tem, when the self-stripper on the card raised the top to strip it, a lot of fly would gather in the open space caused by the top being raised, which (when the top was again dropped into its place), was blown on to the cylinder, causing a thick streak across the sliver, besides letting dirt from the stripper get on to the cylinder. A great many overseers have tried to prevent this in one way and another. Someone suggested having a stripper made which would traverse very slowly from one top to another, but which would raise the top strip and lower it again with increased speed, so as not to have it raised from the cylinder long enough for much fly to gather in the open space.

Now, on the revolving flat card, the nats are constantly moving forward, carrying whatever dirt may have collected in them to the comb, where they are stripped without a flat being raised from the cylinder, and consequently there are no streaks in the sliver, and no dirt getting on to the cylinder on account of the flats being raised from the cylinder. Then as the settings on the old top cards were anywhere from 1-32 of an inch to 1-16 of an inch from the cylinder, it depended altogether on the condition that the clothing was in. If that was in good condition, the settings were closer than they were if the clothing was a little soft; and again, as the cylinders were not perfectly true, the settings could not be close, while on the revolving flat cards the cylinders being very nearly true, we set a great deal closer than on the top cards, our settings being 5-1,000 of an inch to 9-1,000 of an inch, in consequence of which we get a great deal better quality of work from the new system than we ever did from the old system.

The question has often been asked, why is it that some men who have been very successful running the old style carding fail when they try the new style carding? I think from what I have observed that the reason is that they do not realize the difference between the two systems, and therefore are unable to overcome the difficulties. For instance, I have a case in mind of an overseer over the old style carding, whom the superintendent thought was the best or one of the best carders in the world, he did so well. After a while that superintendent went to another mill and took his overseer with him to start up a room with new revolving flat cards. In less than ten months these cards were making such bad work that there was talk of throwing out the cards and putting in a new make, as the cards were poor. Just at this time, and before anything was decided on, that overseer left to take charge of a larger room, and a man was hired to take his place, who, realizing what was needed, went to work on those cards, and the consequence was that in less than a year those cards were doing as good work as any in that city, and that corporation has since bought over 70 cards of the same make, showing that the fault was not because the card was poor, but that the overseer did not realize the difference between the old and the new style carding. For while a good overseer may get good work from a poor card, yet a poor overseer may get poor work from a good card.

There are at least three things that should be required of an overseer of the new style carding. First, he must understand the cards in his room. This he can soon do by being among the cards a part of the time. Second, he must know when certain things should be seen to, and, third, he should know that those things are attended to at the time they ought to be. For the new style carding requires the constant attention of the overseer to the grinding, setting, stripping and cleaning of the cards. The overseer who gives these things his personal attention, and has a regular system for his work, so that one thing follows another and the grinder and strippers know just what to do at certain times in the day, and therefore has everything kept in order, will not be the overseer who will make a failure of the new system, but will be successful.

Another thing we have on the new system that we did not have on the old is the combination draft on the fine roving frames. By this draft we can change 1-10 of a tooth or 5-100 of an inch of draft and should therefore (with the attention given to weight of laps), be able to keep our numbers quite even. Another difference between the old and new style carding is the general appearance of the cloth. Under the new system the cloth, by reason of the better carding (caused by closer settings on the cards and more dirt being taken out of the cotton, presents a cleaner and smoother appearance than it did under the old style of carding.

SOME OF THE ECONOMIC AND PRACTICAL ASPECTS OF ELECTRICAL POWER DISTRIBUTION IN FACTORIES.*

By Henry A. Mavor, London, Eng.

During the two past years there has been in this country a decided awakening of interest in the possibilities of electric distribution of power in factories. Long-distance transmission is less interesting to us because of our local conditions. Proposals have been from time to time made to turn to account such sources of power as exist, for example, at the Falls of Clyde, or even to use the tides for the production of electric energy for transmission to distant points. The fact that fuel is cheap and the cost of transport small will probably militate against the realization in the near future of such dreams. For such power using centres as we propose to discuss in the present paper, it may be taken for granted that, under existing conditions, the power can be produced at or near the point at which it is to be used so cheaply as to preclude any consideration of means for transmitting it from a distance.

A very interesting scheme is on foot in the Midland Counties of England to generate electricity at the pit head, and to transmit it to power using centres in the form of high tension alternating currents. It is antici-

*A paper read before the Institute of Engineers and Shipbuilders in Scotland