In presenting our second circular, we take occasion to call the attention of our friends and customers to the following points:

We have entered into contract with the Phoenix Iron Company, Phoenixville, Pa., for a long term of years, by which that Company transfers to us all their iron bridge-building, and orders for bridges and viaducts are handed to us for execution.

By this arrangement the whole resources of the Phoenix Iron Company can be concentrated upon the fulfillment of our orders. Their present facilities are equal to turning out one hundred feet of finished bridge for each working day in the year, and can be increased, in case of necessity.

Everything is done upon the premises; beginning with the manufacture of the iron from the ore, next rolling it into the shapes required, and finally applying the machine-labor that completes the structure ready for erection. It is believed that all this is done by no other single company in this country.

It results in a uniform excellence of quality of iron and workmanship, which cannot be got from bridge-builders who procure their iron from different makers, and generally at the cheapest rates.

We are prepared to construct any style of wrought-iron bridge, and according to any specified dimensions and weights; at the same time, we would call the attention of engineers and railway-men to that style of bridge which we have been building during the last five years, which has stood the test of use, with the marked approbation of those best able to judge.

What we claim as the peculiar advantages of our bridges are as follows:

We use that style of truss (originally developed in wood by Pratt and in iron by Whipple) which experience has shown to be the best adapted for railway purposes, as there are more of them in use in this country than of any other kind.

So far as we have modified the connections and other details of construction, we have endeavored to be guided by the following principles:

Simplicity and uniformity of construction; least possible exposure of surface to corrosion; uniformity of strain on all parts alike; concentration of material along the lines of strain; and the use of the most suitable kind of material for the purposes required.

At the request of many railway-men, we have prepared a set of designs, accompanied by detailed specifications, covering the proportions and quality of material and workmanship under which they will be constructed.

They have nearly all been actually built by us, and have borne the test of use. Persons requiring bridges will find among these everything they want, unless for special cases, for which we will prepare special plans and estimates, free of charge, when requested.

We build our short spans stronger than has been heretofore customary, providing for a variable load of two tons per foot. We do this, because there is generally no slackening of speed in crossing a short span, and the live load of the locomotive bears a much greater proportion to the dead-weight of the structure in short than in long spans. At 250 feet span the live and dead loads are nearly equal, while on a 30-feet span the live load is more than four times the dead load.