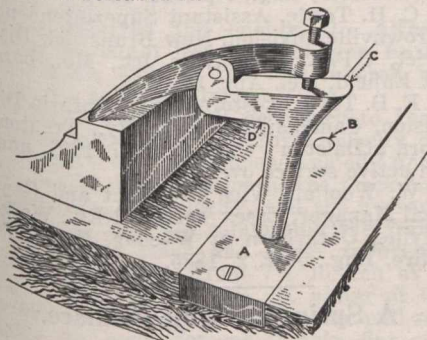


### A Bench Clamp.

A very useful and simple form of bench clamp or holdfast came to my notice during a recent visit to a small shop. It is shown in the illustration.

A piece of  $\frac{1}{2} \times 2$  in. steel stock A was set into the centre of the bench, and ran its full length. A series of holes B were drilled to permit the clamp being used at the most convenient places. A few taps with a hand hammer at C made the device secure in the hole where needed, and when it was desirable to change it, a few taps under D released it.



A Bench Clamp.

There is a wide variety of work that cannot be satisfactorily held in a bench vise. This class of work is easily secured to the bench with this device.—C. H. Willey, in American Machinist.

### Track Section Prize Competition on Eastern Lines, Canadian Pacific Railway.

Canadian Railway and Marine World for January contained general particulars of the above mentioned competition for 1917, and gave the names of the section foremen who won the General Manager's and general superintendent's prizes. We have since been provided with particulars of the awards of the superintendent's and roadmaster's prizes. Following is a com-

Moosehead Subdivision; W. Alexander, section 2, Fredericton Subdivision; T. Gidden, section 2, Shore Line Subdivision; J. H. Bogler, section 6, Shogomoc South Subdivision; S. Tompkins, section 13, Shogomoc North Subdivision; J. Mockler, section 3, Aroostook Subdivision.

Quebec District:—General Superintendent's prize, T. Mattingly, section 3, Chalk River Subdivision. Farnham Division—Superintendent's prize, A. St. Louis, section 8, Drummondville Subdivision; roadmaster's prizes, A. Cloutier, section 21, Sherbrooke Subdivision; P. W. Delaire, section 17, Megantic Subdivision; J. Partridge, section 7, Newport Subdivision; F. Gauthier, section 5, St. Guillaume Subdivision. Montreal Terminals Division—Superintendent's prize, D. Lavoie, Mile End; roadmaster's prize, A. Belec, Montreal West. Laurentian Division—Superintendent's prize, D. Proteau, section 18, Trois Rivières Subdivision; roadmaster's prizes, J. Rochon, section 1, St. Lin Subdivision; O. Geroux, section 8, Ste. Agathe Subdivision; A. Fisette, section 3, Trois Rivières Subdivision; J. Bureau, section 25, Trois Rivières Subdivision. Ottawa Division—Superintendent's prize, R. Reaumur, section 5, M. & O. Subdivision; roadmaster's prizes, N. Huno, section 11, M. & O. Subdivision; M. Daly, section 4, Maniwaki Subdivision; P. Cassidy, section 9, Waltham Subdivision. Smiths Falls Division—Superintendent's prize, D. J. McMillan, section 11, Winchester Subdivision; roadmaster's prizes, J. Cochrane, section 14, Chalk River Subdivision; H. Timleck, section 10, Brockville Subdivision; J. Rioux, section 10, Winchester Subdivision.

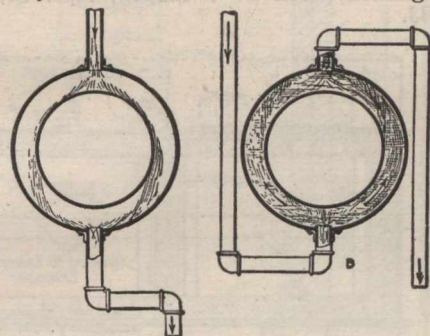
Ontario District:—General Superintendent's prize, G. Muma, section 11, Galt Subdivision. Trenton Division—Superintendent's prize, W. Lowes, section 7, Peterboro; roadmaster's prizes, R. Crawford, section 7, Kingston Subdivision; J. Dowdell, section 14, Belleville Subdivision; M. Connors, section 8, Oshawa Subdivision; L. Linton, section 12, Peterboro Subdivision; W. Lillie, section 2, Havelock Subdivision; B. Locking, section 5, Port McNicholl Subdivision. London Divi-

section 10, O. & T. Subdivision. Toronto Terminals—Superintendent's prize, L. Francis, section 1, Don; roadmaster's prize, R. Gollinger, section 9, Hamilton.

Lake Superior District:—General Superintendent's prize, J. Purich, section 6, White River Subdivision. Superintendent's prizes—North Bay Subdivision, section 3, H. Gunning; Nemegos Subdivision, section 24, M. Hakkinen; Heron Bay Subdivision, section 12, L. Lerwill. Roadmaster's prizes—Thessalon Subdivision, section 16, A. Archambault; Parry Sound Subdivision, section 18, H. G. Roefs; Cartier Subdivision, section 13, P. Ross; North Bay Subdivision, section 12, E. Morin; Nemegos Subdivision, section 4, C. Asialia; White River Subdivision, G. Kusik; Heron Bay Subdivision, section 16, J. Milani; Nipigon Subdivision, section 19, B. Michaud.

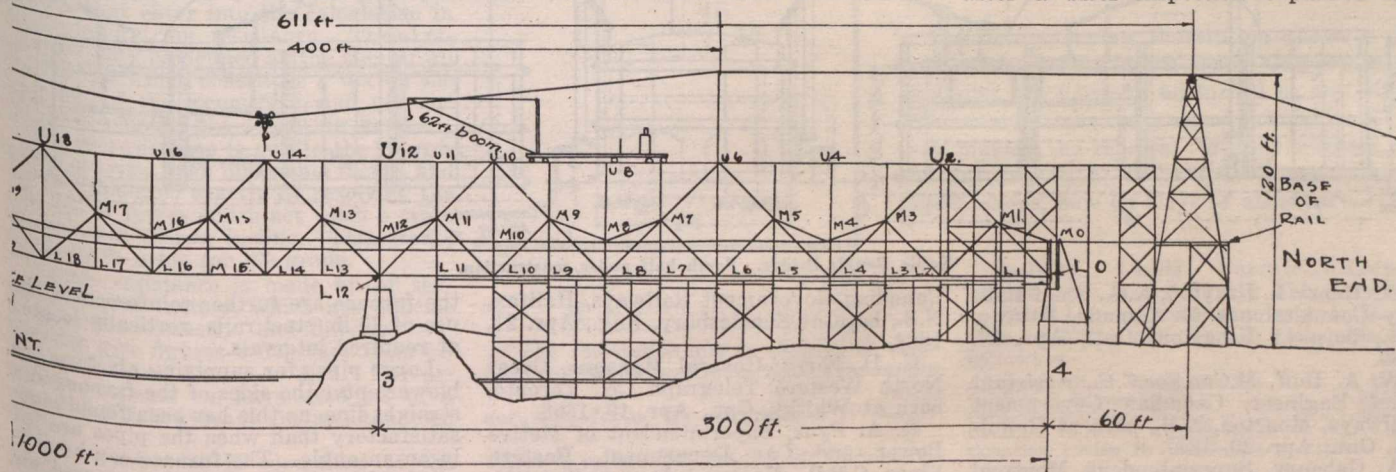
### Cooling a Small Air Compressor.

In a small machine shop with which the writer was connected, considerable difficulty was encountered in maintaining a



Original and rearranged piping.

sufficient supply of air because the compressor persisted in heating up. We had decided that the compressor was too small, and were about to order a larger unit when the writer decided to make a more complete investigation. While going over the water-cooling connections an air compressor erector stopped in, and after a brief inspection explained the



Kettle Rapids Bridge. General erection diagram.

sion—Superintendent's prize, A. Fairbanks, section 4, Windsor Subdivision; roadmaster's prize, T. Wilson, section 7, Windsor Subdivision; G. Muma, section 15, Galt Subdivision; J. Schmidt, section 9, H. & G. Subdivision; E. Allen, section 8, St. Thomas Subdivision; F. Broadbent, section 3, Galt Subdivision. Bruce Division—Superintendent's prize, W. Nealy, section 11, Owen Sound Division; roadmaster's prizes, H. Crowther, section 14, Owen Sound Subdivision; L. D'Angio, section 19, MacTier Subdivision; R. Hewett,

cause of our trouble.

The original water connection was made as per sketch A. With this system of piping, a body of cooling water could not be maintained around the cylinder, but instead merely ran over the cylinder in a thin film, and out to waste. The compressor erector advised revising the water cooling connection as per sketch B, from which it will be observed that the water jacket would be completely filled with water at all times.—W. A. Lailor, in American Machinist.

plete list of the successful section foremen: General Manager's prize, H. Hoyst, section 6, Havelock Subdivision, Ontario District.

New Brunswick District:—General Superintendent's prize, \$50, Wm. Hunter, section 12, St. John Subdivision; Superintendent's prize, Brownville Division, \$25, O. Zelkan, section 9, Moosehead Subdivision; Superintendent's prize, Woodstock Division, \$25, A. Peluse, section 4, Aroostook Subdivision; roadmaster's prizes, \$10 each, J. Conley, section 8,