METHODS, SYSTEMS, AND APPARATUSES FOR HEAT TREATMENT FOR TREATING MEIBOMIAN GLAND DYSFUNCTION

ABSTRACT

Apparatuses, systems, and methods of treating meibomian gland dysfunction. Heat is applied to the patient's eyelid or surrounding tissue to apply heat to the patient's meibomian glands. The application of heat assists in the expression of obstructions or occlusions in the meibomian glands to restore sufficient sebum flow to the lipid layer to treat dry eye. A force may also be applied to the patient's eyelid or surrounding tissue to improve conductive heat transfer and reduce blood flow in the tissue that causes convective heat loss. Thus, the application of force can further increase the temperature level and/or reduce the time to reach desired temperature levels for removing obstructions. Reaching increased temperature levels may improve the melting, loosening, or softening of obstructions or occlusions in the meibomian glands while reducing the amount of time to reached desired temperature levels and/or aid in reducing discomfort to the patient during treatment.

FIGURE 3