

shovel engineer. In some pits you have to put your shovel back every few days; therefore, I think it is always best to have a good foreman. I have never used the Mill car, but I am pretty well satisfied that it is a great improvement on pulling the cable over the train with the engine. I see with some roads that they have aprons on the cars, but most of them are flimsy affairs. On the Grand Trunk & on the New York & Ottawa, every here & there they were lying alongside the road pulled off.

J. JELLY.—With reference to unloading ballast, I am of the opinion, from my experience, that there is about as much time lost with the unloading as anything else in connection with the handling of ballast. We have a spider plough up west, built during the winter season. Previous to that we always had an awful lot of bother with the ploughs. We had a plough that ran on the centre rail, & the Barnhardt plough, & these ploughs were continually giving out & there you were. You would have to take your plough away to the shops. After we built the spider plough & put good material into it we never had any trouble. I have seen us unload 25 cars there in 12 minutes. I think there is nothing that I have used that is equal to the spider plough, & I think there is as much time saved with the plough as in the pit. Of course I like a good pit, but I think more attention should be given to the plough than anything else.

J. DRINKWATER.—How did you fix the side of your cars?

J. JELLY.—We put 4-inch planks on between stake-pockets & bolted them.

J. DRINKWATER.—You did not spike them?

J. JELLY.—No, we used bolts & put them where they were required.

J. DRINKWATER.—What sized bolts?

J. JELLY.—Three-quarter bolts & 4-in. planks. Of course, it goes a little outside of the pocket. It saves the pocket from being damaged in any way.

F. J. HOLLOWAY.—I have used the Barnhardt shovel & have always found it give satisfaction, & I have always used the Barnhardt plough, which goes around very short curves. It was at all times a great success.

J. JELLY.—Perhaps your ballast would be fine.

F. J. HOLLOWAY.—No.

J. DRINKWATER.—Does the Barnhardt plough clear the cars of coarse gravel?

F. J. HOLLOWAY.—Not coarse gravel. It would leave 2 or 3 ins. on the bottom.

J. DRINKWATER.—That has been my experience with the ploughs that we have had.

J. JELLY.—That is mine, too.

T. GRAHAM.—I think in working the pit a man should always have two ploughs at the pit in case anything happens. In this way you will many a time save a load or two. Then, again, there is something about moving back the shovel. Suppose you have a little pit gang of 3, 4 or 5 to start the track & have it right up close to the shovel, & five minutes after your shovel is there you are on your way back. It saves time.

A. McAULEY.—You have a double track?

T. GRAHAM.—Yes.

A. McAULEY.—How do you get your track over the top of the other? Do you throw your track in?

T. GRAHAM.—Yes.

A. McAULEY.—We do not.

T. GRAHAM.—With this pit gang your work would be right through the minute your shovel is out. I think in putting your shovel in the pit you should have ties & rails enough for a double track. Another thing in favor of a double track is, that without it when the shovel is out your track is away; you have thrown it more or less out of shape, & you have trouble.

A. McAULEY.—I never have more than 6 to 8 men around the shovel at the pit, & when we go to move the tracks I generally do it after 6 o'clock, so that we are all right the next morning at 7 o'clock.

T. GRAHAM.—If I can get my shovel out I do so, & have her back ready for next morning.

J. DRINKWATER.—I do not remember missing a train of ballast in the last 7 or 8 years on account of moving the shovel. I do not remember having a break in a day's work on account of moving the shovel, that would not have occurred had we not moved it. There are some times that your shovel is idle where you are hauling 60 or 70 miles. With the short hauls it is altogether different. It is difficult to handle trains on a road where there is any considerable amount of traffic on a long haul & have regularity.

J. JELLY.—Circumstances alter cases.

J. DRINKWATER.—I have worked 3 trains on the long haul.

J. GRAHAM.—I used to, when handling ballast pits, shift the track, as Mr. McAuley says. I used to take a gang at 6 or 7 o'clock in the evening, & perhaps work till 12 o'clock at night. But if you do this you do not get as much work out of your lifting gang the next day. Now I follow the shovel right up with a track, that is the best way, & you have better tracks always in the pit. I have just one extra track.

A. McAULEY.—A double track.

J. GRAHAM.—Yes, you have one to hold your empties, & the other to hold your loads.

T. GRAHAM.—It is not necessary to put in a switch; I never did.

J. GRAHAM.—I always put a switch in.

A. McAULEY.—I think your shovel men have always got more or less time, & they can always keep the track behind the shovel right along—keep with it, & as occasion will admit they can keep pulling it over.

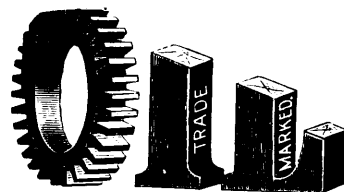
J. JELLY.—There is something I would like to mention, & that is for spotting the train we never use anything except a team of horses. We have used two teams for spotting the cars. We use one engine for hauling, & one team of horses for spotting. You can spot your cars better than with an engine, because you require only one man there, & once he gets up to do his business there is no trouble. It saves a crew & an engine. There

are very few pits but what you can place them so that you can spot your cars all right.

J. DRINKWATER.—How then do you do for your water?

J. JELLY.—One horse.

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