

its lowest. He was afraid to say what the cheapness of water really was under the best conditions. Perhaps \$5 per horse-power per year might be taken as an extreme figure. The author, according to Mr. Unwin, only referred to the transmission of water power by electricity. In cases where there was a large surplus of water power, as in parts of Switzerland, electrical transmission was convenient, but in most instances it was not desirable to let a large quantity of water go to waste, and then came the question of storage. Reference had been made to accumulators, but in any large installation of power transmission, this method of storage was so expensive as to be out of question. The great advantage of water as a means of obtaining power was that it lent its use readily to storage. At Geneva, on the Rhine, they used turbines placed in the river to pump water up to a storage reservoir, and it was this water that supplied the power for lighting Geneva at night. Here, the lowest price quoted for electricity was 6d. per unit; in Geneva it was obtained at 1d. per unit. In the Calumet and Hecla mines power was transmitted electrically, it having been tried on a very large scale, but the engineer had come to the conclusion that it was very expensive, and in future it was proposed to go back to air.

Mr. Kapp, referring to the cost of transmitting power electrically, said that in Switzerland, where the power obtained from the Rhine was formerly transmitted by ropes, electricity was now used. At 700 volts, 700 horse-power was transmitted at the cost of 50 fr. per horse-power per year, which was not so far from \$5 per horse-power.

#### A Novel Experiment.

The details of an interesting experiment which was made in a textile mill at Verviers, Belgium, is described in one of our foreign exchanges, and presents some novel features. The factory employed twenty-five weavers, three of whom were women, upon an equal number of looms. It appears that one of the operatives proposed to his fellow-workers the "pooling" each week of their earnings, and an equal division of the proceeds. The suggestion was examined, discussed, and finally adopted. The employer, when consulted, gave a free hand to the weavers to arrange as they pleased, and to distribute their earnings in whatever way suited them. The arrangement referred to accordingly continued for several weeks, to the complete satisfaction of every one, employers and employed. The weavers, instead of being suspicious of each other, vied with one another in the performance of their tasks, agreed admirably, and rendered mutual support. The experiment, however, appears to have been faced with a difficulty. For several weeks past seven opera-

tives have had to "play." Immediately arrangements were made in order that all might participate in the holidays. Four weavers, turn by turn, took their leave; three others occupied themselves in secondary occupations, such as warping, etc. At the end of the week each received the same wage—the "players" and the workers alike.

According to our authority, the experiment appears to have been further successful, inasmuch as in spite of these conditions the output of the weaving shed was actually increased. The operative who furnished this information adds that the shed included, like all others, "orthodox" and socialist weavers, good ones and bad ones. According to him, the experiment will result in the merchants being furnished with what they require, without the fear of foremen exploiting the operatives who happen to be under them. He thinks that this innovation will extend to the other establishments of Verviers, and that it will improve the lot of a considerable proportion of the working-class population.

That the experiment should have worked so satisfactorily in the instance cited is not perhaps remarkable, considering the small number of weavers employed, and the necessity of mutual sacrifices for the common good. In a limited organization, this principle may often be carried out without great difficulty, but when it is attempted to apply it in the case of larger establishments it is to be feared that the results would not prove so satisfactory. In order to achieve success in such an undertaking, it is absolutely necessary that all should be actuated by the same motives, and that each should be willing to bear his share of the burdens and sacrifices involved. Such a pervading spirit of altruism is hardly to be found in large assemblages of working men.—Manufacturers' Review.

#### Wastage in Certain Manufactures.

The drawback provisions in the United States tariff laws often make it necessary for the custom officials to determine what is the wastage in certain manufactures which are made of foreign material and exported. The report of custom decisions made in November, 1893, contains several of these wastage decisions.

The first decision gives the wastage in making clock springs from imported steel wire rods; the decision is that the quantity of imported rods used in the manufacture shall be determined by adding to the net weight of the exported article as certified by a United States weigher 16 per cent. of such weight. This means that the waste is a little over 14 per cent.

A second decision has reference to the allowance for wastage of tin used in making salmon cans. These cans, the decision shows, are made from 14x20 tin. The Secretary of the Treasury says:

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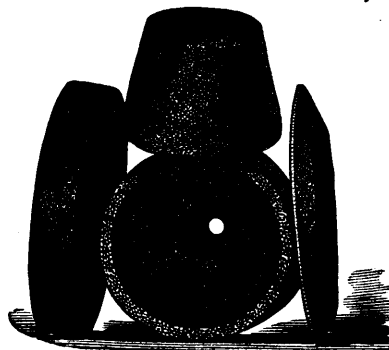
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