

A PORTABLE CONCRETE-MIXING PLANT.

We illustrate herewith a convenient little outfit for concrete mixing designed especially for street work or similar places where the mixer must be frequently moved from place to place. The mixer is of the screw-conveyor type, and the materials shoveled into the hopper at one end are mixed and delivered at the other. Power is furnished by a little gasoline engine mounted on the same platform with the mixer. The platform has a leg at the delivery end and a tongue at the other. The leg supports the platform when the mixer is in use, and the tongue may be attached to the rear of a wagon when the mixer is to be moved. This machine has been put on the market by the Jeffrey Manufacturing Co., of Columbus, O.

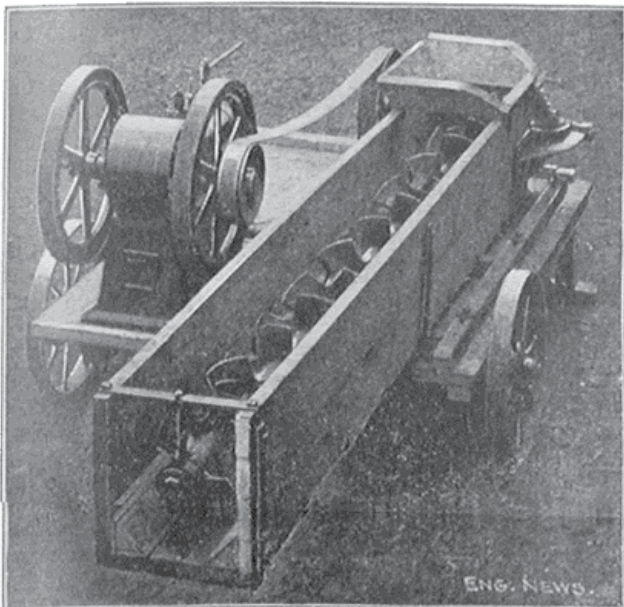
The only defect of this mixer is one which it shares with every mixer of what may be called the "continuous flow type." If you feed a steady stream of stone, cement, sand and water into one end of any such machine, and in exactly the right proportions, the machine will mix these materials and will turn out in most cases a product with which no fault can be found. But the trouble is to feed any such machine in any such uniform manner, and keep the proportions of the different materials anything like correct. If it has ever been done, we do not know when or where. We cheerfully admit that a skilful and conscientious foreman with men who are experienced in the work can feed such a machine in such a manner as to make good concrete; but eternal vigilance is its price. A very little variation in the work of the shoveling gang at one end of the machine

will cause a variation in the product at the other end, and may mean either a weak spot in the concrete or a waste of cement.

This, more than anything else, we believe, is responsible for the prejudice which still remains among engineers against machine-mixed concrete, and for the common saying that a good man with a shovel can beat any concrete mixer.

On the other hand, it is probably true that the actual mixing done by the screw conveyor type of mixer, if well designed, is if anything more thorough than that done by the mixers working on the "batch" principle, where the materials at times give trouble by pocketing and sticking in the corners. Engineers, however, generally prefer the "batch" mixer of which the well-known cubical box is a good example. Here they can measure out so much stone, so much cement, and so much sand when the mixer is filled, and be sure of their proportions.

The moral of all this, it seems to us, is that in using any continuous flow mixer, operations should be so conducted that the concrete will be made in batches. The materials should be measured onto a platform and shoveled from there into the hopper of the machine, which should be made large enough to hold a batch, and the machine should not be started till the batch has all been shoveled into the hopper. At the other end, too, the mixed concrete should deliver into a hopper, which should take the whole batch before being emptied. The mixing which will take place in flowing from one hopper to the machine and from the second hopper to barrow or dump car will to a large extent neutralize the variations in the composition of the mixture in its passage through the machine.



A Concrete Mixer Driven by a Gasoline Engine.
Jeffrey Mfg. Co., Columbus, O., Makers.