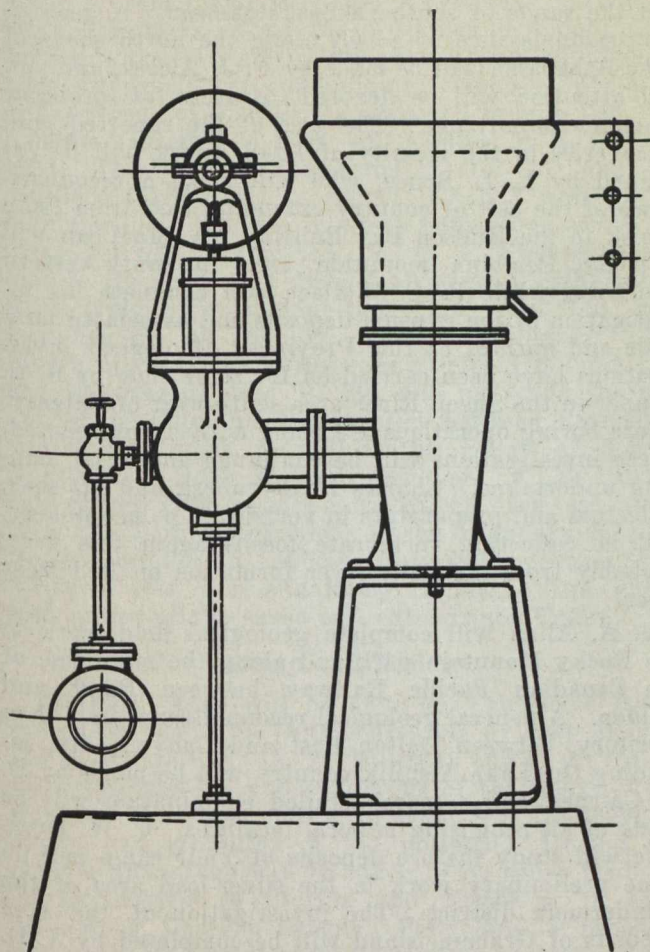


THE SHIELDS & THIELMANN JIG

A machine has been designed at the Quincy stamp mills, Michigan, that tends to revolutionize the treatment of the so-called roughing floor material. It has been in successful operation for eight months, and the results have been better than was expected. The machine takes up a space of about 12 ft. by 4 ft. and has a capacity of 500 tons.



THE SHIELDS & THIELMANN JIG

The machine is called a sectional positive jig Classifier. It is made up of a number of sections, which are divided into pockets of 6 by 12 in. and 12 by 12 in. in size, each having a positive plunger, and an independent adjustable stroke ranging from $2\frac{1}{2}$ in. to 0.

This is very essential as to the treatment of the different sizes of material, ranging from $\frac{5}{8}$ in. to 100 mesh. The plungers are all made of brass, and each plunger carries an oil bath inside submerging the pin on the plunger at all times in a bath of oil. The plunger casings are made of cast iron, and are independent of each other, and can easily be removed or replaced.

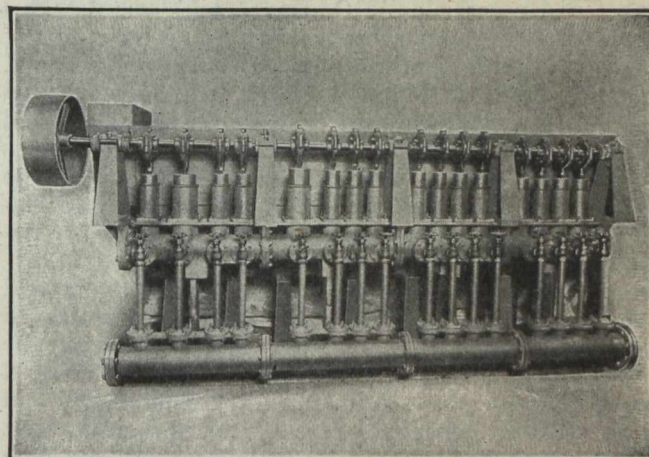
The sections are lined with a cast iron box to protect the sections proper from wear and at the same time they conform as to shape with the partitions in the hutch pockets. Each pocket has a plug of its own, and the material from each pocket is discharged independently.

At the Quincy mill the feed that enters the jig comes direct from the stamp and is an unsized feed from $\frac{5}{8}$ in. down to slime product. The heavy $\frac{5}{8}$ in. copper,

$\frac{1}{2}$ in. copper and a large portion of the $\frac{3}{8}$ in. copper and under is discharged from plugs Nos. 1, 2 and 3 above the sieve. The hutch copper, which ranges from $\frac{3}{8}$ in. down to table copper, is discharged through the sieve into the hutch of section No. 1 as clean concentrates. Clean concentrates are discharged also from the second section into the hutch.

The very fine slimes, containing the very fine copper, are held in suspension and discharged at the tail end of the machine in the form of slime ranging from 80 to 100 mesh.

The amount of copper taken out by this machine is 70 per cent. of the total copper from the stamp head. This product will assay 80 to 95 per cent. copper. The amount of $\frac{5}{8}$ in. gravel taken out by this machine is 125 tons per 24 hours, which is taken out of plugs Nos. 4 and 5, which replace the trommel screens. The amount of middlings taken out to be ground is 100 tons, which is taken out of plugs Nos. 9 and 10. Plugs 6, 7 and 8 are left blank to accumulate concentrates, which may be drawn off when necessary. Rich middlings accumulate in the second section.



The third section discharges material from the sieve. This requires only a table treatment, as the material is too poor to grind. The material, however, from the Nos. 3 and 4 sections is all classified, ranging from $\frac{1}{8}$ in. to 40 mesh, and amounts to about 150 tons, classified into eight different products. The hutch product is enriched from Nos. 3 and 4 sections and makes an ideal table product, no further treatment being necessary. This hutch product amounts to about 50 tons per 24 hours.

Among the advantages claimed for the machine are: It has an adjustable sieve for deepening or lessening the bed. It has an independent motion for every pocket. It has an independent water supply for every pocket. The motion is positive at all times, and does away with ponderous sieve frames, plunger boards, sieve wire, power space, etc. It is a concentrating mill by itself, and handles from 450 to 500 tons per 24 hours.

DOMELAKE.

A by-law providing for a new issue of 100,000 shares of stock to be sold at 50 cents was introduced at a recent meeting of the Dome Lake directors. It is understood that the money raised will be used in installing a cyanide plant and in carrying on development work.