

into the thickness required. Each little piece of metal as it leaves the knives is forced into a two-sided groove that closes tightly and gives to the tack the point and corrugations which lend to its holding qualities. At the same time a hammer strikes the broad end of the tack, putting a head on it, and it then drops into a receptacle beneath. The tack is now complete, save placing it in a revolving barrel, or tumbler, which gives it a bright finish. Blued tacks are colored by heat, and tinned tacks, after being dipped in the metal, having been previously pickled, are riddled and sieved together in a circular drum to prevent their sticking together.

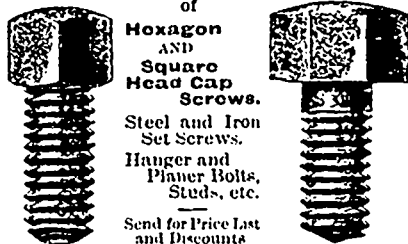
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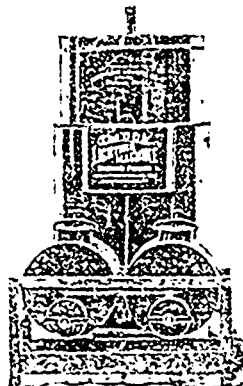
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### A NEW USE FOR WOOD PULP.

A composition is made by Brandon & Sons which is intended to take the place of both leather and India rubber. This is as it may be, but the process may be described in the meantime. While one set of workmen is mixing ordinary "India rubber solution," preferably containing a little sulphur, with dry powdered chalk, another set is drying and breaking up ordinary sulphate pulp. The pulp is then mixed with the India rubber mixture. The whole mass is then made into a sheet and exposed to a temperature of from ninety-three to 107 deg. C. The object of the chalk is to enable this heating to be made moderate. If chalk is not used a higher temperature must be employed to make the India rubber combine firmly with the pulp, and this higher temperature much diminishes the durability of the India rubber, and causes the resulting composition, although answering as well at first as that made with chalk, to rapidly disintegrate when exposed to the weather, and especially to the sun.

The volatile matters present having been evaporated, the leaf is passed between rollers to compact it, as it is left in a somewhat porous and spongy state. A little soot or lampblack should be added to the

chalk before incorporating that with the other ingredients.

The following are the recipes used:—

	Lbs.
A. for India rubber:	
Dry sulphate pulp.....	100
India rubber solution.....	50
Chalk.....	50
Lampblack.....	5
Sulphur.....	5
B. For leather:	
Dry sulphate pulp.....	120
India rubber solution.....	40
Chalk.....	30
Lampblack.....	5
Sulphur.....	5

—Invention.

### PIANOS FOR SOUTH AFRICA.

There are two Morris pianos in the factory warehouses here which will be shipped to Grahamstown, South Africa. They are placed in special watertight cases to preserve them during the long sea voyage and are intended in the first place for exhibition at Grahamstown, and will afterwards be handled in the trade. The piano trade of South Africa has been largely confined to the smaller makes of instruments manufactured

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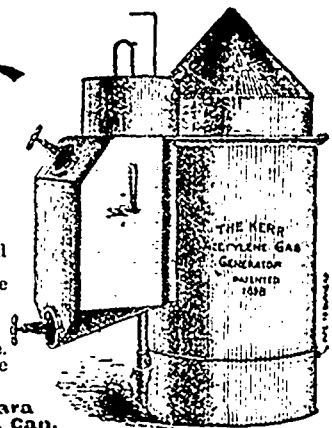
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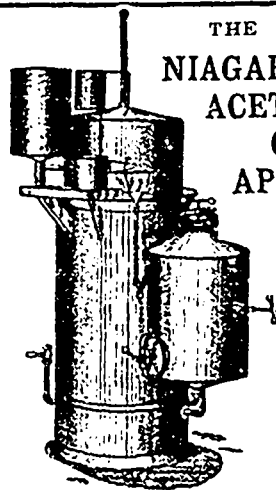
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