

The Thresherman's Question Drawer

Answers to Correspondents

Q. T. F. On my engine the piston rod has worked loose in the crosshead. There is no jam nut on the piston rod, but the cross head is split, and has two bolts through it to draw it together; but I have sawed the split wider and thought I could draw it together, but I can't get it any closer. Now, what can I do with it. Do I have to get a new one, or can I get this fixed?

A. If the threads are badly worn the only thing to do is to get a new crosshead. It may be if you put stronger bolts in the crosshead, oil them well and draw them up well, and by hammering the outside of the threaded part, it may be made to fit up to the thread so that it will hold. Sometimes a lack of oil on the threads and under the head or nut of a bolt prevents it being drawn up, and this may be your trouble.

Q. S. G. H. I have a separator with a big cylinder. I can't get it to knock the grain from the heads. What is the cause? Six rows of concave teeth run high, seem to do no good.

2. How will a, say 20 h.p. gasoline engine pull under belt compared with, say, a 15 h.p. steam engine?

3. Is a 20 h.p. gasoline engine strong enough to saw with a 54-inch saw?

4. Will a 20 h.p. pull a mill good on the road, or a 28 x 54 separator, with all attachments?

A. To improve the threshing of a cylinder you should increase the speed.

2. The brake h.p. of a steam traction engine is about three times the nominal rating. Gasoline engines are rated by brake h.p., so the gasoline 20 h.p. would be equal to about a 7 h.p. steam engine.

3. A 20 h.p. gasoline engine will not do much good with a 54-inch saw, since the 20 h.p. engine is equal to a 7 h.p. steam engine.

4. A 20 h.p. gasoline engine will be light for pulling a mill or 28 x 54 separator on the road.

Q. N. S. H. Could you tell me what makes the steam go the wrong way (or backward) through injector, making it impossible to get water in the boiler? Pipes are all clean. Have tried three different injectors, also tried two new check valves.

A. There are a few things that will prevent an injector from working. The pipes should all be free from obstructions. The steam pipe should not be reduced in size, and it should be taken from the boiler and not from any other pipe that is used to conduct steam for another purpose. The suction pipe or hose should be

without leaks and without obstructions. Often times a hose is tight but the lining is loose and closes the hole and prevents a free flow of the water. The screen on the end of the suction pipe hose is often stopped up. The discharge pipe is often stopped up, especially where it enters the boiler. The pipe should be taken down occasionally to clean the lime out which accumulates, due to the heat of the boiler. The injector should be examined to see that the tubes and all passages are free from foreign matter. Sometimes scales break loose from the steam pipe and get into the injector, as well as grease and other things which come up the suction pipe. Be sure you have the check valve put on correctly.

Q. J. T. R. Will the grates close to the flues with a hot fire cause them to leak quicker than if the grates are further away? I have a rocker grate, which is about 3 inches closer than what the old ones were, or the stationary.

A. There is more heat in the upper tubes than in the lower ones even if the bed of coals is close to the latter. The hot gases being light will rise to the top of the fire box. You can make a practical test of this by placing a small tin box lid full of water in the top-most tube at the smoke box end and one in the bottom-most tube. Then run the engine, pulling an average load for five or ten minutes, and then examine the lids to see how much water has been evaporated in each tube. You will find that in the top tube the water will disappear very quickly, while in the bottom one the water will stay much longer, the difference in time depending of course on whether the boiler is large or small for the work which is being done. The failure of stay bolts and sheets is due to other conditions than the coals of fire being close to the sheet, as about all of the fire box trouble is due to accumulation of mud or sediment, or an improper place of feeding the water into the boiler. This is also true of tube trouble, and in addition to these, the overheating and sudden chilling of the tubes with cold air will cause the tubes to leak without the other conditions which are herein set forth.

Q. C. P. B. I have a Case engine and the threads in the crown sheet for the soft plug are worn out, and the sheet is some thinner around the hole than any place else. The plug has a 3/4-inch pipe thread. Can I tap the hole for a 1-inch pipe and put in a bushing, or would it be the best to have a tap made just big enough to make good threads and

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