

## EXPERIMENTAL SURGERY.

WORKING PLANS OF A SANITARY ANIMAL CAGE FOR LABORATORY USE.

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THE animal cage herewith described has been run to its full capacity since its completion, early in November, 1903. It has therefore undergone adequate trial in the Surgical Laboratory of Columbia University, and it has successfully accomplished the ends for which it was designed. So thoroughly practical and serviceable in every way has it proved, that working plans for its construction are presented in the hope that they may be useful to others engaged in experimental work.

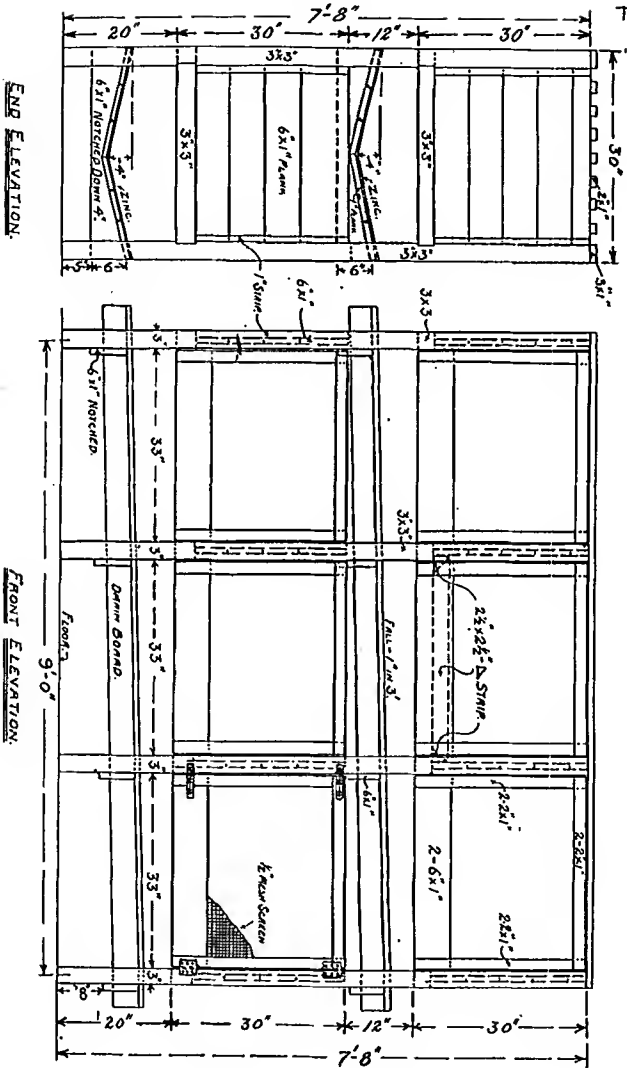
It is believed that with the aid of these sketches an ordinarily intelligent carpenter can construct a similar series of cages without the least trouble. Should, however, any difficulty be experienced, we shall gladly answer any questions bearing on points which are not made clear. That the construction is not difficult is attested to by the fact that we built the cages with our own hands.

The plans presented are intended merely to facilitate the keeping of animals in healthy sanitary condition. By placing a metal tray beneath the screen flooring, however, in such manner as to catch all excreta, one would be enabled to carry on physiologico-chemical researches in conjunction with those of a purely surgical nature.

All the screens used are made of galvanized steel, which we obtained cut to order from the Clinton Wire-Cloth Company, 76 Beckman Street, New York. This material will support any sized dog without sagging, and will cause no soreness of the feet.



FIG. 2.



The drain-boards are to be flushed with a sprinkler connected with an automatic time flush tank, such as is used for ordinary urinals. This mechanism is not shown in the drawing, but it consists simply of two pipes running the length of each drain-board, perforated at frequent intervals by one-thirty-second-inch holes. These pipes, attached to the inner surfaces of the three by three-inch uprights, are jointed to the tank through a Y, and the overflow, suitably trapped, is connected with the soil-pipe.

Our cage is not yet fitted with the flushing apparatus, but one of us (Gordon) finds no difficulty in caring for its six occupants in addition to doing the regular second year student work.

The cage is lined on the inside with zinc to the height of eighteen inches. The lower edge of this is reflected inward and downward on the triangular strip running round the base of the compartment. This directs the excretions beyond the wooden frame of the floor screen. The zinc is carried up on the doors in the same manner.

The cost of such a series of six cages, exclusive of labor, is \$40.00.

We gratefully acknowledge our indebtedness to Mr. James F. Sanborn, of the Rapid Transit Engineer Corps, who kindly drew the finished working plans, and also to Mr. L. Casamajor, who photographed the cage.

