- 55. With regard to the points-and-crossings shop, have there been any improvements since you have been there ?-Yes.
- 56. In what direction?—In the system of working the different classes of rails. Different tools have been introduced in the blacksmiths' shop for producing the different parts, and wherever labour could be saved it has been saved.
  - 57. Has the output of points and crossings been increased thereby ?—Yes.

58. And the cost reduced ?—Yes.

59. Are points and crossings made from the Manufacturing Account ?—Yes.

60. You have other Manufacturing Accounts in the works ?—Yes.

61. You yourself keep an eye on the state of these Manufacturing Accounts ?- I watch them as

closely as it is possible to do.

62. And if you found that any particular class of article was costing more than was allowed for it, what would you do ?-I would take it to the foreman at once, and go into the whole thing and see where the leakage was.

63. Is it the case that all the Manufacturing Accounts make a surplus ?—Yes.

[Summarised statements of staff at Addington, wages paid, value of work done, and new stock manufactured, put in.]

64. Are the A engines built at Addington similar to those at the present time being built by Price

Bros. ?—The last three are to the same drawings as the engines constructed by Price Bros.

65. Taking the net cost of wages and material at Addington, what was the total amount for these engines?—£4,310.

66. Did that include the Westinghouse brake and everything complete?—Yes, the engine complete ready for the road.

67. What was Price Bros.' contract price?—£3,998.
68. What was the cost of adding the Westinghouse brake?—£210.

- 69. What is the cost of completing the painting, which work is done at Addington ?-£20, making a total for the engine of £4,228.
- 70. Supposing Price's took the contract for these engines at too low a figure, do you think it would result in leaving them without any profit on the job ?—I think it would.

71. Has Addington built locomotives of the Wr class ?—Yes.

72. Have some of the same engines been built at Hillside?—They were built at Hillside.

73. Did Addington supply any proportion of the material to Hillside ?—Yes, the brass castings, steel castings, forgings, and the boilers.

74. What did the forgings comprise?—Connecting-rods, coupling-rods, crank-pins, buffer heads

and shanks, and other parts of the draw-gear.

- 75. Did the second lot of boilers cost more or less than the first batch?—Less by £10 per boiler in wages.
- 76. We have had from England certain flange-plates already flanged. Have you taken any notice of them ?—Yes. They were imported for the WF and X engines.

77. Were they a good job ?—Yes, excellent.

- 78. Did you compare the cost of these flanged plates complete with the cost of unflanged plates here, plus the cost of flanging locally ?-We took out the difference in the cost as near as we could get at it. Of course, I do not know that the figures we got were absolutely correct, but I think they were very near it. In some cases we could do them cheaper, and in other cases it was in favour of the imported article.
- 79. Can you state what the cost per pound is on the average for the various forgings for the Class X engines ?—They were principally made in mild steel, and the cost of forging was 41d. per pound, including wages and material.

80. What was the cost of wages separate from material ?—Twopence three-farthings.

81. Can you give the Commission any particulars generally regarding improvements introduced at Addington to increase the output?—There is a patent cutting-tool which was erected and placed on the plate-planer. That allowed us to cut out the cone-plate for the X boiler in nine hours.

82. That, you say, is a patent tool ?—Well, it was never patented.

- 83. Do you use that tool on the frame-plates ?-No. The cone-plate we were able to cut out with this tool in nine hours at a cost of 10s.  $1\frac{1}{2}d$ ., whereas the first one which we did by means of drilling cost us £2. Then there was the attachment we put on to the wheel-lathe, which enables us to do two wheel-centres at one time.
- 84. Did that result in a saving of time ?—Under the old process it took us nineteen hours to bore

a pair of wheel-centres; with the new process we can do the same work in twelve hours.

85. Are there any other improvements?—Tools of different sorts have been introduced in connection with points-and-crossings work. The tools in that line do work which formerly was done by hand.

- 86. And with regard to the snap flask?—We use that in three foundries—brass, steel, and iron. In connection with the Tabor machine alone we saved in the moulding-boxes £29 14s. 101d. It is impossible to get at the exact saving achieved by reason of the improved appliances in the mouldingshop.
- 87. Had you any difficulty at one time with regard to annealing ?—Yes, when I came to Addington we could not do it at all satisfactorily.

- 88. What did you do?—Took out the annealing-retorts and put in fans.
  89. What was the result?—Very satisfactory castings—equal to anything produced in the
- 90. With regard to the equipping of some of the older lathes for the use of high-speed tool-steel, have you made any alteration to the cone ?-Yes. In the last lathe we took off the five-speed cone and replaced it with three-speed, which enabled us to get considerably more out of the lathe.