

ENGINE ROOM NOTES.

W. H. WAKEMAN, in the Wood-Worker.

It is always a good plan to watch an engine carefully for loose pins, setscrews and nuts, for an ounce of prevention of accidents in this way is worth several pounds of cure, after an engine is wrecked by the failure of a governor to do its duty.

Grate bars should fit the furnace so as to prevent waste of fuel; but they should not be wedged in so tightly that when they are expanded by heat they will be ruined.

Friction clutches and cut-off couplings are a great convenience in a mill or factory; they enable the operatives to quickly stop a line of shafting in case an accident happens, without waiting to get word to the engineer. They also save power by making it convenient, or possible, to allow one or more lines of shafting to remain at rest, when not needed for use.

When selecting hangers, choose those which will admit of taking out the shafting without removing the bolts holding the hangers; in case of repairs it may save much time and expense.

When laying out holes in belts for lacing, do not locate them so near together that the strength of the belt will be seriously impaired; and after you have laced it, draw in extra pieces of lacing so that they will come between belt and pulley when in use, as they will save the lacing that holds the belt together.

It is poor policy to allow any kind of packing to remain in use too long, and especially so in the case of valve stems on Corliss engines, which are often made of a composition that is easily cut and grooved.

When an injector has worked well for some time, then declines further service, examine the feed pipe to boiler and see if it has become choked with scale and sediment.

It is a good plan to use a little oil on asbestos wicking, when packing valve stems, but if much is put on it makes an unsightly mess on the bonnets of nickel-plated radiator valves and in other similar places.

It is very annoying to an engineer who understands his business, to find that as soon as the flywheel begins to revolve in the morning, or when starting up after dinner, some workman in the shop has started a heavy machine

into operation. As a rule these machines do not turn out good work when running at a slow speed; but whether they do or not, they should never be started until the engine has attained its full speed. Machinery in silk mills and similar places are exceptions to this rule, but wood-working machinery is not.

Metallic piston rod packing is a very good thing to have, but some kinds are made in the form of a wedge, and if an engineer screws the nuts on the studs up tightly, he may get himself into trouble; therefore he should go slowly until he fully understands the construction of the packing in his stuffing box.

If the indicator diagram from your engine shows an imperfection for which you cannot account, be sure that the indicator piston is well oiled before losing sleep to worry over it, for the oil may change the whole aspect of affairs.

Boiler compounds are necessary in many cases, but as soon as scale is removed from the shell and tubes, it

should be taken out without delay, as it may cause a crown sheet to be burned.

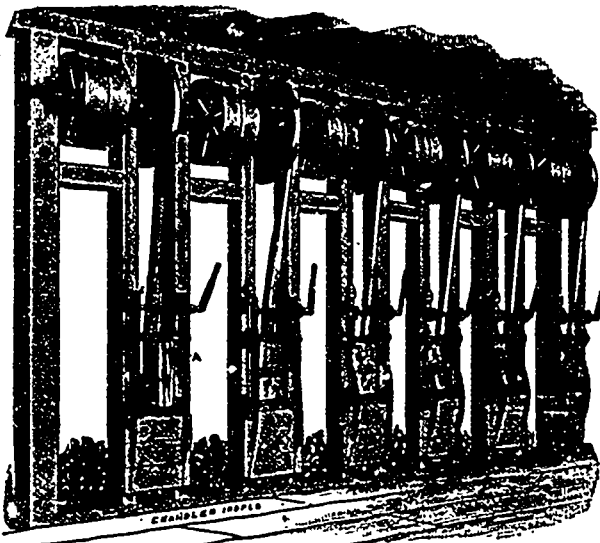
Flange unions in the main steam pipe between the lubricator and the cylinder should be packed with asbestos millboard, copper gaskets, or some other substance that hot oil will not dissolve.

Where a jet condenser is in use, some of the condensed steam will find its way back into the boiler, after being condensed and passing to the hot well; therefore measures should be taken to remove cylinder oil before it is condensed.

If the main belt on your engine has run steadily years or months, and then begins to "flop" in a reasonable manner, do not hasten to saw a piece of the floor through which it runs, nor yet to cut a piece of the belt, but apply an indicator and see if the belt does not need resetting.

Every pound of back pressure on the piston of an engine means another pound of forward pressure, which in turn means more fuel for the boiler, hence the back pressure should be reduced to the lowest point possible. This is what a condenser is used for.

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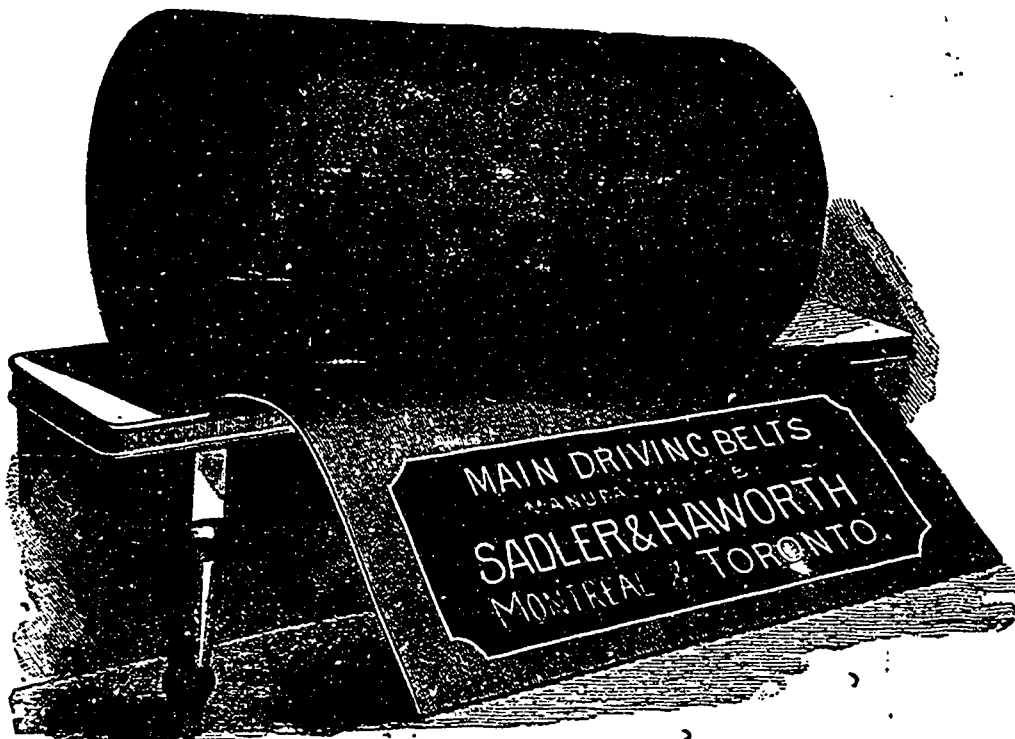


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