New Inventions.

AN IMPROVED HAGEDORN'S NEEDLE HOLDER.

ONE drawback which may be urged against Hagedorn's needle holder is that a somewhat uncomfortable movement of the little finger is necessary to unlock it. I have therefore requested Messrs. Arnold and Sons, 31, West Smithfield, E.C., to construct a Hagedorn with a Macphail's catch. This renders the unlocking a comfortable process. The holder as thus modified is shown in the accompanying illustration.

CECIL H. LEAF.

Wimpole-street, W.

THE ATKINS NEW CANDLE CARBON FILTER.

THIS filter is constructed on the principle of the porous porcelain candle drip-filter of the Chamberland - Pasteur type. It consists of a reservoir into which the filtering chamber fits provided with three carbon candles. The advantage of such an arrangement is that in addition to rendering water sterile the action of carbon is utilised to remove the organic matter. We placed the filter under some rather severe trials and except that the rate of filtration is decidedly slow the results were quite satisfactory. The rate of filtration of

ordinary tap water was nearly three pints per hour, but this rate was considerably reduced when turbid water was put into the filter. In all cases, however, a perfectly clear filtrate was obtained. Ultramarine was effectually filtered out and, as is well known, this substance is difficult to remove from water. Water coloured with caramel came through colourless and clear. The carbon candles are made of dense material and are comparatively thick in the wall which accounts for the small filtering capacity. The filter is manufactured by the Atkins Filter Engineering and Water Softening Co., Limited, of 71, Southwark-bridge-road, London, S.E.

COMBINED PERITONEUM FORCEPS AND WOUND RETRACTOR.

THESE forceps, made according to my instructions by Messrs. White and Wright, 93, Renshaw-street, Liverpool, are for use during any abdominal operation. As the peritoneum is cut through the edges are seized by one, two, or more pairs of forceps on each side of the wound. The special advantages which they possess are: 1. Since the shanks are at right angles to the blades the former do not get in the way of the operator by sticking up or falling across the wound, as usually happens with Spencer Wells or other forceps. 2. The whole instrument is so shaped that it acts as an efficient wound retractor, being also retained in position by the grip which it has on the peritoneum. Further, the lower finger-hole is made so

that it can be rotated to a right angle with the other in order that the instrument may lie flat on the abdominal

wall. The length of the forceps is seven inches and all the joints are of the "take-off" variety.

Liverpool. W. BLAIR BELL, M.D. Lond., M.R.C.S. Eng.

AN AUDIOMETER FOR NOTING THE AUDITORY APPRECIATION IN CASES OF DEAFNESS AND OTHER DISEASES OF THE EAR.

THE accompanying illustration represents an instrument which I have designed as an aid in the investigation and diagnosis of cases of deafness. The working parts are contained in a box provided with two ear-pieces attached to it by flexible tubes. The contents of the box include one or more tuning forks, shown by the dotted lines, and as the force which sets the fork in action is always the same, and as the sound is heard by the operator and the patient under the same conditions and at the same time, an exact record of the time of appreciation can be kept which is a valuable reference in the future treatment of the case, or for noting the effect produced on audition by particular treatment, such as inflation or paracentesis. The C fork is the ordinary test. The terminals are of glass and can be removed after use for cleansing. The apparatus is

made by Messrs. Down Brothers, Limited, 21, St. Thomas's-street, London, S.E.

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