THE GROOSOKAT, OR PORTABLE TRAVELLING ENGINE

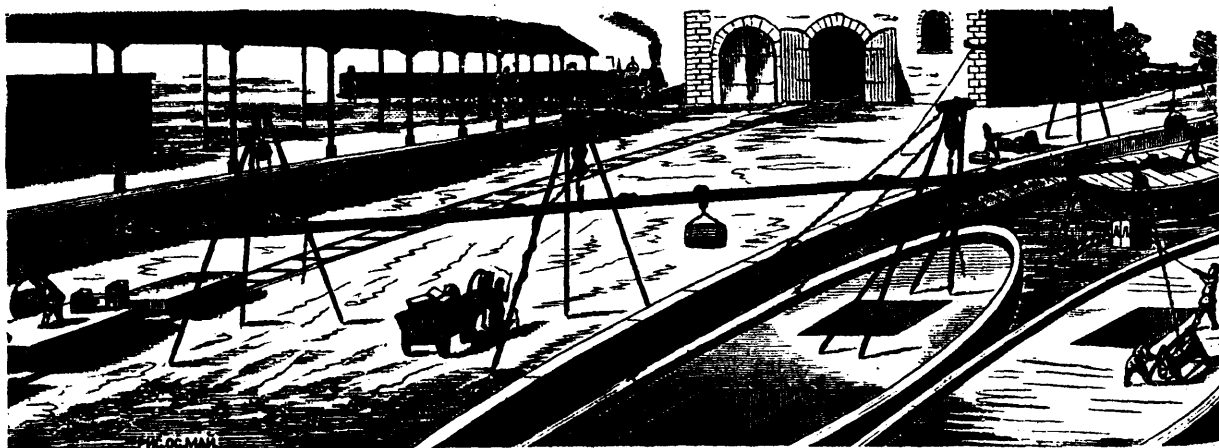

Fig. 1.
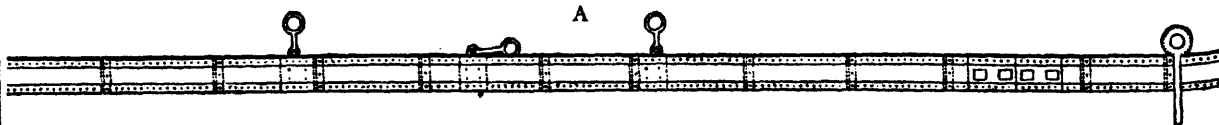
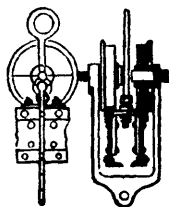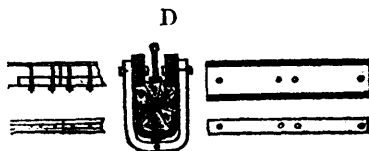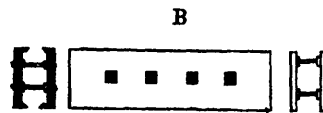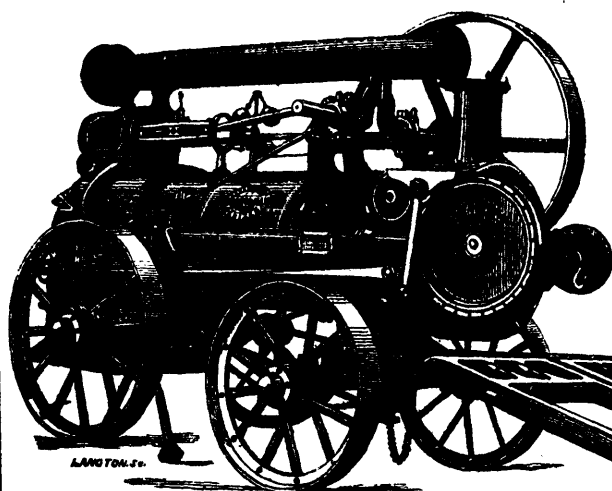*Fig. 2.*

Fig. 3.   *Fig. 4.*   *Fig. 5.*

PORTABLE ENGINE AND HOIST.

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We annex an illustration showing a handy arrangement of builder's hoist combined with a portable engine, constructed by Messrs. Brown & May, of Devizes. As will be seen from the engraving the hoisting drum is placed in front of the smokebox, a position which enables the chain or rope to be led off at any desired angle. As Messrs. Brown & May fit all their portables with their powerful steam-jet arrangement for cleaning the tubes, there is no necessity to open the smoke-box door for this purpose, and hence the position of the hoisting drum involves no inconvenience. The mode of driving the hoisting gear is as follows : A pitch chain is led off from a chain wheel on the crankshaft (on the fly-wheel side) to a wheel on the first motion shaft, this latter shaft carrying at its opposite end a grooved friction wheel. Between this latter friction wheel and the large wheel on the hoisting drum shaft is a moveable wheel which can be raised or lowered by the long lever shown at the side of the engine, this lever also operating a brake fitted to the periphery of the large friction wheel. The first motion shaft being coupled to the crankshaft by the pitch chain is always revolving when the engine is running, while the hoisting gear is stopped or started by raising or lowering the intermediate wheel already mentioned, the raising of this wheel taking it out of contact with the large friction wheel and the wheel on the first motion shaft, while a further motion of the hand lever in the same direction applies the brake. The hoist is made to lift easily 10 cwt. at the rate of 50 feet per minute, and this combination of a hoist with a portable engine is one which will be of much service to builders and contractors. The arrangement is also one which can be advantageously applied to engines driving portable saw-mills, as the hoisting or winding gear can then be utilized for hauling logs to the mill.