glue may be ready for use at the same time. The glue is not



Fig 1.—Glue-pot for heating by petroleum.

heated directly over the flame, but by hot water; to do this the glue-pot is placed within a larger vessel containing water, the glue-pot at the same time closely fitting to the outer rim of the larger vessel. This contrivance is placed over a petroleum, gas, or spirit lamp, which gives the required heat. In some districts where brown coal is found, it is heated on a specially made contrivance with the brown coal waste,

The latest method of heating is by electricity. The apparatus necessary for this has been put on the market by the firm W. Leo, Stuttgart.

The majority of bookbinderies, large and small, use a strong linen hemp-spun thread for sewing, the strength of which depends upon the weight and size of the sheets to be sewn. As it is inconvenient to be obliged to be continually beginning a new thread or knotting, most bookbinders use a reel of thread. The so-called Marschall thread is the best.

The book is held together by cords, for which the so-called sewing cord is used. There are now special kinds made for the purposes of the bookbinder; these are lightly twisted out of a long fibrous material so that afterwards they can be easily undone for the subsequent necessary scraping out. Certain kinds of bindings are sewn upon tapes; strong raw linen tape of  $i-1\frac{i}{2}$  cm. being the material most generally used.

For machine sewing, thread is generally used. Tinned iron wire, ready wound on spools, is also used. It is made in various sizes and used according to the weight of the sheets.

## B.—MATERIAL FOR COVERING THE BOOK.

The real protection against outward injury to the book lies