

PRODUCTION OF COAL IN 1906

According to statistics compiled for the United States Geological Survey by Edward W. Parker, coal mining expert in charge, the total production of coal in the United States in 1906 was 414,039,581 short tons of 2,000 pounds, valued at \$512,610,744. These figures, compared with those of the preceding year, when the output amounted to 392,919,341 short tons, valued at \$476,756,963, show an increase of 21,120,240 short tons, or 5.4 per cent. in quantity, and of \$35,853,781, or 7.5 per cent. in value.

Of the total production in 1906, Pennsylvania contributed 200,546,084 short tons, or 48.4 per cent., in quantity, and \$262,182,935, or 51.1 per cent., in value, the larger percentage in the value being due, of course, to the higher value of anthracite, which is produced almost exclusively in that State.

The anthracite production of Pennsylvania in 1906 was 63,645,010 long tons (or 71,282,411 short tons), valued at \$131,917,694, while the bituminous production was 129,263,673 short tons, valued at \$130,265,241. The anthracite production of Pennsylvania in 1906 was 5,694,142 long tons (or 6,377,439 short tons) less than that of 1905, with a decrease in value of \$9,961,306, while the bituminous production showed an increase of 10,850,036 short tons in quantity and of \$16,874,734 in value.

One of the interesting facts presented in the statistics of coal production last year is that West Virginia has supplanted Illinois as the second coal-producing State, West Virginia showing a total output of 43,276,485 short tons, while the production of Illinois was 41,497,435 short tons. This was due principally to the almost complete suspension of mining in Illinois (as in other States where labor union forces were strong) during all of April and a part of May, when the miners and operators were in conflict over the wage scale, whereas the majority of the operations in West Virginia were more actively worked, as a result of the suspension of work in the other districts.

Notwithstanding, however, the loss of from six to eight weeks in the States where mining operations were suspended, there was a general increase in production east of the Mississippi River, the only exceptions noted being in Michigan, Georgia, and North Carolina. In Illinois, where the question of the wage scale is most sharply contested, the production increased from a total of 38,434,363 short tons in 1905 to 41,497,435 short tons in 1906. Indiana's production of coal increased from 11,895,252 short tons in 1905 to 12,084,281 short tons the following year. Ohio's production increased from 25,552,950 short tons in 1905 to 27,729,843 short tons in 1906, while the bituminous production of Pennsylvania increased from 118,413,637 short tons in 1905 to 129,263,673 short tons in 1906.

In West Virginia, where there was no suspension of mining, the output of coal increased from 37,791,580 short tons in 1905 to 43,276,485 short tons in 1906.

Among the other coal-producing States in which there was an increased production in 1906 were Alabama, Colorado, Iowa, Kentucky, Maryland, Montana, New

Mexico, Tennessee, Virginia, Washington, and Wyoming. In addition to the three States previously named in which decreases occurred, the following showed losses in tonnage: Arkansas, Indian Territory, Kansas, Michigan, Missouri, Texas, California, Oregon and Alaska. In California, Oregon, Arkansas, Indian Territory and Texas the decreases were due principally to the use of fuel oil. In Kansas, Michigan and Missouri the decreases were due, in the main, to the fact that in these States the industry did not recover from the idleness previously referred to.

PRODUCTION OF COAL IN 1906, BY STATES.

State.	Production.	Value.
Alabama	13,107,663	\$17,467,886
Arkansas	1,864,518	2,999,774
California and Alaska	30,831	78,684
Colorado	10,114,074	12,738,509
Georgia and North Carolina	363,463	407,247
Idaho and Nevada	6,165	24,238
Illinois	41,497,435	44,742,440
Indiana	12,084,281	13,105,168
Indian Territory	2,859,450	5,481,053
Iowa	7,321,639	11,688,598
Kansas	6,010,858	8,935,195
Kentucky	9,673,536	9,794,823
Maryland	5,434,528	6,473,829
Michigan	1,336,338	2,402,529
Missouri	3,755,778	6,163,449
Montana	1,787,934	3,186,620
New Mexico	1,963,558	2,635,571
North Dakota	300,998	437,894
Ohio	27,729,843	30,386,297
Oregon	79,731	212,338
Pennsylvania:		
Anthracite	71,282,411	131,917,694
Bituminous	129,263,673	130,265,241
Tennessee	6,262,686	7,682,121
Texas	1,160,707	2,058,731
Utah	1,773,847	2,411,992
Virginia	4,275,815	4,207,521
Washington	3,276,184	5,908,434
West Virginia	43,276,485	40,777,382
Wyoming	6,138,152	8,019,486

The calorimeter is an instrument of value in the hands of a trained chemist. For any given class of coals it gives an excellent standard of comparison. But when a large number of determinations are to be performed on coals of widely differing composition, it is often necessary to correct and adjust results. This means that each fuel develops its own "error" and a correcting factor must be found for each. Results obtained by means of the calorimeter must not be considered absolute. Relatively they are correct. But unless refinements are introduced, making the work too tedious and elaborate for commercial purposes, it is not desirable that comparisons based upon calorimeter results should be instituted between coals of different characters.

The same general truth applies to commercial laboratory work. While the determination of some of the elements is simple and should always be accurate, there are operations, such as the volumetric determination of sulphur in pig iron, where a constant error is observable. Exactness is here sacrificed for speed. So long as the error is constant no harm need be done