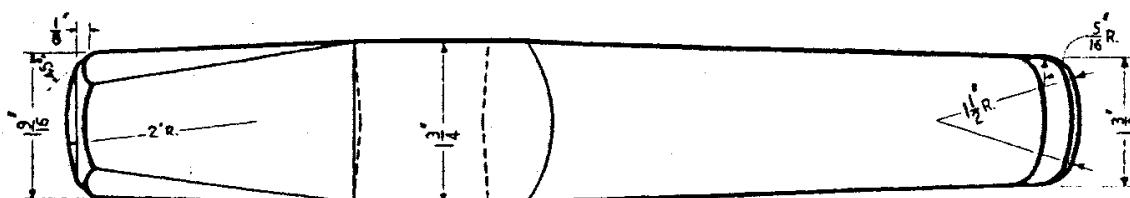
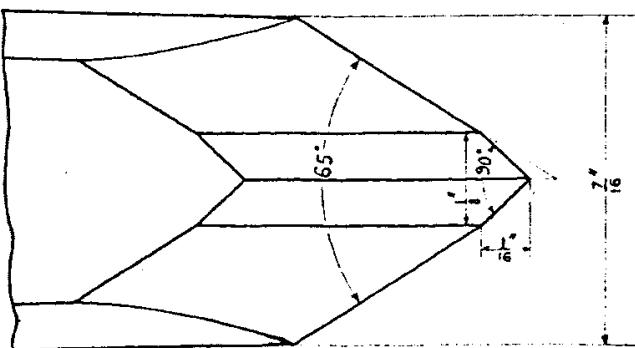


SECTION A-A



ELEVATION

DETAIL OF
CUTTING EDGE
(Enlarged plan view)

Approximate Weight 5 1/2 lbs.

1. All Track Chisels must have manufacturer's name or trade-mark, the lot number and The Pennsylvania Railroad Monogram stamped plainly in the metal in the positions indicated, in cases when Track Chisels are made in P.R.R. Shops, the name of the shop shall be given in place of manufacturer's name or trade-mark.

2. It is desirable to have orders placed in lots of not less than five hundred (500) or multiples thereof, and each lot marked with figures stamped under the maker's name or trade mark to indicate the consecutive number of the lot furnished by that manufacturer.

3. Track Chisels shall be made of Crucible or Electric Carbon Steel of the following composition:-

Carbon	.80 to .90
Silicon	.10 to .30
Manganese	.30 to .50
Sulphur	.025
Phosphorus	.025
Alloys	None.

4. One chisel shall be selected by the inspector from each lot, be properly marked for identification and forwarded to the Test Department at Altoona, Pa., for check analysis.

5. One chisel, selected by the inspector from each lot, shall be tested in his presence by the manufacturer and shall cut, not less than 100 linear inches, $\frac{1}{8}$ inch deep (measured from the top of the bulged metal), in a rail having an approximate Brinell hardness number of 260, without requiring resharpening and without spelling of the head or decrease of more than $\frac{1}{4}$ inch in length of the head end of the chisel due to mushrooming.

6. To insure proper tempering and against water cracks in the cutting edge, every chisel of each lot must be subjected, in the presence of the inspector, to three (3) gouging blows of such intensity as to give, for each blow, a cut of approximately $\frac{1}{16}$ inch in depth in the head of a rail having an approximate Brinell hardness number of 260.

7. The acceptance or rejection of each lot shall be determined from the results of chemical analysis (Paragraph 4) and the cutting test (Paragraph 5).

8. When redressing, chisels must not be worked at a temperature over 1650 degrees F. (salmon color) nor under 1300 degrees F. (medium cherry color) and must be brought to a working heat very slowly, the cutting edge reformed as closely as possible to that shown on plan, cooled and then ground. They shall then be heat treated as follows: The entire chisel shall be preheated to about 400 degrees F. and 3 inches of cutting end then soaked for 10 minutes in a lead or salt bath at 1450 degrees F. followed by quenching in water to about room temperature. Chisel shall then be drawn for 30 minutes in oil or salt at 540 degrees F.

9. The manufacturer agrees to replace free of cost to The Pennsylvania Railroad Company, Track Chisels furnished in accordance with this plan, which are found to be defective in material and/or workmanship.

10. A tolerance of 2% on length and 5% on cross-section will be allowed.

11. Before leaving the factory, each Track Chisel must be coated with paint, oil or varnish to prevent corrosion and each polished cutting edge shall be oiled.

Except cutting edge, this is same design as A.R.E.A. Track Chisel, Plan No. 17-1.

77270-E

**THE PENNSYLVANIA RAILROAD
STANDARD
TRACK CHISEL**

OFFICE OF CHIEF ENGINEER, PHILA., PA., MAY, 1920

Correct
J. E. Corning
Engineer of Standards



Approved
J. E. Corning
Chief Engineer