

## THE PARAFFIN BATH

WALTER J. ZEITER, M. D.

The paraffin bath affords a simple and efficient method for applying heat to the surfaces of the body, especially to the hands and feet. During the World War, Dr. James A. Dickson of our Orthopedic Department had an extensive experience in the use of paraffin in injuries of the extremities. He used a bath which was enclosed with a water jacket and heated with gas. The results from this type of equipment were so gratifying that an electrically controlled bath which we now use was developed. These baths are available for hospital, office and home use (Figs. 1 and 2). The inside of such a bath is constructed of stainless metal, and the outside casing is of chrome plated steel. Built in are the melting and maintenance elements which are insulated with firmly packed mineral wool. Slats of bakelite or wood fastened to strips of stainless metal are placed on the bottom of the bath to protect the patient's extremities from touching the heated metal. The melting and maintenance elements are controlled by thermostatic time switches. If the paraffin is congealed, the melting element is used until the paraffin is nearly at the operating temperature, then the maintenance element, independent of the melting element, keeps the bath at that temperature.

Ordinary commercial paraffin is used. This may be obtained at different melting temperatures which range from 123° to 136° F. By the addition of paraffin oil the melting point can readily be controlled. Our baths are operated at a temperature of about 126° F.

Before immersing the extremity to be treated, it is bathed and carefully dried. Then the patient dips the member in and out of the bath quickly, so that a thin coating of paraffin congeals on the skin. This process is repeated several times until the glove of the paraffin is of sufficient thickness to allow the part to remain in the bath with comfort. The patient keeps the extremity immersed in the bath for from ten minutes to half an hour. Then the glove of adherent paraffin is removed and replaced in the bath, following which massage and reeducation of the muscles are instituted. The skin always remains soft, pliable, and moist when this procedure is employed; it is not withered and shriveled as it is from contact with water. Characteristic hyperemia results (Fig. 3).

Quite frequently the paraffin bath can be used to great advantage in the home. For this purpose we have used a double boiler very successfully (Fig. 4), giving the patient the following instructions:

*Hands:* Fill the top of a large double boiler (6 quart) with paraffin

## THE PARAFFIN BATH

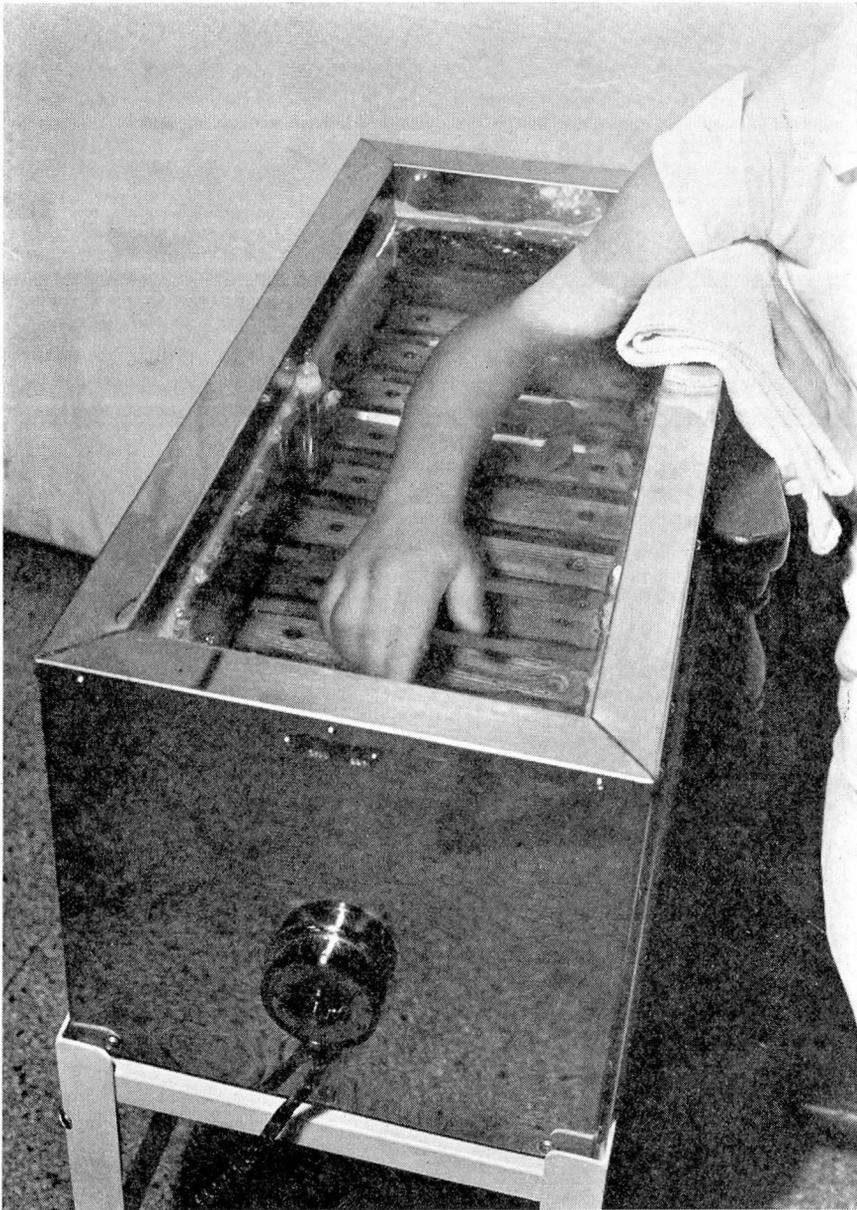


FIGURE 1: Paraffin bath for hand and arm.

(6 to 8 pounds) and the lower part with hot water. Heat until almost all the paraffin is melted but be sure an unmelted piece remains. This is important if burns are to be avoided. Remove from fire, leaving water in bottom of boiler.

Dip hand quickly into paraffin, keeping the fingers separated and being

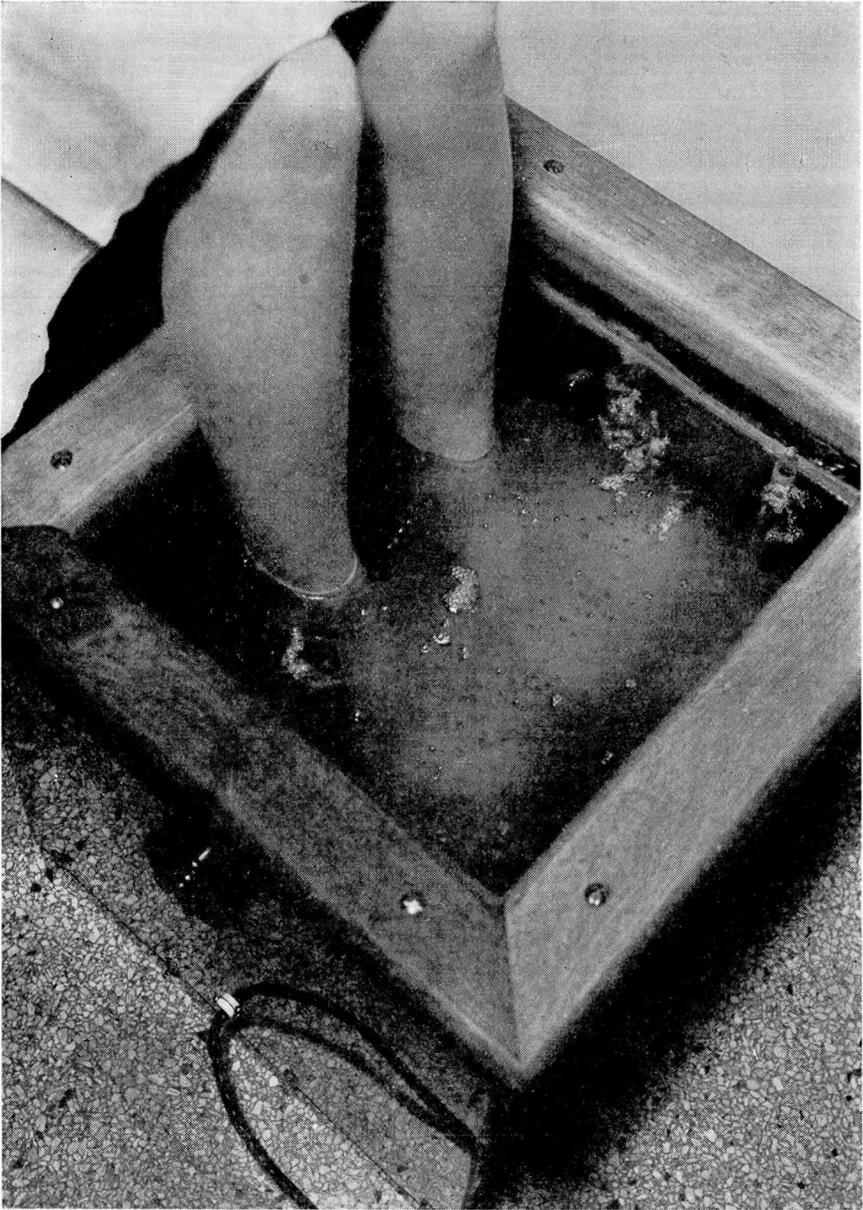


FIGURE 2: Paraffin bath for feet.

careful not to touch the sides or bottom of boiler. Remove hand from boiler until paraffin hardens, then dip and quickly remove again. Repeat this procedure until a thick glove is formed, and then keep immersed in the paraffin for from ten minutes to half an hour. Peel off glove and put paraffin back into boiler (Fig. 3).

## THE PARAFFIN BATH



FIGURE 3: Removal of paraffin glove after treatment, showing typical hyperemia.

If exercise is prescribed, squeeze and mold piece of warm paraffin in the hand before putting back in boiler.

It is well to have a thermometer to check the temperature of the paraffin; however, this is not essential as will be noted from the above directions. If an unmelted piece of paraffin remains or if the paraffin



FIGURE 4: Double boiler for home treatment of hand and wrist.

is allowed to cool until it begins to congeal on the surface it will be perfectly safe to use.

When other forms of heat are not available for treating different parts of the body, paraffin can be applied in a simple manner. After it is melted, a clean, warmed paint brush is immersed and the part to

## THE PARAFFIN BATH

be treated is painted rapidly with about a dozen coats of liquid paraffin. When the paraffin is first applied to the skin, it will feel very warm. This thick coating which retains its own heat for a considerable period of time is allowed to remain on the area for twenty to thirty minutes. This simple method, too, can readily be made available in every household.

The paraffin bath is particularly indicated in the treatment of arthritis because of the ease and simplicity with which it may be applied. It is also effective in the presence of stiffness of joints following lacerations or infections, in the treatment of scars restricting motion of joints and tendons, in involvements of joints secondary to lesions of nerves, in sprains, and in contusions. In other conditions, such as fibrositis of lumbar area, it can be applied with a paint brush as described above.

Because of the marked heat, the paraffin bath must be used judiciously in old, weak, and debilitated individuals. If circulatory and sensory changes are present, the application of paraffin should be done cautiously because of the danger of burns. Open wounds, cuts, and skin infections are better treated by other methods. If the ordinary precautions mentioned previously are taken, burns will be avoided. Repeated use of the paraffin locally in some patients may rarely produce a mild erythema ab igne.

The paraffin bath is believed by some to be less sanitary than other procedures. There is, however, no basis for this belief, since the bath, as well as the double boiler used for home purposes, can be readily sterilized.

With the ordinary precaution of cleaning out the tank, using new paraffin, and insisting that each patient be bathed before entering the bath, this objection is negligible.

The paraffin bath affords a simple method of applying heat to various parts of the body, especially to the hands and feet. It is simple to operate and maintain, and the upkeep cost is low. With proper instructions, it affords a simple method for home use when other means are not available.