with an exact radical; thus, in a child of seven months, using $\sqrt{25}$ instead of $\sqrt{28}$. Below are seen the results given by this formula compared with those prescribed by the Ladd Card.

NO. OF FEEDINGS IN 24 HOURS.		
Age of Child	Formula	Ladd Card
1 week	10	10
2 weeks	10	10
4 "	9	9
6 "	9	8
2 months	8	8
3 "	8	7
4 "	7	7
5 "	7	6
6 "	6	6
7 "	6	6
8 "	5	6
9 "	5	6
10 "	5	5
11 "	4	5
12 "	4	5

From the total amount and the number of feedings, the size of the individual feeding can be easily computed. These two formulæ thus give the working practitioner the means for obtaining quickly results essentially as accurate for all practical purposes as those given in the various tables and textbooks.

New Instrument.

A NEW NEEDLE HOLDER.

BY JOHN W. KEEFE, M.D., PROVIDENCE, R. I.,

Consulting Surgeon to the St. Joseph's Hospital; Attending Surgeon to the Rhode Island Hospital, Providence, R. I.

THE number of needle holders which from time to time have been devised is an evidence that none are satisfactory to the majority of surgeons.

The holder shown in the cut I trust may meet the requirements some surgeons are seeking. The handle is one that may be firmly and easily held, thus having the instrument under complete control. The ratchet may be operated by the thumb, downward and outward pressure releasing, downward and inward pressure securing, the grasp of the needle. The last notch in the ratchet should always be used, irrespective of the size of the needle, as the elasticity of the

steel in the upper blade will accommodate it to any size needle. The jaws of the instrument being narrow and pointed permit the use of the holder in small and deep localities. A little time should be devoted to studying and practicing the methods of holding and releasing the needle, so that one may be able to use the needle holder with facility. The instrument was made for me by George L. Claflin & Co., Providence, R. I.

Medical Progress.

REPORT ON THORACIC DISEASE.

BY J. W. BARTOL, M.D., BOSTON.

INFLUENCE OF DWELLING ON SPREAD OF TUBERCULOSIS.

ROMBERG and Haedicke¹ report the results of a careful investigation, based on statistics and personal observation, of the morbidity and mortality record of tuberculosis in Marburg since 1890 with especial reference to localization amongst certain classes or districts of the city.

An epitome of their findings is: (1) Taking the one-fifth of the population in poorest circumstances, phthisis is present in 4.7%, while in the remaining four-fifths in better standing, it is found in only 0.2%. (2) Thirty-four per cent of reported deaths from tuberculosis occurred in 2.6% of the 1,503 dwelling houses. Amongst the poorest quarters, however, 59.2% of all tubercular disease was located in 33.6% of the dwellings existing in the given quarters. (3) Situation, construction and number of dwellers do not serve to explain relative frequency of cases in certain buildings. Although multiplication of cases does not occur in dwellings kept clean and neat, on the other hand, slovenly conditions alone do not account for occurrence of numerous cases in one household. (4) General considerations lead to the conclusion that most cases can be referred to the influence of infection. (5) Most cases are the result of not a single but of repeated infection with tubercle bacilli. Existence of conditions favoring repeated infection in the dwellings of the poorer classes leads to multiplication of cases in certain households, and in this aspect makes tuberculosis a disease influenced by the dwelling and therefore to be combated, especially in the poorer quarters of a town.

HEMATOGENOUS MILIARY TUBERCULOSIS OF THE LUNGS.

Several points of interest are apparently cleared up by Sawada² in a study of cases of miliary tuberculosis in rabbits' lungs resulting from the injection of bacilli into either the peritoneal cavity, the carotid or the anterior chamber of the eye. Investigations were also made as to the age at which the pulmonary lymph nodes develop in both infants and young rabbits. The conclusions reached

are: (1) Hematogenous tuberculosis of the lungs experimentally produced in rabbits follows the statement of Ribbert for similar condition in man, in always originating in the lymph nodes. (2) Tubercle bacilli circulating in the blood, unless occurring in clumps, will not be arrested in the broader capillaries of the alveoli, but will locate within the lung if they pass into the narrow

¹ *Deut. Archiv. klin. Med.*, Bd. lxxvi.
² *Ibid.*, xlvii.