

No. 686,985.

Patented Nov. 19, 1901.

J. M. MILLER.
SYRINGE.

(Application filed July 18, 1901.)

(No Model.)

Fig. I.

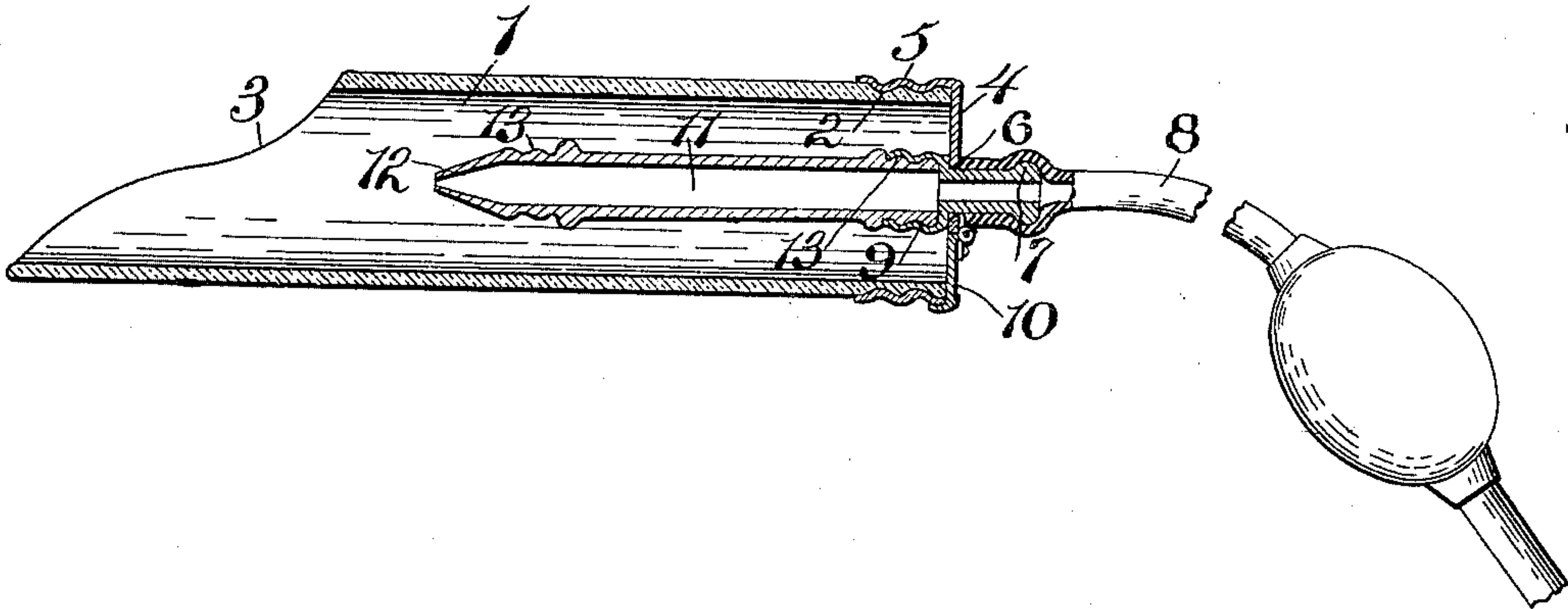
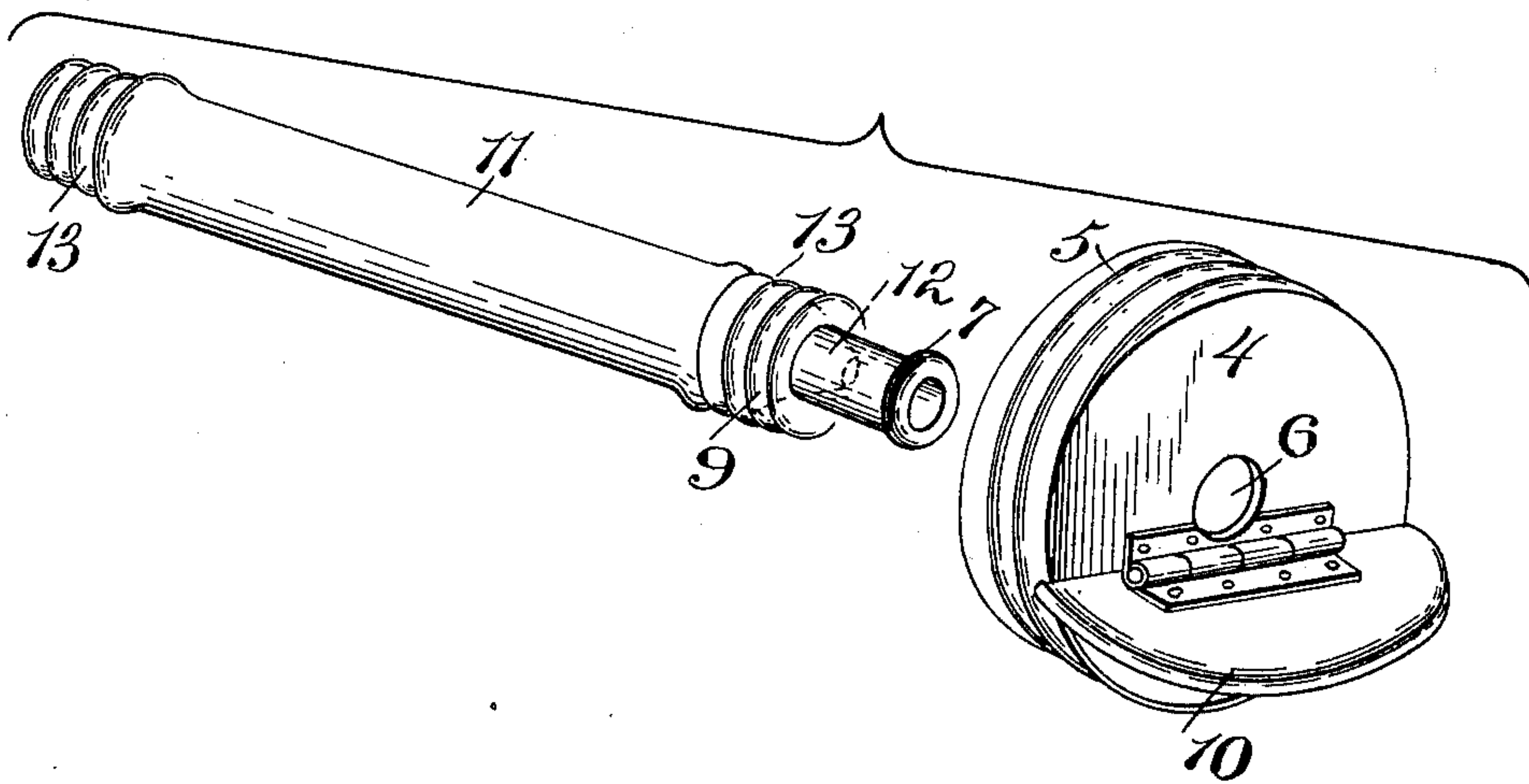


Fig. II.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN M. MILLER, OF DAYTON, WASHINGTON.

SYRINGE.

SPECIFICATION forming part of Letters Patent No. 686,985, dated November 19, 1901.

Application filed July 18, 1901. Serial No. 68,809. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. MILLER, a citizen of the United States, and a resident of Dayton, Columbia county, State of Washington, have invented certain new and useful Improvements in Surgical Instruments; and my preferred manner of carrying out the invention is set forth in the following full, clear, and exact description, terminating with claims particularly specifying the novelty.

This invention relates to surgical instruments, more especially of that class known as "syringes;" and the object of the same is to so improve the construction that it may be used as a speculum or an insufflator and its parts be yet separable, as for cleansing and repair.

To this end the invention consists in an instrument constructed substantially as hereinafter more fully described and claimed and as illustrated in the drawings attached hereto, and wherein—

Figure I is a central longitudinal section of this instrument complete. Fig. II is a perspective detail of the inner parts removed and the glass tube reversed.

Referring to the drawings by reference-numerals, 1 designates the body of the instrument proper, which is preferably of glass in tubular form about three to five inches in length and three to five inches in circumference. At its rear end it is cut off square and threaded, as at 2, while at its forward end it is cut off on an ogee line 3, beginning at the top about one-third way back from the extremity and curving thence downward to said extremity, as best seen in Fig. I. This shape of tip or point I have found by experience to be far preferable to one which is cut off square, is beveled, or, in fact, is cut on any other plan.

The device is inserted into the vagina for the purpose of distending the parts in order that the womb may be treated as the exigencies of the particular case may demand, and for this purpose it is contemplated that the body 1 may be made in several sizes and of slightly-differing shapes, although for general use I prefer the size and shape shown and described.

The numeral 4 designates a cap, preferably of metal, for closing the rear end of the body

1. For this purpose it has a flange 5, threaded to engage the threads 2 on the body, as seen in Fig. I. At its diametric center it is pierced with an opening 6, through which extends a short tube provided with a knob 7 at its outer end, over which is slipped a rubber hose 8, while the inner end of the tube is enlarged and interiorly threaded, as at 9. Liquid may be pumped in through this hose 8 and through the tube, in which event the discharge is permitted through a small gate 10, which is a portion of the end or head of the cap 4, hinged to the remainder, as best seen in Fig. II, and adapted to close tightly against the threaded flange 5 when not in use. This cap is preferably of some metal which will not become rusted or corroded by the use of such acids as are usually employed in connection with instruments of this character.

The numeral 11 designates the inner tube, which is preferably of glass from two to four inches in length and of about the relative size shown in the drawings. At one end it is brought to a conical point 12 with a fine orifice, and at both extremities it is provided with exterior threads 13 of a size to engage within the threads 9. By this means this inner tube can be inserted either end first into the tube or pipe through the cap 4, and when in place it will stand along the axial center of the body 1, but will not project beyond its front end. Obviously this inner tube is for containing liquid or powdered medicaments, which are forced or blown into the patient by means of the hose 8 when desired.

This complete instrument is especially designed for use at the home of the patient where she is too feeble to come to the office of her medical adviser, and it is intended for use by the doctor, a skilled nurse, or a patient herself who is acting under instructions. The body 1 alone may be used as a speculum or for replacing misplaced wombs, packing them into position, and applying simple treatment. With the cap 4 the instrument becomes a douche or syringe, and the parts can be thoroughly washed with water or antiseptics or even with diluted medicines, the inlet being through the hose 8 and the pipe and orifice through the cap and the outlet being through the gate 10. With the addition of the inner tube 11 the instrument becomes an

insufflator when this inner tube is reversed, and the powder is placed therein and blown therefrom by a blast through the hose. The various parts are separable for purposes of
5 cleansing, repair, and replacement.

I do not limit myself to the proportions or materials given nor to the exact details of construction, as various changes therein may be made without departing from the spirit of
10 my invention.

What is claimed as new is—

1. The surgical instrument herein described, the same comprising a body of cylindrical shape with its rear end cut off square
15 and exteriorly threaded, a cap having a threaded flange engaging said rear end, an inlet through the center of said cap, and an outlet consisting of a gate comprising a small portion of the cap hinged to the remainder there-
20 of and closing against said flange.

2. The surgical instrument herein described, the same comprising a tubular body of cylindrical shape with its rear end cut off square, a cap closing said rear end and cen-
25 trally pierced with an opening, an inlet leading through said opening, and an outlet consisting of a gate comprising a small portion of the cap hinged to the remainder thereof.

3. The surgical instrument herein de-
30 scribed, the same consisting of a tubular cylindrical body, a cap closing the rear end thereof and centrally pierced with an opening, a pipe extending through said opening and threaded at its inner end, an inner tube hav-

ing threads at each end of its body adapted 35 to take into said threads of the pipe and standing at the axial center of said body, the inner tube having a fine orifice at one end and a large orifice at the other, and means for forcing the medicament through said pipe. 40

4. The surgical instrument herein described, the same consisting of a tubular cylindrical body, a cap closing the rear end there-
45 of and having an opening, a pipe extending therethrough, a hose communicating with the outer end of said pipe, and an inner tube having a reduced perforated extremity at one end and each end being provided with means to connect it to the inner end of said pipe.

5. The surgical instrument herein de- 50 scribed, the same comprising an exterior cylindrical body, a cap closing one end and having an outlet-gate and a central opening, a pipe through such opening and having an en-
55 larged and threaded inner end, a hose communicating with the outer end of the pipe, and an inner tube exteriorly threaded at both ends to fit the threads of said pipe and reduced at one end to a conical point with a
60 fine aperture.

In testimony whereof I have hereunto subscribed my signature this the 13th day of July, A. D. 1901.

JOHN M. MILLER.

Witnesses:

W. J. HUBBARD,
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