# Improvements connected with injection syringes and the like / [Fritz Freienstein].

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### COMPLETE SPECIFICATION.

## Improvements connected with Injection Syringes and the like.

I, FRITZ FREIENSTEIN, of Scharrnstrasse 12/13, Berlin, in the Empire of Germany, Merchant, do hereby declare the nature of this invention and in what manner the same is to be performed to be particularly described and ascertained in and by the following statement:—

This invention relates to an injection syringe tube with a screw cap nut for fixing and permitting the exchange of the tube on subcutaneous and other surgical

syringes.

Hitherto this fastening has been effected usually by screwing or pushing it on a cone, or on a cylinder provided, with a screw thread, whilst the tube itself was 10 connected inseparably with a cylindrical end piece, provided with a conical bore or with a screw thread to be pushed or screwed upon the corresponding cone or cylinder of the syringe body. Not only is such a fastening deficient and insufficiently close but the tubes provided with these fixed end pieces occupy a considerable space so that for a subcutaneous syringe the case will generally only 15 hold two, and always only a limited number of tubes, whilst it is of the greatest importance and very desirable to have always a large number of tubes at hand, as they very easily get stopped up, and for avoiding infection especially in dentistry it is absolutely necessary to submit the tubes to a thorough disinfection, before they are again used.

The object of this application allows of placing in one a large number of tubes the hitherto used end socket being avoided and the tube A itself let into a small

cone B of soft metal.

A screw cap nut C which possesses a corresponding conical form in the part where it rests upon the cone B, receives the tube and is pressed or screwed over 25 the lengthened syringe mouth piece D consisting of a cone or of a cylinder provided with a screw thread. By screwing up this cap nut the tube is completely tightened by the pressing of the cone B.

It will be understood that tubes thus fixed can be very easily exchanged and cleaned and that on account of the small space which they occupy a larger number

30 of them can be arranged in a case of the usual size.

The cleaning is effected in the known manner by use of a thin wire E with eye E<sup>1</sup> as shown in Fig 2.

Having now particularly described and ascertained the nature of this invention and in what manner the same is to be performed I declare that what I 35 claim is

An injection syringe tube for subcutaneous and other syringes having a conical head B fixed on its dull end and adapted to be pressed strongly upon the syringe mouth piece D by means of a screw cap nut passed over the tube A and screwed upon the mouth piece D.

Dated this 8th day of June 1896.

HERBERT HADDAN & Co., 18, Buckingham Street, Strand, London, W.C., Agents for Applicant.

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