“A New Sullivan Diamond Drill”

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The article begins:

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This article, which begins on the next page,
is presented on the Stone Quarries and Beyond web site.
http://quarriesandbeyond.org/

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A NEW SULLIVAN DIAMOND DRILL

The accompanying photographs illustrate the new Sullivan "Rambler" diamond drill, direct-connected to a gasoline engine and mounted on a steel truck for convenience in transportation. This outfit has been especially designed to meet the requirements for a drill of moderate capacity to be used in mountainous or inaccessible districts, where transportation of boilers, heavy machinery and fuel is impracticable and costly. A gasoline engine as a means of supplying power meets these requirements very nicely, but operation by belt, which has hitherto been the practice, is only partially satisfactory. The ordinary gasoline engine has not sufficient speed variation for economical use in diamond drill service. A wide range of speed is needed; fast speed, in order to permit rapid progress when the formation is favorable, or slow speed, to protect the diamonds when the rock encountered is broken or runs from soft to hard suddenly. The gasoline engine is of an improved, two cylinder, opposed type, with magneto ignition. The necessary speed variations are secured by means of a friction disc drive. This provides, with the assistance
of a governor on the engine, a range in speed of the drill spindle of from 100 to 500 revolutions per minute, as desired.

The “Rambler” drill has a capacity of about 500 feet, removing a \( \frac{3}{4} \) inch, or “E” size, core. With “A,” or 1\( \frac{1}{8} \)-inch core fittings, the Rambler has a capacity of 350 feet. The swivel head, hoisting mechanism and pump, with the gasoline engine, are all mounted on a bed plate, which in turn is mounted on a steel wagon truck. The swivel head is of the improved Sullivan screw feed pattern, with three feeds, which may be instantly altered by a lever without stopping the drill. The length of feed or run is 24 inches. A hoist of the internal gear type is used.

The entire drill and engine are covered with a sheet metal case, to keep out dust and moisture, as shown in the smaller picture. The outfit, as thus mounted, weighs about 3500 pounds.