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Next in order comes the wheel de-partment. In this section there are the following motor-driven tools: llowing motor-driven tools:
114 60-in. Planer.
115 24-in. Slotter.
116 96-in. Boring mill.
117 Extension gap lathe.
119 600-ton Hydraulic wheel press.
120 90-in. Driving wheel lathe.
121 85-in. Quartering machine.
122 80-in. Wheel lathe.
134 60-in. Radial drill.
To the right of this spection comes the

To the right of this section comes the balance of the heavy motor-driven ma-chines, classed as a general depart-ment, with the following machine tools: 125

- 60-in. Planer. 60-in. Planer. 126
- 128 26-in. Draw cut shaper with
- crane. 129
- 30-in. Draw cut shaper with crane.

72-in. Vertical boring mill. 42-in. Vertical boring mill. 130

131

- 14-in. Bolt lathe.
- 16-in. Shaper. 60-in. Radial drill. 32-in. Engine lathe. 6
- 9 30-in. Engine lathe.
- 10 Horizontal boring mill.

11 50-ton Forcing press.
12 52-in. Vertical boring machine.
12A 42-in. Vertical boring machine.
The piston, crosshead and motion department, which comes next in order, is very complete with a wide range of standard tools for this class of work. The 26 machines in this set have group drive divided into two sections with the heavier machines at the left end of the section in one drive. The complete list

36 18-in. Engine lathe with taper attachments.

Alongside this section is the tool room in a closed partition. It has the usual tool room equipment for a shop of this size, as follows: 37 Grindstone.

38 16-in. Universal shaper. 39 14-in. Tool lothe with taper and relieving attachments.

6-spdle Drill. 40

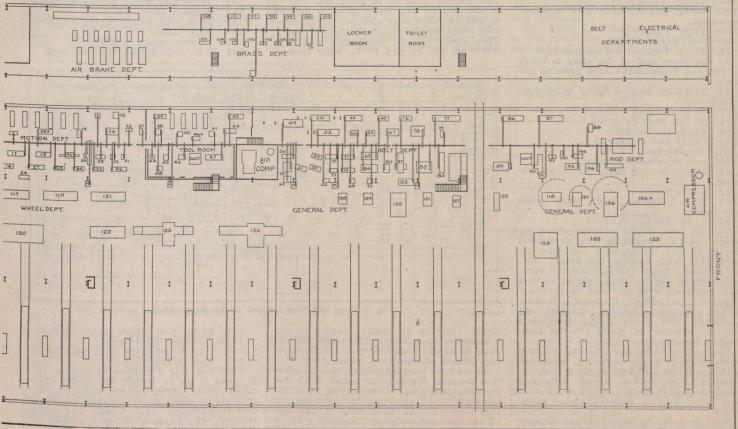
41

2-spdle Drill. 18-in. Tool lathe with taper at-42 tachments.

43 14-in. Tool lathe with taper at-tachment and draw-in collets. 44 Twist drill grinder.

45 Reamer grinder with attachments. 46 Tool grinder.
46A 12-in. Speed lathe. .
47 22-in. Engine lathe with taper

ed, in a compartment alongside the



Boiler and Tank Shop, showing Tool Layout in all Shops.

127 Combined milling machine.

- 132 118
- 18-in. Slotter. 6-ft. Radial drill.
- 137 26-in. Draw cut shaper with
- crane. 136
 - 18-in. Vertical miller.
 - 136A Locomotive rod boring machine. 133
 - 60-in. Draw cut cylinder planer. Special cylinder borer.

133 60-in. Draw cut cylinder planer.
135 Special cylinder borer.
123 36 x 36-in. Milling machine.
Along the north side of the shop there
is a third bay 40 ft. wide, extending the
full length, with a gallery overhead. On
the ground floor under the gallery the
lighter group-driven machinery is placed
as will be described. Commencing at
the left, omitting for the present 178, a
hydraulic rivetter, there is first of all a
general department consisting of the
following smaller machine tools, belted
to a jackshaft driven from two motors:
1 26-in. Engine lathe.
2 28-in. Engine lathe.
3 Double emery grinder.
4 26-in., 12-ft. Bed engine lathe.

- 18 19
- 48-in. Radial drill. 50-ton Forcing press. 16-in. Engine lathe with taper 20

attachment.

- Centreing machine. 21

- Centreing machine.
 Milling machine.
 Milling machine.
 Sin. Emery grinder.
 Disc grinder.
 Link grinder.
 16-in. Traverse shaper.
 10-in. Slotter.
 Zohin Engine lather. 26 27 20-in. Engine lathe with taper attachment.
- 28 16-in. Engine lathe with taper attachment.
 - 29
 - 20-in. Planer. 14-in. Drill. 4-in. Hack saw. 30
- 31 Buffing machine. 32
- 33 Universal grinder with all attach-
- ments. 34 16-in. Engine lathe with taper
- attachments. 35 16-in. Engine lathe with taper attachments.

tool room, in conjunction with the air compressor at the right hand end of the middle bay, supplies all the air re-quired in this shop, thus making it in-dependent of the central plant air com-pressor in the powerhouse. Moreover, standing connections are provided, con-nected with the general air distribution for use in case of emergency.

Just past the tool and air compressor rooms is the bolt department, equipped with the machines enumerated:

49 3-in. x 36-in. Hollow hex. turret lathe.

- operates under the large crane, and is 50 3-in. x 36-in. Hollow hex. turret lathe.
 - 4-in. Hack saw. 51
 - 52 4-in. Hack saw.
- 2-in. x 24-in. Hollow hex turret 53 lathe.
 - 54 Automatic lathe.
 - 55
- Centering machine. 14-in. Bolt lathe with taper at-56 tachment.

53

- attachments.
- 48 Milling machine. An air compressor, electrically operat-
- section in one drive. The complete list is as follows: 13 36-in. Planer. 13A Piston grinder. 14 Double emery wheel. 15 36-in. Radial drill. 16 16-in. Bolt lathe with taper attachment. 66-in. Radial drill. 17