

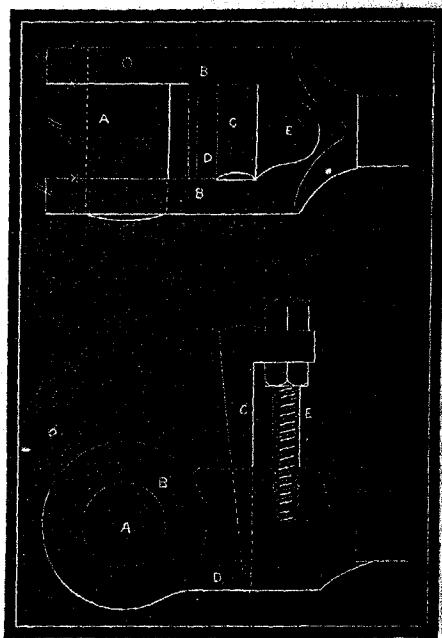
Within a few days work will be commenced on the shaft Windsor, and as soon as it is sunk the drainage tunnel will be excavated from it to meet that now being worked from this side of the river.

From what was learned of the nature of the ground in sinking the shaft, it is anticipated that the main tunnels will be surrounded on all sides with good solid blue clay.

The progress of the work has thus far been very satisfactory, and there is every reason to believe that it will rapidly be brought to a successful termination.

A Joint.—A simple and neat adjustable joint is made by adapting a bearing block D to the outside of the eye-end through which the pin A goes, and which is made truly cylindrical and concentric with the pin for that purpose.

The block is adjusted by the key C, which is forced and secured by the bolt and jam nuts E. The pin A is fastened to the fork B by a cross pin or other known means. The blocks D may be made by forming four together in one pattern, boring them out while thus united and facing sides in the lathe, then cutting them apart and fitting each to its place.



J. H. C.

A Permanganate Battery.—Mr. J. H. Koosen has experimented upon the substitution of permanganate of potassa for the nitric acid of the Grove Platinum Battery, and asserts that the electromotive force of this combination is greater than that of the Grove.

The following combination—platinum in a solution of permanganate with $\frac{1}{30}$ of sulphuric acid added, and amalgamated zinc in diluted sulphuric acid—gave the electromotive force as the average of more than one hundred measurements, to be between 1.9 and 2.2 (Daniel, 1.)