

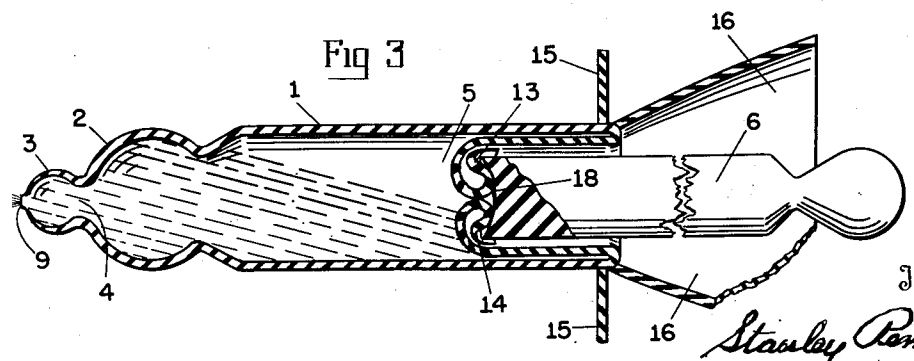
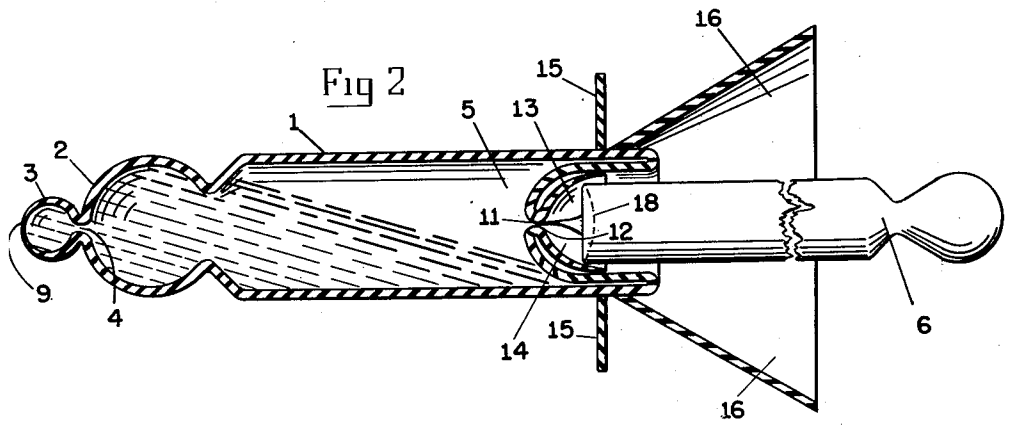
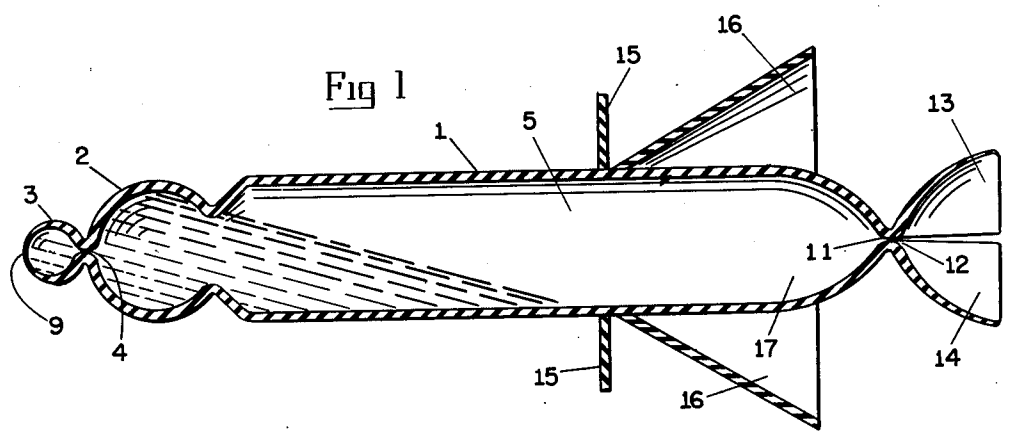
June 6, 1950

S. PENKSA  
PROTECTIVE RECEPTOR

2,510,249

Filed Nov. 27, 1946

2 Sheets-Sheet 1



Inventor  
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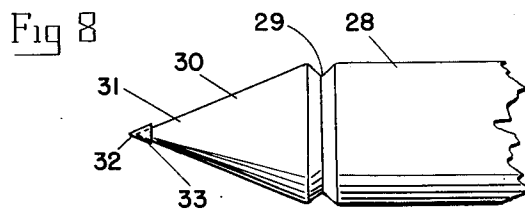
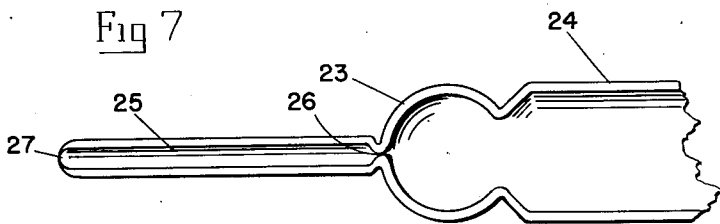
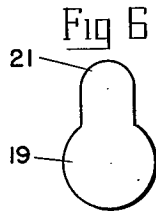
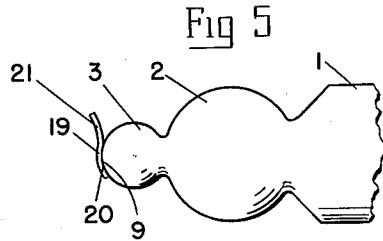
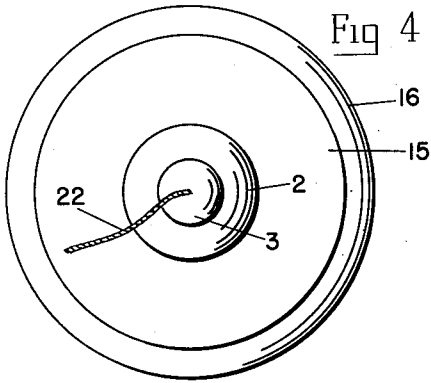
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2 Sheets-Sheet 2



Inventor

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# UNITED STATES PATENT OFFICE

2,510,249

## PROTECTIVE RECEPTOR

Stanley Penksa, Yonkers, N. Y.

Application November 27, 1946, Serial No. 712,696

3 Claims. (Cl. 128—294)

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### *Objects of the invention*

This invention relates to obstetrical appliances and has for its object to provide means for receiving, transporting and injecting sperm of the male to the female in cases of artificial insemination, without exposing the semen to contamination either through contact with any article, air or light which might possibly interfere with its fertility.

Another object of the invention is to provide means of artificial insemination which is simple, effective and sure.

Another object of the invention is to provide means for the collection and transportation of semen in a manner to prevent exposure thereof at any time to atmospheric conditions.

Another object of the invention is to provide means for the collection of semen from the male and the insemination of the female therewith.

A further object of the invention is to provide a sack formed with a semen collecting pocket normally held closed, but adapted to be opened at the moment of ejaculation, through the action of the greatest enlargement of the penis head, in order to receive the semen, which pocket will automatically close tight upon removal from or contraction of said head.

A still further object of the invention is to provide a sack so formed that sperm of the male may be collected, transported, diluted and injected into the upper portion of the vagina, or directly into the uterus without exposure at any time to atmospheric or any other deteriorating or contaminating influences.

Another object of the invention is to provide a method by means of which artificial insemination may be accomplished without permitting the sperm at any time coming into contact with air or any object through which it may become deteriorated as to fertility, or contamination.

Another object of the invention is to provide a flexible (preferably an elastic) sack for the collection of semen and injection of the same into the uterus of the female patient.

A still further object of the invention is to provide a sack for injecting semen into the vagina of a female, said sack having means whereby the pressure may be brought to bear upon the sack without forcing it too far into the genital tract.

Another object of this invention is to provide a sack of the nature above stated which is provided with automatic closing means at each end thereof.

With the above and other important objects in view as will hereinafter more fully appear, I

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have invented the device shown in the accompanying drawings.

### *Brief description of drawings*

5 Figure 1 is a longitudinal sectional view of one member of my device,

Figure 2 is a view similar to Figure 1 of the complete invention, parts being shown in changed position,

10 Figure 3 is a view similar to Figure 2 shown diagrammatically,

Figure 4 is an elevational view of one end of Figure 1,

15 Figure 5 is a view similar to Figure 4, showing a patch thereon,

Figure 6 is a detailed elevational view of a patch,

Figure 7 is a sectional view of a modification, partly broken away, and

20 Figure 8 is a view similar to Figure 7 of another modification.

### *Foreword*

25 In the medical profession physicians have had to resort to artificial impregnation in many cases of sterility, due to various causes, such as malformation of the genital organs of either the husband or the wife, infertility of the husband and many other pathological reasons. In this practice it has been found that the spermatozoon becomes greatly weakened or killed through exposure to light, atmospheric conditions or contact with bacteria infested organs or articles, which conditions have heretofore made it necessary to repeat insemination often many times, in order to bring about pregnancy.

30 It is extremely essential in this practice that the strictest rules of asepsis should be carried out for success; otherwise, the semen may become contaminated with disease or other germs which will either result in diseased offspring, or reduce the sperm to impotency.

35 It is in order to overcome this probability of deteriorating the spermatozoon through the present unsatisfactory method of handling the semen and the necessity of oft repeated injections incident thereto, that I have designed the device to be hereinafter described.

40 In the artificial insemination of farm and other animals, which practice is very common in Russia, Sweden, Switzerland and other European countries, and which is a rapidly growing practice in the United States, the same difficulties in the collection, handling and injection of the semen, as above outlined, has been encountered.

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Practice has proven that semen may be collected (refrigerated when necessary) and shipped for long distances without any material deterioration; however, it has been found that its exposure to atmospheric conditions, contaminated articles, or germ infested flesh, either of the veterinarian or the animal to be treated, often results in a negative operation, necessitating one or more repeated operations which result in much unnecessary expense unless such exposure is obviated, hence my invention. It is well known to practitioners in this field that the semen from one ejection is sufficient to bring about pregnancy in a number of different females, provided the semen is sufficiently protected from deteriorating influences and is properly diluted. My device makes provision for such dilution as will presently be explained.

#### Specification

Like reference characters indicate like parts throughout the following specification and in the several views in the drawings, in which 1 indicates an artificial insemination sack formed of rubber, a treated fabric or other suitable material. This sack is of a size to snugly fit the male organ and has provided at the outer extremity of its head 2, a normally closed pocket 3. When the male organ head is swollen to its greatest extent at the movement of ejaculation said sack head 2 is stretched to such an extent as to open the aperture 4 whereby the semen discharged will enter directly into said pocket. Upon contraction of the male organ the rubber will automatically contract therewith, tightly closing said aperture and sealing the semen in said pocket.

Spaced inwardly of the end of the sack is another contraction of the rubber, as indicated at 11, which forms a normally closed mouth 12 for the sack which mouth, however, will readily open upon stretching apart the flaps 13 and 14 which terminate the outer end of the sack and extend beyond said contracted mouth.

The extreme end 9 of the pocket 3 (as indicated particularly in Figure 4 of the drawings) is greatly thinned in order that it may be readily burst upon sufficient pressure being applied thereagainst.

Surrounding the sack 1 at a point inwardly of the apron 16 is a rather thick flange 15, which forms a stop to limit the movement of the sack into the vagina when the plunger 6 is used as indicated in Figures 2 and 3 of the drawings. This plunger is preferably formed of semi-rigid rubber and is used especially in the impregnation of animals. Extending from the flange 15 toward the members 13 and 14 is a relatively large conically formed apron 16 which forms the double function of a pocket within which the hand of a surgeon is slipped to grasp the portion 17 of the sack therein for manipulating the same in an insemination operation in certain cases, and also as a hand grip to maintain hold upon the sack when the plunger 6 is being used in other cases.

The plunger 6 is provided with a concave recess 18 in the end thereof into which the contraction 11 is adapted to seat when the plunger is used to force out the contents of the pocket 3. This automatic connection of the plunger with the mouth of the sack will prevent fluid from escaping through back pressure.

In order to prevent accidental rupture of the weakened portion 9 I provide a non-elastic patch 19 removably sealed, over said weakened portion which is adhered to the surface 20 surround-

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ing said portion 9 and which patch is provided with a loose tongue 21 by means of which it may be removed just before the impregnating operation. Instead of using this particular method of freeing the semen from its pocket, I may embed a thread 22 in the thinned portion 9, to be pulled out at the proper time. In this case the wall may be somewhat thicker than the wall 9 but of a nature to nearly break through upon pulling upon the free end of the thread and tearing it from its place.

In cases of failure of natural insemination due to inability of sperm cells to migrate to the cavity of the uterus because of cervical obstructions of the cervix uteri, or cervical canal, stenosis in the region of the internal os, etc., I have provided the form of device illustrated in Figure 7, in which the head 23 of snack 24 is provided with an elongated probosci formed pocket 25 having a contraction 26 and weakened wall end 27, and which may readily probe its way through curvatures or obstructions to sufficiently close juxtaposition of the uterus to accomplish the desired purpose.

It is to be understood that instead of rubber the sack 1 may be formed of treated silk, or any other non-elastic material suitable for the purpose in which the pocket 3 will be connected to the head portion 2 by a reduced neck within which is embedded an elastic band for contracting the mouth 4. A similar closure may be provided at the mouth 12.

In Figure 8 I show another modification in which I provide a sack 28 having a reduced neck 29 for the conical head 30 into which the semen is directly ejaculated. Upon partial removal of the sack a string is tied tightly around said neck to bottle up the semen and thus prevent contact with the air. This form of the invention is especially adaptable for use for certain farm animals and poultry having a reduced external orifice to the genital canal into which the point 31 is inserted and the conical head then acts as a wedge to spread the flesh and thereby readily gain entrance. Just before the entrance is started the extreme point 32 is weakened by removing cap 33, to an extent to permit ready bursting through pressure.

#### Operation

The operation of the invention is extremely simple and as follows: The sack 1 is fitted to the male which is caused to make a discharge therein through any one of several well known devices disclosed by the U. S. Department of Agriculture or other satisfactory methods. If after the sack has been removed from the male organ or penis and it is then desired to dilute the semen which has been collected in said pocket 3, the mouth 12 of the sack is turned up and the diluent is poured in through a funnel, after which the pocket 3 is sufficiently squeezed to force the semen into the body portion 5 of the sack, whereupon the sack is then sufficiently agitated to cause a thorough amalgamation of the semen and diluent. After this is done a sufficient portion of the mixture is squeezed back into the pocket 3 whereupon the device is ready for impregnation of the female. To accomplish this purpose I provide the plunger 6, which is inserted against the mouth 7 of the sack (which is held in one hand while its head end is being inserted into the vagina) and forced into the sack until the contents of the sack are sufficiently compressed to stiffen the sack and cause it to freely and easily

pass into the genital canal until its pocket end 3 has about reached the uterus, whereupon the sack is held by means of the apron 16 while said plunger is pushed far enough into the sack as point 17, to so expand said pocket through compression of its contents, to cause the extremely thinned or weakened center 9 to burst and let the contents of the pocket escape into or near the uterus. As soon as this escape occurs the pressure being relieved the pocket at once contracts and closes aperture 4 hindering further escape of the sperm mixture. The bursting of said pocket causes sufficient vibration to transmit the slight shock to the hand of the surgeon performing the operation who at once ceases pressure of said plunger.

Where there is a sufficient quantity of the diluted fluid in the body portion of the sack the surgeon may repatch the pocket and squeeze the sack by hand to cause forcing out of additional semen into the pocket 3 whereupon the operation may be repeated upon another female or animal. It will be noted that the sack is of sufficient length for the operation. It will also be noted that the enlarged apron 16 of the sack is of sufficient size to permit the operator to hold the sack in proper position and prevent the sack being shoved too far in through the action of the plunger, when used. In connection with this operation attention is called to the fact that due to the great pliability and flexibility of my device, it may readily be caused to enter and follow the genital tract toward the uterus and may be readily used in case of lesions in the genital canals which preclude normal fecundation, resulting in sterility.

#### Method

The method provided for by the above described invention is to obtain semen, retain the same until ready for use, transport the same to any desired distance (around the world if desired) dilute the semen (either at the time of collection or at any period before use) and inseminate the female, without at any time exposing the semen (from collection to insemination) to atmospheric, human, or any other contact which might contaminate, deteriorate or otherwise effect its potency. This is accomplished by collecting the semen in the sack 1 and retaining the same therein until discharged into the genital canal in the impregnation operation.

It may be stated here that semen under proper conditions may be preserved almost indefinitely, but according to physicians, expert in artificial insemination, veterinarians of general practice, as well as those in the employ of the Department of Agriculture, agree that no satisfactory method of preserving semen in its original pure potent state has heretofore been found.

In conclusion it may be stated that the invention will prove of the greatest value to livestock breeders in the country due to the fact that females may be bred from the finest male stock in the world at a relatively negligible cost. And by the same method wives, with the assistance of their family physicians, may be insemi-

nated with the semen of their husbands though separated by half around the globe, thus avoiding the breaking up of countless homes.

I claim:

1. An obstetrical instrument comprising an elongated flexible sack with an open end and a closed end and having a constricted section spaced from the closed end and providing a closed pocket therein, said constricted section adapted to be stretched when subjected to pressure from the sack to open the pocket to the interior of the sack whereby fluid may pass from the sack to the pocket, and said constricted section adapted to contract and close the pocket when the pressure is relieved, said pocket having a relatively thin area adapted to break to release the fluid when sufficient pressure is applied thereto.

2. An obstetrical instrument comprising an elongated flexible sack with an open end and a closed end and having a constricted section spaced from the closed end and providing a closed pocket therein, said constricted section adapted to be stretched when subjected to pressure from the sack to open the pocket to the interior of the sack whereby fluid may pass from the sack to the pocket, said constricted section adapted to contract and close the pocket when the pressure is relieved, said pocket having a relatively thin area adapted to break to release the fluid when sufficient pressure is applied thereto, and said sack having a second constricted section spaced from the open end thereof providing a mouth and having outwardly flared flaps extending from the mouth.

3. An obstetrical instrument comprising an elongated flexible sack with an open end and a closed end and having constricted sections spaced from the ends, said sack also having an annular circumferential flange with an apron extending therefrom spaced from the said open end, the constricted section of the closed end of the sack providing a closed pocket in the end of the sack with a relatively thin area therein adapted to break to release fluid therein when sufficient pressure is applied thereto, said constricted area forming the pocket adapted to stretch when subjected to pressure whereby fluid may pass from the sack to the pocket and adapted to contract to close the pocket when the pressure is relieved.

STANLEY PENKSA.

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