

rim. The pan is eight feet nine inches across at the narrowest part.

There is a spiral gradient of one inch in the bottom surface of the pan which extends all around, beginning at the widest part under the feed box. The bottom, or floor, also inclines to the centre, forming a concave surface.

This pan is constructed in such a manner as to render it flexible, the bottom being made of the best seasoned redwood staves three-quarters of an inch thick, and laid lengthwise from the centre. The inner or small end of each stave is bolted to the rim of the centre casting, and the outer or wide end is bolted to a steel rim or band, one-quarter inch by five inches, which forms the base in the construction of the pan. The outer ends of these staves are strengthened and held in position by a reinforce of redwood battens underneath and a substantial rim or edge all round the pan.

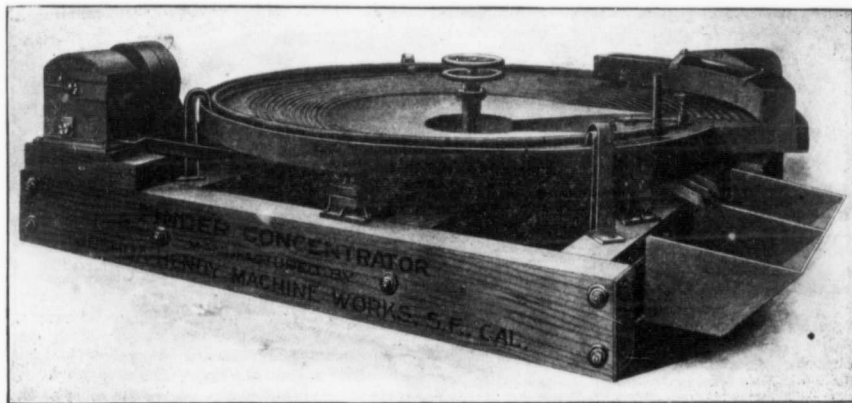
The staves are laid so that there is one-eighth of an inch interval between each, admitting flexibility, and they are made in such a manner as to prevent warping from moisture. In fact the whole structure is built with a view to great strength and stability. It will not get out of shape in course of time as is the case with some of the most approved types of riffled tables.

The bottom surface is covered with a special grade of

A steel post or shaft two and a quarter inches in diameter is securely fastened to the under or foundation frame of the machine, and this post acts both as the pivot as well as the centre support of the pan. This post passes through a sleeve in the centre casting of the pan, and the adjusting gear is screwed to the top end. This adjusting device consists of a ball-headed steel-threaded pin, the head of which rests on the end of the post, the threaded end passing through the cap of the sleeve which holds up the pan, and the two hand wheels geared on the upper end. The top wheel, turning from right to left, raises the centre of the pan, causing the incline of the bottom to become flatter; and by turning the opposite way the reverse result is obtained. The lower wheel is practically a jam nut which holds the pan to any adjustment once set.

The foundation timber frame is composed of four pieces, six by twelve inches square, and one piece, eight by twelve inches. There is also a short block, eight by twelve inches square, which is attached to the side of the timber on which the driving gear is bolted in order to support that mechanism. This frame is very solidly bolted together with three-quarter inch tie rods, which run from side to side in both directions.

There are six standard supports which act as bearings on which the outer edge of the pan rests. These bearings are



brown linoleum, which experience has proven to be the best substance that can be used for the purpose, and on this surface is laid brass or copper tapering riffles, fifty-six in number, and three-quarters of an inch apart, so arranged as to radiate spirally from the direction of the centre outwardly and around toward the rim, the feather ends terminating in regular sequence nearly in a circle so as to leave a clear smooth space between the terminals and the rim of the pan.

The feed box, which distributes the pulp upon the surface of the pan, is bolted securely to the widest point of the pan, the feed being received at the jog end of the box, and passing on to the pan through the feed holes in the bottom of the box. This box is curved so as to conform to the rounded rim of the pan.

The wash or clear water is conducted by a pipe three-quarters of an inch in diameter around the outer edge of the pan, and is delivered on the pan through various small holes therein, making jets, which fall behind a rubber water strip tacked and cemented to the bottom and running around the pan, having many small holes through which the water is spread very evenly to all desired parts.

The pipe is supported by three standards, which are securely bolted to the timber frame upon which the pan rests.

There are two discharges for concentrates, one at the end of the forty-second riffle and the other at the end of the entire system of riffles.

so arranged as to evenly distribute the strain between them, and each and every wearing part is of the best chilled iron. Attached to each side bearing is a spiral spring which takes up any lost motion and prevents vibration.

The driving mechanism is strong, compact, and light. It is of the simplest construction, of the common toggle type, the toggle links being of the best tool steel one-half inch thick rounded at the ends and working in chilled grooves cast in the parts to hold them. All other parts of this gear are also of the best workmanship, and both durable and smooth.

A large spiral spring made of five-eighths steel is attached to the steel rim under the edge of the pan on the side holding the feed box, and which is also fastened to spring seats bolted to the frame timbers. This spring is adjusted so as to pull the pan one way while the toggle pulls it the opposite. This spring also takes up any lost motion and prevents pounding or knocking of the bearing parts. A suitable threaded bolt is attached for regulating.

The tailings discharge through the centre of the pan where is located a suitable spout which directs the flow to the tailings launder.

A small V-shaped trough three inches deep should be placed in the notch of the frame under the table so as to catch the sulphurets from the second discharge hole and conduct them to the box in front. A suitable trough should also be placed to catch the sulphurets from the first discharge.