as an integral part of said description a set of drawings is attached where, for illustrative but non-restrictive purposes, the following is represented

Figure 1 - It shows a plan view of the container support for the artificial insemination of pigs constituting the object of this invention, in which the saddlebag appears fully extended

Figure 2 - It shows a cross-sectional view of the saddlebag, in accordance with the section line A-B in figure 1.

Figure 3 - It shows, finally, a side elevation view of the same support duly coupled to the body of a sow and in the phase of artificial insemination of same.

PREFERENTIAL EMBODIMENT OF THE INVENTION

[0013] In the light of these figures it may be observed how the support proposed takes the form of a kind of saddlebag in which a wide intermediate band (1) is defined, of a strong material, such as canvas for instance, with no possibility of harming the animal, at each end of which there are attached the pouches or saddlebags proper (2-2'), provided with closing overlaps (3) in order to secure the weight, fixable in said closing position by any conventional means, as, for example, by means of "velchro" type ribbon cling fasteners, said pouches (2-2') being intended to hold in their interior respective counterweights (4), preferably in disc form, determining in every case the most suitable load depending on whether the sow is nulliparous or multiparous, said counterweights (4) being housed within a thick layer of padding material (5), which has the evident purpose of distributing the load where it rests on the body of the sow

[0014] To this intermediate band (1) and specifically to its rear edge, there are attached by means of seams three strips or straps (6), one perfectly centred middle one and another two symmetrical side ones, which converge towards their rear end (7), where they receive and secure a ring that opens (8), preferable taking the form of a "velchro" type ribbon cling fastening, sewn in the middle at the confluence (7) between the three straps (6), said strap (8) being of a suitable length to be able to gird the container (9) holding the dose of semen with same

[0015] As may be observed in figure 3 and as mentioned previously, the flexible nature of the catheter (10) and the plurality and symmetry of the straps (6) cause the container (9) to adopt a raised, laterally centred and

perfectly stable position, which assures optimal insemination conditions

[0016] It only remains to be pointed out lastly that on the wide intermediate band (1) of the saddlebag, at the end areas of same adjoining the pouches (2-2'), there are transverse strips or straps (11), sewn to the band (1) at their ends, forming handles that assist the handling of the saddlebag, both in the operation of setting it in place on the sow and in its later removal.

[0017] In accordance with the structural arrangement described, the operating procedure with the support proposed by the invention is as follows

- First of all, a counterweight (4) of a weight appropriate to the features of the sow is put into each one of the pouches (2-2') making up the saddlebag
- The saddlebag is then placed on the sow's lumbar area
- Next, pheromone simulating the presence of the boar is sprayed onto the sow's snout
- After that, the catheter is inserted into the sow's vagina.
- The catheter (10) is then coupled to the container (9) with the dose of semen, at a temperature between 35°C and 37°C
- This container (9) is attached to the ring defined by the rear strap of the support (8)
- The container (9) is pressed manually until filling the catheter (10) with the semen and the wall of said container (9) is then pricked in order to prevent vacuum
- Absorption of the dose is monitored
- When absorption is completed, the catheter is removed or else left in place to prevent the entry of air, keeping the saddlebag on the sow for a further 2 minutes
- Lastly, the saddlebag is removed together with the catheter, if this has been left in place

[0018] It is not considered necessary to make this description more extensive for any expert on the matter to appreciate the scope of the invention and the advantages stemming from it

[0019] The materials, shape, size and arrangement of the components are open to variation providing that this does not entail altering the essential nature of the invention

[0020] The terms in which this report has been drafted should always be taken in their broadest and

non-restrictive sense.

Claims

1. A container support for artificially inseminating pigs, the container of which is coupled to a vaginal penetration catheter and which should be kept in a raised position during the period of semen absorption, characterised in that it consists of a kind of saddlebag for fitting snugly to the sows body in the lumbar area, taking the form of a wide central band which terminates at each end with a pouch for holding respective counterweights, provision being made that from the rear edge of the central or intermediate band straps branch out that terminate in a fastener for securing the receptacle containing the dose of semen. 5
10
2. A container support for artificially inseminating pigs, according to claim 1, characterised in that said pouches are provided with closing overlaps, fitted with any kind of conventional fastener, such as for instance "velchro" type cling ribbons 20
3. A container support for artificially inseminating pigs, according to claim 1, characterised in that the counterweights that are housed inside the pouches are replaceable and of varying weight, adaptable to the features of the sow, depending on whether this is nulliparous or multiparous. 25
30
4. A semen container support for artificially inseminating pigs, according to claim 1, characterised in that each pouch is lined with a thick layer of padding for the counterweights 35
5. A container support for artificially inseminating pigs, according to claim 1, characterised in that three straps, converging towards their rear end, one middle one and two symmetrical side ones, branch out from the rear edge of the central band of the saddlebag 40
6. A container support for artificially inseminating pigs, according to claims 1 and 5, characterised in that at the rear end of said straps there is a "velchro" type cling ribbon, attached by sewing at the mid-point, which acts as the retaining fastener for the receptacle containing the dose of semen 45
50
7. A container support for artificially inseminating pigs, according to claim 1, characterised in that the intermediate wide band of the saddlebag includes straps at its end areas that are sewn to it by their ends performing the function of handles 55

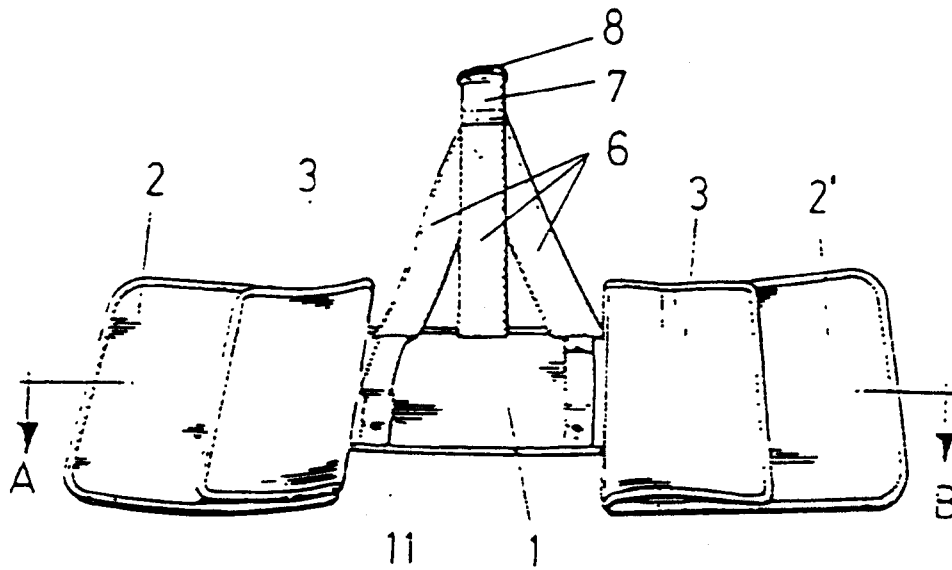
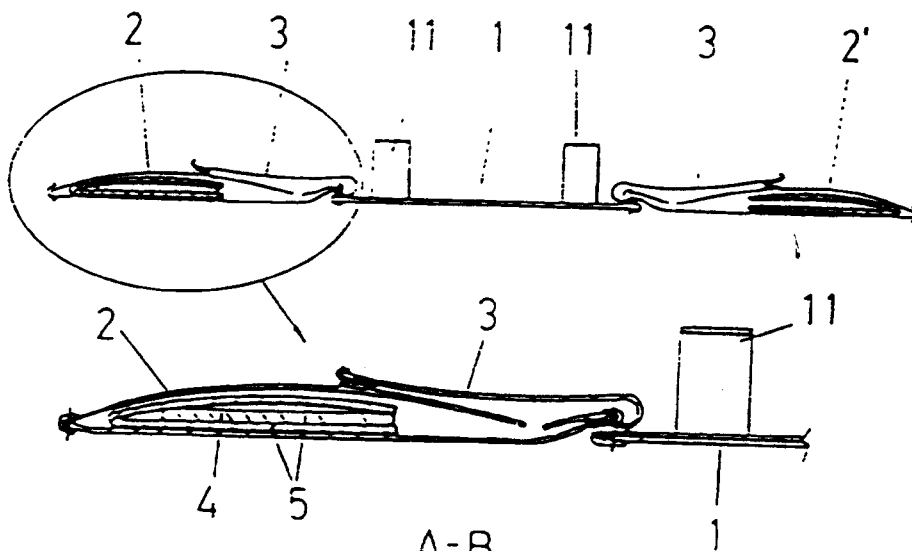


FIG.-1



A-B
FIG.-2

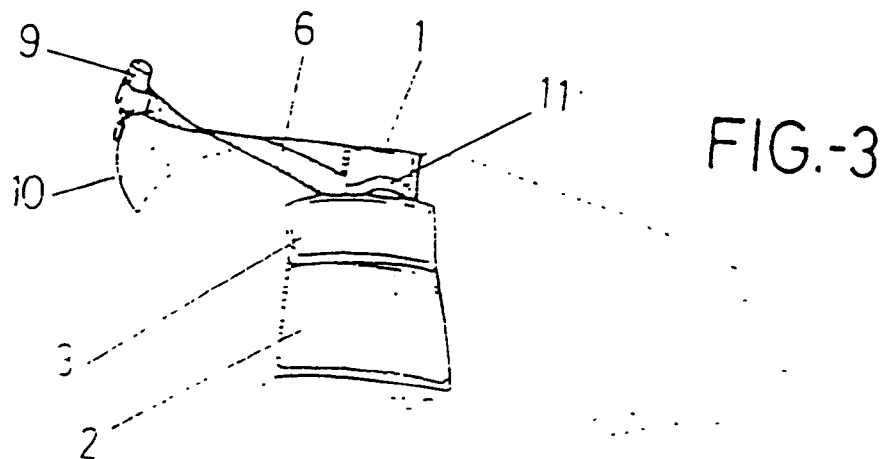


FIG.-3

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/ES 98/00321

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 A61D19/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 A61D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	FR 2 720 929 A (SOCIETE D'ETUDES, DE GESTION, D'ENGINEERING) 15 December 1995 see the whole document	1,7
Y	---	5,6
Y	US 5 690 060 A (DUMOULIN ET AL.) 25 November 1997 see abstract; figures	5,6
A	WO 93 02634 A (UNITRON SCANDINAVIA A/S) 18 February 1993 see abstract; figures see page 1, line 17 - page 3, line 22	1
A	EP 0 068 262 A (RHEINTECHNIK WEILAND & KASPAR KG) 5 January 1983 see abstract; figure	

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

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- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

19 January 1999

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/ES 98/00321

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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