

SIDE FORMS FOR CONCRETE ROADS

By J. H. Anderson

The placing of side forms for a concrete road is too often done in a haphazard fashion. Many forms are not properly constructed in the first place, with the result that they soon bend and warp or wear out of shape. In the second place, side forms are very seldom properly staked to line and grade.

The form setter, as a rule, when he desires to bring a form to grade, does so by inserting beneath it a small stick or stone, which is entirely insufficient to maintain the form to proper elevation under the saw-like pounding

a slightly different design, intended for the same purpose as the form shown in Fig. 2 will be bent when the forms are handled roughly, and in order to obviate this and still retain the benefits of this design a form can be built as shown in Fig. 3. Fig. 4 shows a side form used by a contractor who happened to have a considerable quantity of old 4 x 4-inch timbers on hand. This side form was used for a road 18 feet wide, and a strike-board was mounted on wheels. Due to its width, this form was very satisfactory for a strike-board mounted on wheels, while due to its rigidity and the method of forming the joints a very smooth surface was obtained.

Proper placing of side forms costs but little more than does the careless placing all too frequently practised, and the improved riding quality of the road and the increased satisfaction derived therefrom will compensate manifold for the slight extra expense.—Concrete Highway Magazine.

SOME SUGGESTIONS FOR IMPROVEMENTS IN THE ENGINEERING PROFESSION

(Continued from page 89.)

within his estimate and has paid his assistants the smallest wages for which he could hire them. The heads of engineering departments are responsible for the low wages paid the rank and file.

Recently, the engineering employes of the city of Chicago petitioned for an increase in wages, and among other things said:—

"We submit that when engineers who are in charge of work and responsible for its proper execution are paid less than the foreman and some of the mechanics working under their direction and supervision, neither will attain the highest efficiency—the engineer because he is discouraged by the comparison, and the workman because he feels that the man over him is not recognized by the authorities."

Similar action should be taken by the city engineers wherever such conditions exist.

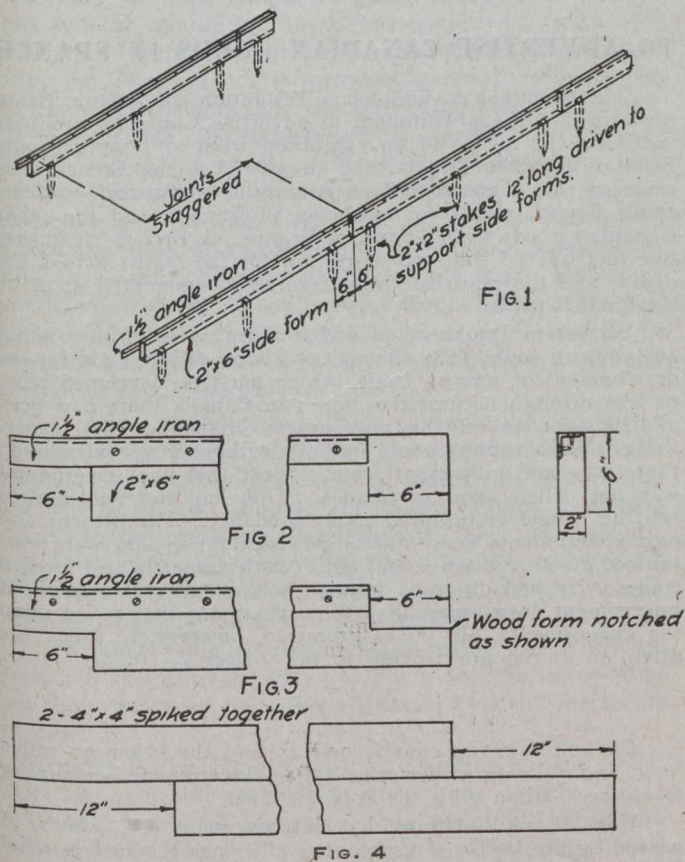
Engineers in private practice should pay their assistants good wages. These men usually work for corporations, and they don't ask for cheap engineering service. They always expect to pay well for legal services, and should be educated to regard engineering services as equally valuable.

The consulting engineer can undoubtedly improve the conditions of the men working under him.

The engineers in the railroad service can do much for their assistants. We should insist on an adequate force with good salaries at all times.

Those of us with railroad experience remember that on construction it was thought engineers were no longer needed after the first train passed over a division, whereas had an adequate force of engineers been maintained to work up complete records of cost and complete maps and plans, it would have been worth many times the cost, in their dealings with the government now in the Federal valuation work, and would oftentimes have saved the companies more than their costs in lawsuits.

The profession must be improved from within—not without. The public will appraise us at no higher value than we set upon ourselves. It is up to us to improve the profession by improving the conditions of service of those in our employ.



action of the strike-board. Frequently, too, the joints in forms on opposite sides of the road are placed directly opposite each other instead of being "staggered," as are the joints on a railroad.

In Fig. 1 is shown a method of supporting side forms to grade which is easily applied. Note that 2 x 2-inch wooden stakes about 12 inches long are driven along the line of the side forms to the elevation of the bottom of the form. These stakes, of course, are intended merely to support the side form to the proper elevation, other stakes being driven in the regular way for the purpose of holding the forms in line. Note, also, that the joints in the side forms are staggered to prevent an undulation forming across the road in case the joints should be low. Fig. 1 shows the use of wooden side forms with an angle iron at the top edge. This method of staggering the joints and supporting the joints to grade can be applied also to steel forms.

Figs. 2 and 3 show details of wooden side form construction. In Fig. 2 the angle iron extends 6 inches beyond the end of the form to insure that adjacent forms will be maintained at the same elevation. Fig. 3 shows