

CLAIMS

1. An intrauterine system (100, 300, 400, 500, 600) comprising
 - a frame (102, 302, 402, 502, 602) having a first end (104, 304, 404, 504, 604), a second end (106, 306, 406, 506, 606) and a length L defined as a distance from the first end to the second end;
 - a removal thread (218, 326, 436, 626) attached to the first end of the frame; and
 - at least one pharmaceutically active agent;
- 10 wherein the first end of the frame comprises a first locking part (108, 308, 408, 508, 608) and the second end of the frame comprises a second locking part (110, 310, 410, 510, 610), the first locking part and the second locking part being arranged to form a lock (202, 312, 432), the removal thread being configured to guide the first locking part to the
- 15 second locking part.
2. An intrauterine system (100, 300, 400, 500, 600) according to claim 1, wherein the at least one pharmaceutically active agent is arranged in at least one capsule (330, 332, 334, 336, 414, 416, 418, 420, 514, 516, 518, 624), the capsule being arranged to surround the frame (102, 302, 402, 502, 602) on at most a part of its length L.
- 20 3. An intrauterine system (100, 300, 400, 500, 600) according to claim 1 or 2, wherein the frame (102, 302, 402, 502, 602) comprises
 - a first frame segment (204, 314, 422, 612), a second frame segment (206, 316, 424, 614) and a third frame segment (208, 318, 426, 616)
 - 25 having a width W defined as a dimension perpendicular to the length, the first and second frame segment being connected via a first bending segment (210, 320, 426, 520, 618) and the second and third frame segments being connected via a second bending segment (212, 322, 428, 522, 620);
 - 30 wherein

- the first bending segment has a first width W1 and the second bending segment has a second width W2; and
 - the first width W1 is 5-50 % of the width W and the second width W2 is 5-50 % of the width W.
- 5 4. An intrauterine system (100, 300, 400, 500, 600) according to claim 1 or 2, wherein the frame (102, 302, 402, 502, 602) comprises
- a first frame segment (204, 314, 422, 612), a second frame segment (206, 316, 424, 614) and a third frame segment (208, 318, 426, 616) having a width W defined as a dimension perpendicular to the length, the
- 10 first and second frame segment being connected via a first bending segment (210, 320, 426, 520, 618) and the second and third frame segments being connected via a second bending segment (212, 322, 428, 522, 620);
- wherein
- 15 - the first bending segment has a first width W1 and the second bending segment has a second width W2; and
- the first width W1 is 5-50 % of the width W and the second width W2 is 100-150 % of the width W.
5. An intrauterine system (100, 300, 400, 500, 600) according to claim
- 20 3 or 4, wherein the cross-section of the frame (102, 302, 402, 502, 602) at the first bending segment (210, 320, 426, 520, 618) and at the second bending segment (212, 322, 428, 522, 620) has an essentially concave shape (214) wherein the first width W1 and the second width W2 is the smallest dimension of the cross-section.
- 25 6. An intrauterine system (100, 300, 400, 500, 600) according to any of the preceding claims, wherein the first locking part (108, 308, 408, 508, 608) is a pin and the second locking part (110, 310, 410, 510, 610) is a loop, wherein the pin is arranged to be irremovably inserted into the loop.

7. An intrauterine system (100, 300, 400, 500, 600) according to any of the claims 1-5, wherein the first locking part (108, 308, 408, 508, 608) is a hook and the second locking part (110, 310, 410, 510, 610) is a loop, wherein the hook is arranged to be irremovably inserted into the loop.
- 5 8. An intrauterine system (100, 300, 400, 500, 600) according to any of the preceding claims, wherein the pharmaceutically active agent is selected from progesterone, oestrogen, progestin, levonorgestrel, indomethacin, diclofenac, piroxicam, meloxicam and ketoprofen.
9. An intrauterine system (100, 300, 400, 500, 600) according to any of
10 the preceding claims, wherein the frame (102, 302, 402, 502, 602) comprises a bending point (216, 324, 434, 622) allowing the intrauterine system to be removed.
10. An intrauterine system (100, 300, 400, 500, 600) according to any of the claims 2-9, comprising at least two capsules (330, 332, 334, 336,
15 414, 416, 418, 420, 514, 516, 518, 624).
11. An intrauterine system (100, 300, 400, 500, 600) according to claim 10, wherein the capsules (330, 332, 334, 336, 414, 416, 418, 420, 514, 516, 518, 624) comprise different pharmaceutically active agents.
12. An intrauterine system (100, 300, 400, 500, 600) according to any
20 of the claims 2-11, wherein the at least one capsule (330, 332, 334, 336, 414, 416, 418, 420, 514, 516, 518, 624) is arranged to surround the frame (102, 302, 402, 502, 602) along its whole length with the exception of the first locking part (108, 308, 408, 508, 308) and the second locking part (110, 310, 410, 510, 610).
- 25 13. An intrauterine system (100, 300, 400, 500, 600) according to any of the claims 3-12, comprising a first capsule (330, 414, 514) arranged to surround the first frame segment (314, 422), a second capsule (334, 416, 518) arranged to surround the second frame segment (316, 424)

and a third capsule (418) arranged to surround the third frame segment (426); wherein the first locking part (108, 308, 408, 508, 608), the first bending segment (210, 320, 428, 520, 618), the second bending segment (212, 322, 430, 522, 620) and the second locking part (110, 310, 410, 510, 610) are free from capsules (330, 332, 334, 336, 414, 416, 418, 420, 514, 516, 518, 624).

14. An intrauterine system (100, 300, 400, 500, 600) according to claim 1, wherein at the least one pharmaceutically active agent is arranged in the frame (102, 302, 402, 502, 602).

- 10 15. A kit comprising an intrauterine system (100, 300, 400, 500, 600) according to any of the claims 1-14 and an inserter (1100, 1300, 1400, 1500), the inserter comprising
- a handle body (1104, 1306, 1416, 1504) having a distal end (1108, 1330, 1454, 1508), a proximal end (1106, 1440, 1506) and a length L_H
 - 15 defined as the distance between the distal end and the proximal end;
 - a measurement tube (1110, 1328, 1406, 1510) having a distal end (1114, 1514) and a proximal end (1112, 1512), its proximal end being movably attached to the distal end of the handle body, provided the measurement tube is arranged to remain outside a cervix channel during
 - 20 insertion;
 - a plunger (1132, 1202, 1362, 1450, 1532) having a distal end (1134, 1360, 1534), a proximal end (1136, 1536), a length L_p defined as the distance between the distal end and the proximal end, the plunger being movably arranged inside the handle body and the measurement tube,
 - 25 wherein the length L_p is greater than the length L_H ;
 - a flange (1122, 1404, 1522) movably arranged to surround the measurement tube;
 - a finger holder (1124, 1314, 1446, 1524) movably arranged to surround the handle body; and

- means (1126, 1526) for reversibly locking a removal thread (1128, 1358, 1414) of the intrauterine system, arranged on the handle body.