

since 1933 there has been some recovery. Among the developments in Canada that resulted in increased production of these materials prior to the depression may be mentioned: (1) the tendency for brick to be replaced by reinforced concrete, cement blocks, etc., as indicated at p. 350 by a decline in brick production and an increase in that of cement; (2) the extensive improvement during that period in the mileage and character of roads and highways in Canada; and (3) the improvement of railway roadbeds.

The provincial distribution of the 1938 production of sand and gravel, and stone, is shown in Table 6, p. 323, while the chief purposes for which these materials were produced are shown in Table 35. Sand and gravel production in 1939 totalled 28,172,384 tons valued at \$10,820,631, and stone production amounted to 5,468,174 tons valued at \$5,952,242.

### 35.—Production of Sand and Gravel, and Stone in Canada, by Principal Purposes, 1936-38.

Material and Purpose.	1936.		1937.		1938.	
	Quantity.	Gross Value.	Quantity.	Gross Value.	Quantity.	Gross Value.
	tons.	\$	tons.	\$	tons.	\$
<b>Sand—</b>						
Moulding sand.....	16,725	16,951	100,668	44,551	18,845	19,698
For building, concrete, roads, etc.....	956,502	362,542	1,356,269	476,824	1,750,187	685,976
Other.....	15,096	5,795	59,007	13,087	67,595	22,909
<b>Sand and Gravel—</b>						
For railway ballast.....	6,318,681	1,054,703	2,764,639	533,876	2,359,703	443,936
For concrete, roads, etc.....	14,336,640	5,216,942	19,453,188	8,340,764	22,513,256	9,101,882
For mine filling.....	1	-	1,170,260	146,811	1,852,323	256,380
Crushed gravel.....	480,516	264,466	2,097,270	936,783	3,661,973	1,471,773
<b>Totals, Sand and Gravel.....</b>	<b>22,124,160</b>	<b>6,921,399</b>	<b>27,061,301</b>	<b>10,492,696</b>	<b>32,223,882</b>	<b>12,002,554</b>
<b>Stone—</b>						
Building.....	42,335	714,616	49,098	746,370	49,666	725,402
Monumental and ornamental.....	8,975	281,656	8,301	278,325	22,382	448,328
Limestone for agriculture.....	94,031	116,397	112,628	131,071	129,689	146,557
<b>Chemical Uses—</b>						
Flux.....	279,299	187,240	345,742	266,780	314,604	233,671
Pulp and paper.....	197,957	197,523	200,893	219,461	114,572	126,980
Other.....	137,951	168,834	147,312	140,056	122,561	107,349
Rubble and riprap.....	475,845	250,581	699,586	608,453	501,216	359,232
Crushed.....	3,702,153	3,043,407	5,309,039	4,306,867	3,789,680	3,197,797
<b>Totals, Stone<sup>1</sup>.....</b>	<b>4,981,665</b>	<b>5,128,739</b>	<b>6,935,612</b>	<b>6,939,360</b>	<b>5,116,022</b>	<b>5,556,026</b>

<sup>1</sup> Relatively small and included with "For concrete, roads, etc." not specified.

<sup>2</sup> Totals include minor items

The quantities and values of stone produced, given in the table above, represent only the production of those establishments that actually quarry their own stone and are exclusive of the products of the stone-dressing industry comprising those establishments that buy rough stone and dress, polish, or finish it; although dressing operations are frequently carried on right at the quarry and to that extent cannot be separated from the primary production. Of the total quantity of stone produced in 1938 about 84 p.c. was limestone, 14 p.c. granite, 2.0 p.c. sandstone, and 0.4 p.c. marble. The average value per ton was \$0.90 for limestone, \$1.91 for granite, \$2.14 for sandstone, and \$4.50 for marble. The marble was used chiefly for stucco dash, in glass factories, pulp and paper mills, and other industrial processes, for poultry grit, and pulverized as whiting. Large quantities of limestone were used for fluxing and other chemical purposes, but by far the largest part of all stone except marble was used as crushed stone.