

provided with a pulse dosage dispenser 38 seen in dash-lines. Pulse dispenser 38, in one manufacture is made as a raised pouch, as illustrated in FIG. 8 in dash-lines. The pulse dispenser 38, made as a raised pouch is similar to a marsupial pouch. In this manufacture, the pouch is on the inside wall of container 37. The pouch contains drug and it serves to discharge a part of its drug through opening 39 into container 37 each time container 37 is lowered and inverted for receiving an incoming medical fluid. It is presently desired to keep the size of opening 39 small in order to minimize the amount of active drug released into container 37, and for keeping drug in reserve in pouch 38 for later use. In this manufacture pouch 38 functions as a pulse dosage dispenser, and acts as a reservoir of drug. Container 37 is used like container 17 with intravenous delivery system 10. FIG. 9 is a side view in opened section of the pouch as depicted in FIG. 7 and 8. The pouch is formed by a wall 40 made of a flexible polymeric material defining a pocket-like structure bonded around its edges to the inside surface 41 of container 37. The edges and the inside surface are bonded to each other by adhesive or solvent bonding or by any other suitable means to provide a fluid tight seal. This permits drug to be maintained in pouch 38 and it permits discharge only through opening 39 specifically provided for that function. FIG. 10 is similar to FIG. 9 with the added embodiment of a dispensing passageway 42 integrally formed in the bottom of the pouch and positioned distant from opening 39. FIG. 10 operates as previously described and it contains a medicament that can be added to an incoming fluid for intravenous use.

The novel and unobvious invention uses means for obtaining the precise control of drug delivery in an intravenous delivery system. While there has been described and pointed out features of the invention as applied to presently preferred embodiments, those skilled in the art will appreciate that various modifications, changes, additions and omissions in the delivery system illustrated and described can be made without departing from the spirit of the invention.

I claim:

1. A method for administering a drug formulation to a warm-blooded animal, wherein the method comprises:
 - (a) admitting intravenously into an animal in need of a drug formulation a delivery member connected to an intravenously therapeutic delivery system, the system comprising:
 - (1) a first container housing an intravenously acceptable fluid;
 - (2) a second container housing an intravenously acceptable drug, said second container having an internal pouch that houses said drug, said pouch having fluid impermeable sidewalls, a fluid impermeable bottom wall and an upwardly facing opening so that a drug in the pouch leaves the pouch solely via said upwardly facing opening when fluid is introduced into said second container;
 - (3) means for conveying fluid from the first container into the second container;
 - (b) conveying fluid from the first container into the second container by moving at last one of said containers to a position whereby the second container is lower than the first container;
 - (c) letting fluid from the first container into the second container for contacting the drug, thereby

forming in situ a drug formulation acceptable for intravenous administration; and,

- (d) administering the drug formulation to the warm-blooded animal in a therapeutically effective amount by positioning the second container above the first container to permit drug formulation to flow from the second container to the delivery member for administering to said animal.

2. A method for administering a drug formulation to a warm-blooded animal, wherein the method comprises:

- (a) admitting intravenously into an animal in need of a drug formulation a delivery member connected to an intravenously therapeutic delivery system, the system comprising:
 - (1) a first container housing an intravenously acceptable fluid;
 - (2) a second non-vented container of one piece construction housing a dosage form comprising a drug that is released by the dosage form into fluid that enters the second container and contacts the dosage form, said second container initially free of intravenously acceptable fluid and initially being located above the first container;
 - (3) means for conveying fluid from the first container into the second container;
- (b) conveying fluid from the first container into the second container by moving at least one of said containers to a position whereby the second container is lower than the first container;
- (c) letting fluid from the first container into the second container for contacting the dosage form causing it to release drug, thereby forming in situ a drug formulation acceptable for intravenous administration; and,
- (d) administering the drug formulation to the warm-blooded animal in a therapeutically effective amount by positioning the second container above the first container to permit drug formulation to flow from the second container to the delivery member for administering to said patient.

3. A method for administering a drug formulation to a warm-blooded animal, wherein the method comprises:

- (a) admitting intravenously into an animal in need of a drug formulation a delivery member connected to an intravenous therapeutic delivery system, the system comprising:
 - (1) a first movable container housing an intravenously acceptable fluid;
 - (2) a second non-vented movable container of one piece construction housing an intravenously acceptable dry drug and initially being located above the first container;
 - (3) means for conveying fluid from the first movable container into the second movable container;
- (b) conveying fluid from the first movable container into the second movable container by moving at least one of said movable containers to a position whereby the second movable container is lower than the first movable container;
- (c) letting fluid from the first movable container into the second movable container for contacting and dissolving the drug, thereby forming in the formulation chamber a drug formulation acceptable for intravenous administration; and,