APPENDIX.

APPENDIX.

EXPORTATION OF STONE.

Slate is now being quite largely exported to Australia and New Zealand; some to England and Germany, and some to South America and the West Indies. The most extensive exportations are perhaps to Australia. School slates are quite largely sent to Germany. Marble is exported to the British North American provinces, to the West Indies, and to Cuba; and the reports of the Philadelphia custom-house show that in 1878 marble was exported to England; in 1879 to Belgium, England, and Ireland; in 1880 to Belgium, England, and Japan. Soap-stone has been exported to England. Quite a large amount of Carrara marble is brought to the port of Boston and from there distributed to the British North American provinces. The reason why this is done under the double duty instead of being shipped direct to the market where it is consumed, is because large amounts of marble are shipped constantly to this country while these other markets receive but a small amount at a time; also because ships will bring cargoes for less money to Boston than to Halifax on account of being more certain of procuring a return cargo. These conditions account, in part at least, for the stone of foreign production that is shipped from the different ports of the United States.

IMPORTATION OF STONE INTO THE UNITED STATES.

The custom-house reports show the importation of stone into the United States from nearly every country in the world. It is well known, of course, what stone comes from Scotland, England, Ireland, France, Germany, Belgium, the British North American provinces, and from Italy, and it is also known that onyx has been imported from Mexico, marble from Spain and Portugal, etc., and that marble has been imported from Sicily, granite from Norway and Sweden and Russia, and marble from Africa, but it is not so easy to account for the stone that is imported from British West Indies, Honduras, Central America, Cuba, Hayti, South America, Holland, and Turkey.

The only countries from which stone is constantly in the market in this country are Italy and Nova Scotia. The granite and sandstones from Scotland are imported for special orders. The same may be said of the granite imported from England and Ireland and the colored marbles from France and Germany—the brown sandstone of Germany, and the Caen-stone of France.

The statistics of the Philadelphia custom-house show a large amount of dressed marble imported from England. Some stone is brought as ballast from Brazil, and marble and manufactures of marble from the Danish West Indies and the Netherlands, Brazil, Belgium, Cuba, British West Indies, Sweden and Norway, and some manufactures of slate from Germany. It is also stated that marble has been imported from Nova Scotia and from Canada. Some stone is entered on the custom-house books as "imported manufactured product", which consists of various carved figures picked up by tourists in different parts of the world. This fact may account for stone imported from any country; for instance, if a figure is carved in China and finds its way to Turkey, and is shipped from there to the United States, it will appear as the manufactured product of stone from Turkey. What the manufactures of stone are that have been shipped from South America and the West Indies could not be determined. Marble comes mostly in the unmanufactured state. The cost of labor is so much less in Italy than in this country that the Italian marble, after paying the cost of transportation and a duty of 50 cents per foot and 20 per cent. ad valorem, can be sold in New York about as cheap as the Rutland marble. The cost of transportation from Carrara, however, does not differ much from the cost of transportation of a like amount from Rutland, Vermont.

IMPORTS AND EXPORTS OF MARBLE AND STONE, BY COUNTRIES, FOR THE YEAR ENDING JUNE 30, 1881.

IMPORTS.

Countries from which imported.	Marble and stone, and manufactures of, not elsewhere specified.	Countries from which imported.	Marble and stone, and manufactures of, not elsewhere specified.
Total	$927, 752	Quebec, Ontario, Manitoba, and the Northwest territory	$17, 426
Belgium	11, 809	British West Indies	89
China	92	Hong-Kong	857
France	26, 842	Italy	554, 210
French West Indies	89	Japan	84
French possessions in Africa and adjacent islands	28	Mexico	1, 603
Germany	42, 305	Netherlands	4, 487
England	70, 802	Spain	55
Scotland	77, 178	Cuba	5
Ireland	98	Sweden and Norway	74
Gibraltar	40	Turkey in Asia	2
Nova Scotia, New Brunswick, and Prince Edward island	119, 558	United States of Colombia	25

EXPORTS.

Countries to which exported.	MARBLE AND STONE.		Countries to which exported.	MARBLE AND STONE.	
	Rough or unmanufactured.	Manufactures of.		Rough or unmanufactured.	Manufactures of.
Total	$220, 362	$409, 433	Hong-Kong		$150
			British possessions in Africa and adjacent islands		12, 003
Argentine Republic		4, 131	British possessions in Australia	$9, 100	77, 530
Belgium	176	2, 407	Hawaiian islands		4, 363
Brazil	2, 500	1, 833	Hayti	331	8, 846
Central American states		1, 500	Italy		350
Chili		2, 688	Japan		338
China		45	Liberia		679
Denmark		7, 649	Mexico	25	10, 948
Danish West Indies	42	126	Netherlands		8, 225
France	35	6, 145	Dutch West Indies		439
French West Indies	84	7	Dutch Guiana		716
Miquelon, Langley, and St. Pierre islands		129	Dutch East Indies		130
French possessions, all other		136	Portugal		234
Germany	3, 220	23, 207	Azores, Madeira, and Cape Verde islands		138
England	4, 581	113, 320	Russia, Asiatic		148
Scotland	280	5, 563	San Domingo		359
Ireland		7, 849	Spain		38
Nova Scotia, New Brunswick, and Prince Edward island	5, 517	5, 963	Cuba	15	14, 339
Quebec, Ontario, Manitoba, and the Northwest territory	194, 061	59, 942	Porto Rico		2, 369
British Columbia		1, 667	Spanish possessions, all other		163
Newfoundland and Labrador	363	253	Sweden and Norway		714
British West Indies		13, 390	United States of Colombia	32	5, 414
British Guiana		1, 577	Uruguay		916
British Honduras		488	Venezuela		3, 946
			All other countries and ports in South America not elsewhere specified		262

EGYPTIAN BRECCIA.

The very celebrated universal breccia of Eygpt is composed of rounded pebbles of most diverse forms, color, and material. It occurs about 12 leagues to the east of Kéné, in the Arabian chain of mountains, not far from the valley of Kossier, and on the railroad going from the Nile to the Red sea. The Egyptians have extracted from it some immense blocks—such as the antique sarcophagus of Alexander, which was 15 millimeters in circumference, and which was covered with hieroglyphics and delicate sculptures. The Romans carried away from Egypt a great number of such monuments at the time of the Pharaohs, and they themselves quarried this breccia. One can regard the universal breccia of Egypt as one of the hardest stones, one of the richest in color, and one of the most beautiful. Almost all the museums in the world contain statuary or ornamental constructions of some kind cut from this rock. The variety which appears to have been most admired by the ancients had a green color. The essential components of this variety were fragments of argillitic schist and porphyry, with here and there a pebble of granite, which, being much harder than the others, rendered the rock very difficult to work. This rock

is not at all uncommon or confined to Egypt; a Grecian rock has been brought into the market which very closely resembles it. From Hainaut, in Belgium, a rock has been obtained which is nearly the same as that found in the Devonian formation in the southern Vosges; and at still other places this rock has been obtained.

We can increase the list by calling attention to some of the American varieties (Boston conglomerate). (Delesse, p. 24.)

CHLORITE ROCK.

Rocks composed of chlorite are found in various parts of the world, and are used for ornamental constructions, especially for making smaller objects which can be turned with a lathe. These are the stones which are called by the French *pierres ollaires*. No rocks of this nature have thus far been brought to our attention in the United States. A chlorite from Potton, in Lower Canada, has been used. It is found in beds of Lower Silurian age lying immediately upon the Laurentian rocks; it is associated with dolomite or serpentine, and, like the latter rock, it contains some chromate of iron. (Delesse, p. 27.)

ALGERIAN ALABASTER.

In his geological explorations of the province of Oran, M. Ville found at Aïn Tembalek, near the Ysser, five deposits of a very curious alabaster. M. Delmonte, who was a marble-worker at Carrara at one time, who had admired this marble in ancient monuments, the origin of which was unknown to him, explored it and introduced it into market, and it is now called the Algerian alabaster. It is a fibrous calcite, veined and translucent, and has especial properties. It has a horizontal stratification, while the ordinary alabaster is concentrically banded—a circumstance arising from its concretionary formation in cavities, or often stalactites. Heated, it becomes brown, owing to its contents of iron carbonate; some specimens are red, some golden, yellowish, or brown, some pure white, and some a mixture of all these colors; specific gravity, 2.728. It is so compact that it is more difficult to cut than ordinary marble. It stands the weather very well, as a column found in an ancient quarry demonstrates. It forms extensive beds, which are regularly and horizontally formed, having a post-Tertiary origin, since it rests on Tertiary deposits, and lies between layers of a sweet-water formation, or travertine, which is abundant in little basins in the province of Oran; and the Algerian alabaster is simply a modification of this travertine.

The Romans, who brought the materials for decoration from all parts of the world, have explored the Algerian alabaster upon a grand scale. The Turks also explored the same quarries, and adorned their mosques with materials from them. It has been used in mosaics, and even for statuary.

ITALIAN MARBLE (CARRARA).

According to Consul Robert W. Welsh, (*a*) from 125,000 to 150,000 tons of marble are sent out from Carrara to various parts of the world every year, but it is all sold for cash. The sale of the marble, the delivery of it at the railway station or at Leghorn or Genoa, and the receipt of the cash equivalent, make up the entire commercial business of the place.

Carrara marble is a luxury, and the demand for it depends upon the condition of "the times" in the various countries to which it is exported. The condition of the world has been such that the only country with which dealers in Carrara marble had a good trade in 1879 was the United States.

STATEMENT OF THE EXPORTATION OF MARBLE FROM THE CONSULAR DISTRICT OF CARRARA IN THE YEAR 1879.

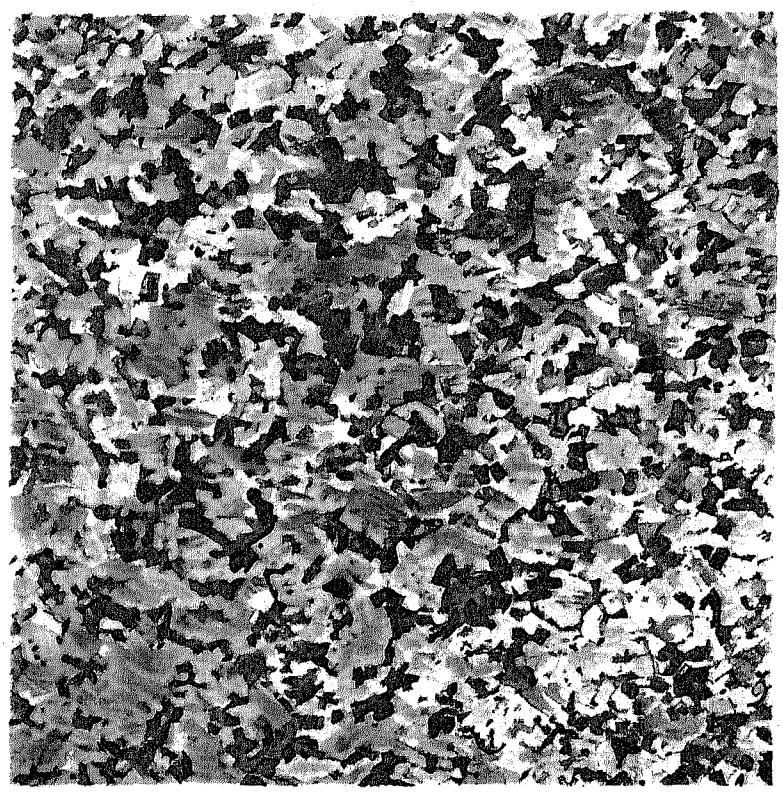
	Tons.
Block marble	76,370
Sawed marble	20,526
Worked marble	37,538
Total	134,434

STATEMENT OF THE EXPORTATION OF ALL KINDS FROM 1872 TO 1879, INCLUSIVE (CARRARA).

	Tons.
1872	116,061
1873	117,115
1874	117,282
1875	121,774
1876	103,511
1877	118,938
1878	105,019
1879	134,434
Total	934,134

The above statements are taken from the *Corriere Carrarese*.

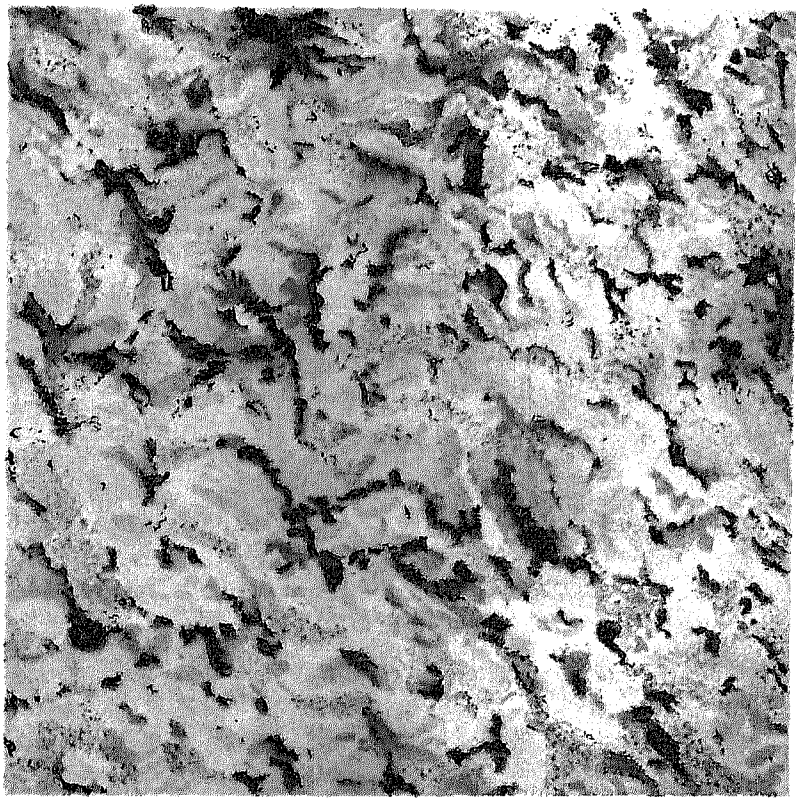
a Report to State Department, October 31, 1880.



BIOTITE GRANITE

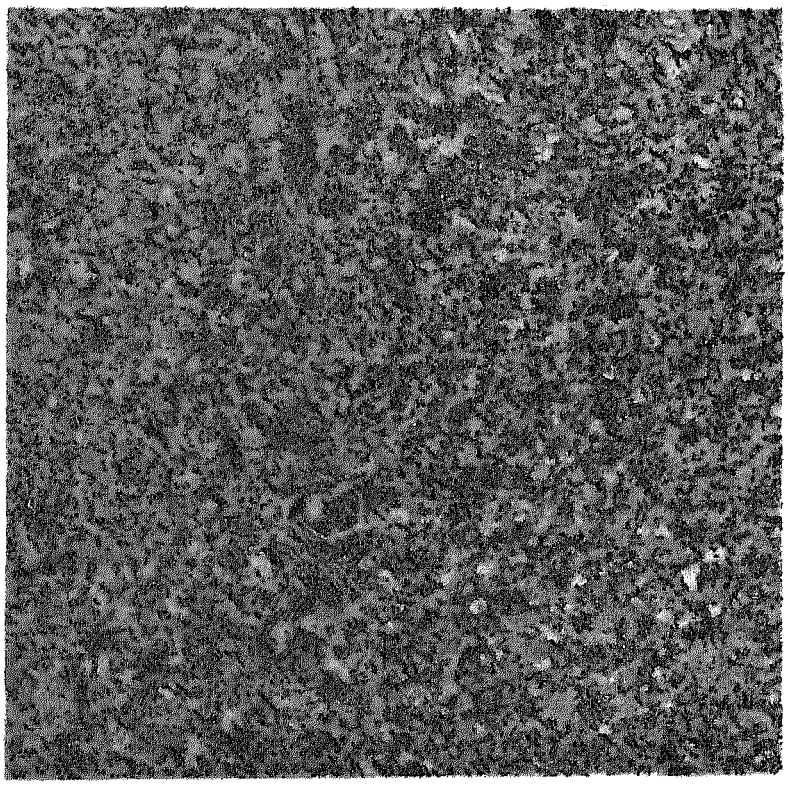
RED BEACH, MAINE

Julius Bien & Co. Lith.



BIOTITE GRANITE WITH EPIDOTE

LEBANON, GRAFTON CO., N. H.



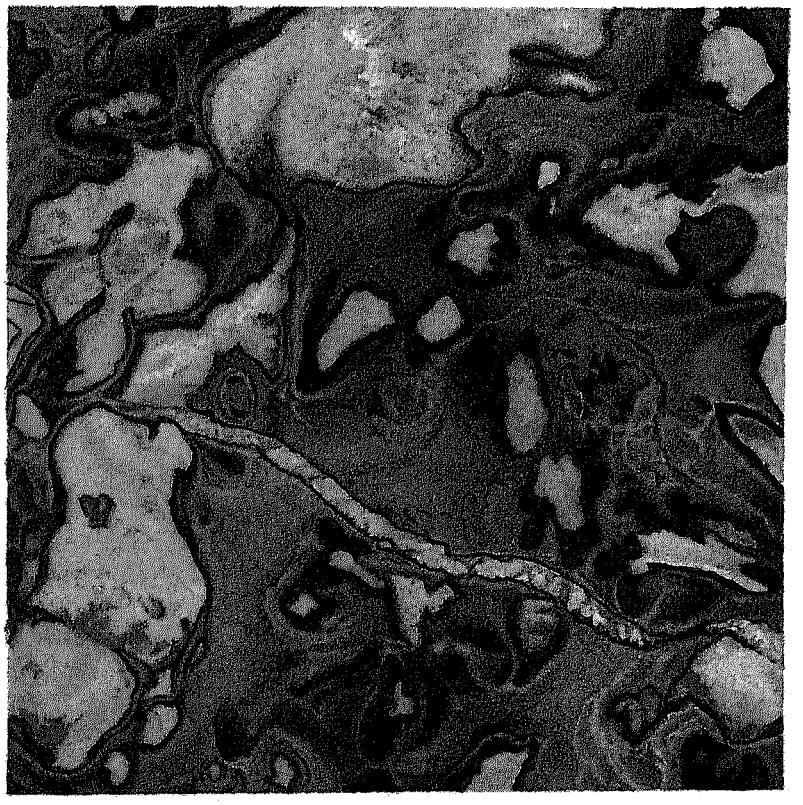
BIOTITE GRANITE

FITZWILLIAM N. H.

MARBLE

MALLETT'S BAY, VT.

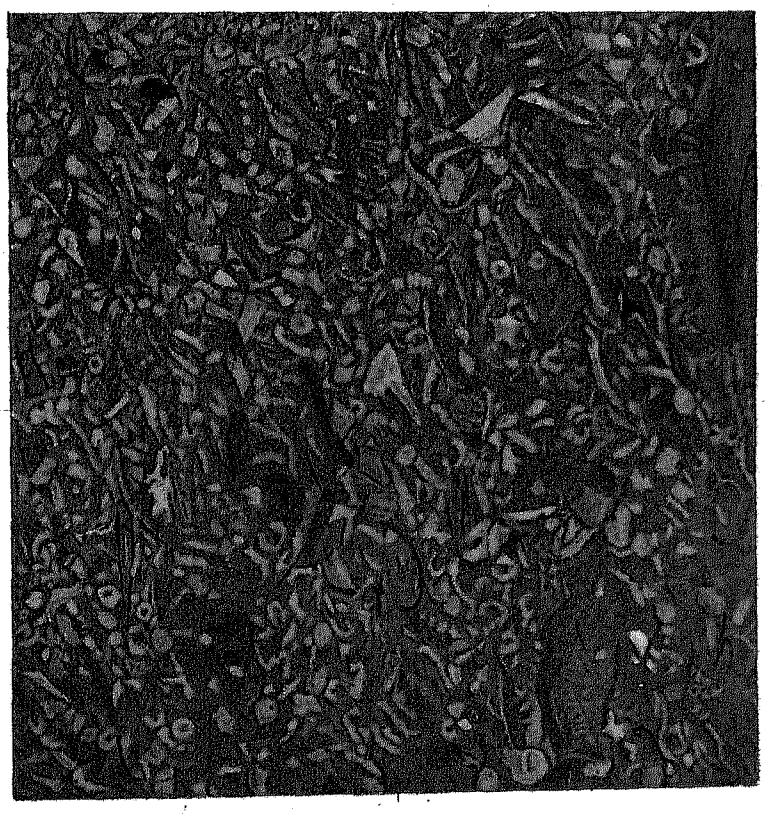
Julius Bien & Co. Lith.



MARBLE

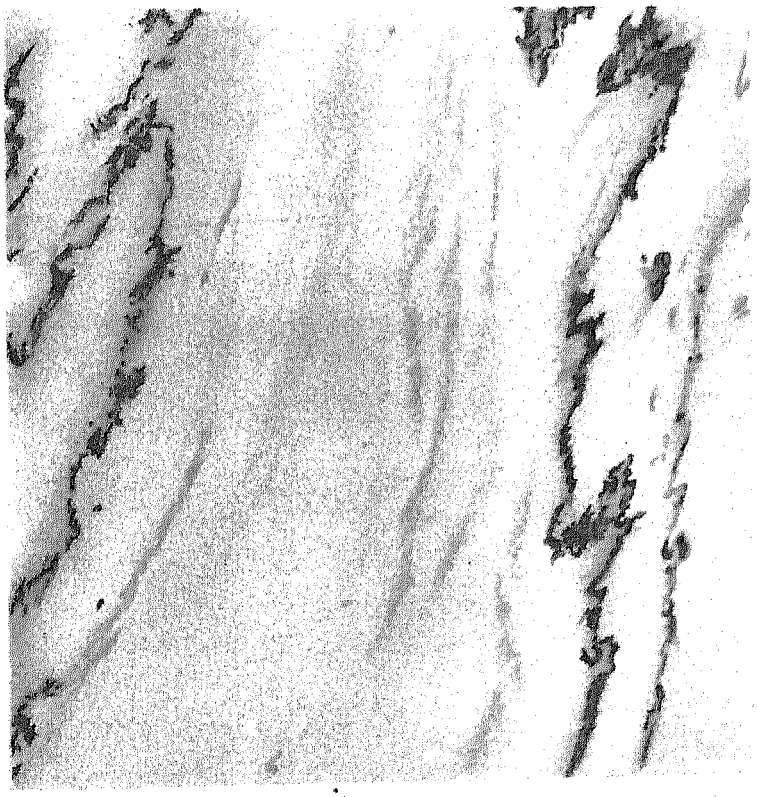
MALLETT'S BAY, VT.

Julius Bien & Co. Lith.



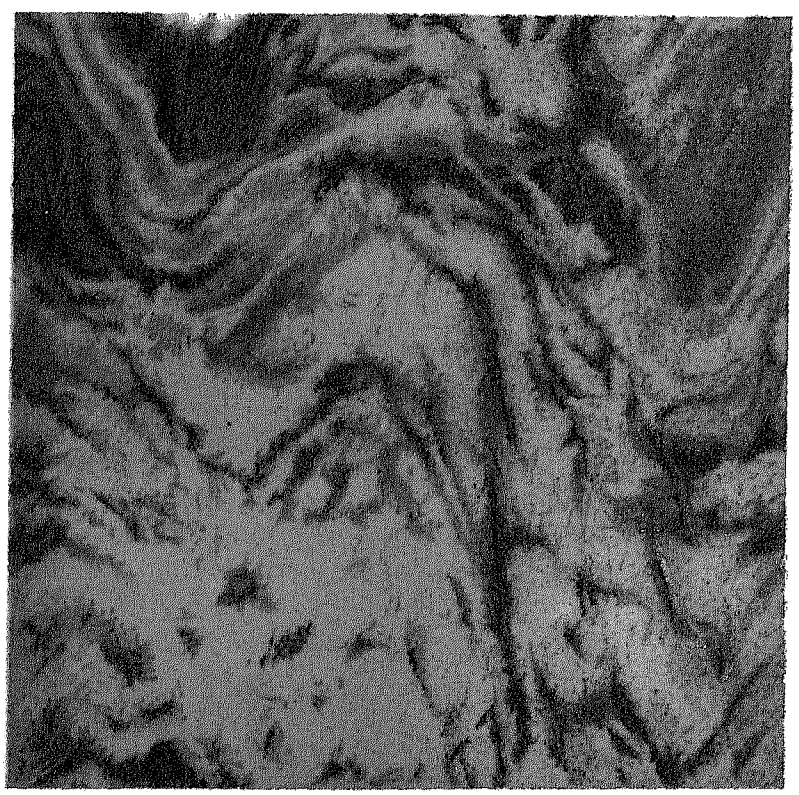
"LEPANTO" MARBLE

ISLE LA MOTTE, GRAND ISLE CO. VT.



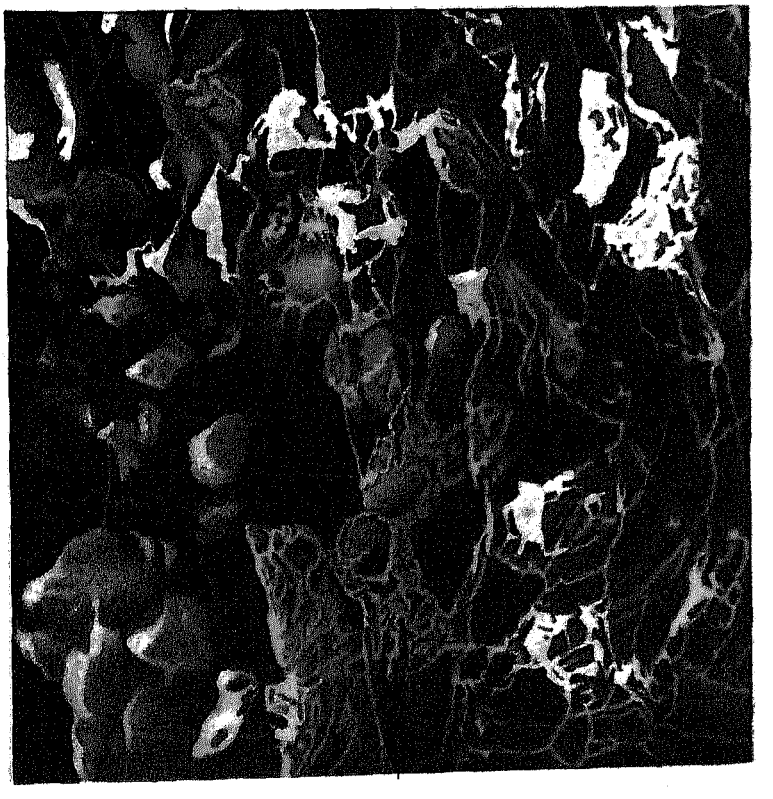
MARBLE

SUTHERLAND FALLS, VT.



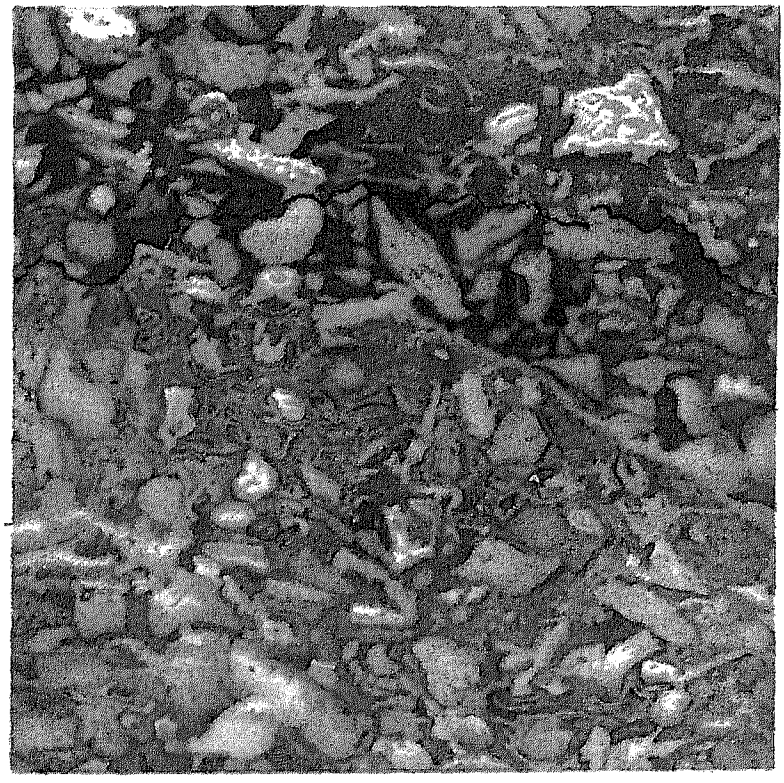
MARBLE

RUTLAND, VT.



MARBLE

SWANTON, VT



MARBLE

MALLETT'S BAY, VT

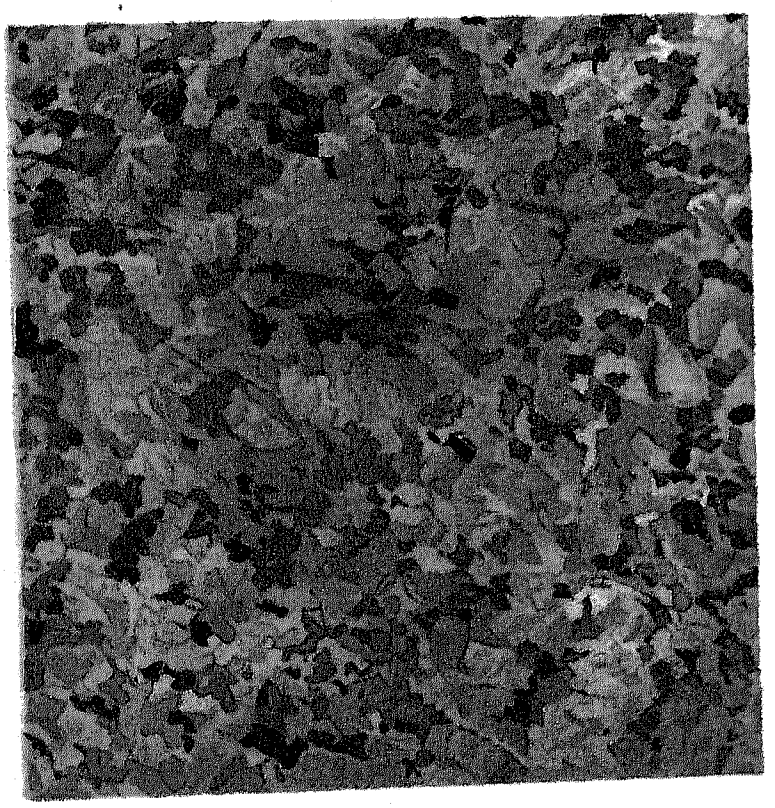
MARBLE

WEST RUTLAND, VT.

New York Lith. Co.

MARBLE

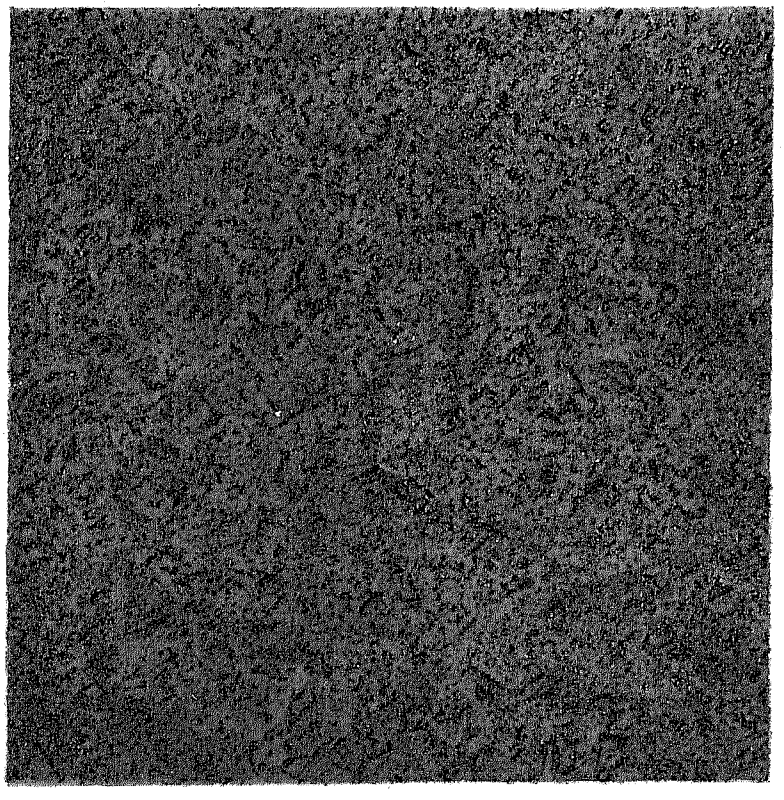
WEST RUTLAND, VT



HORNBLENDE GRANITE

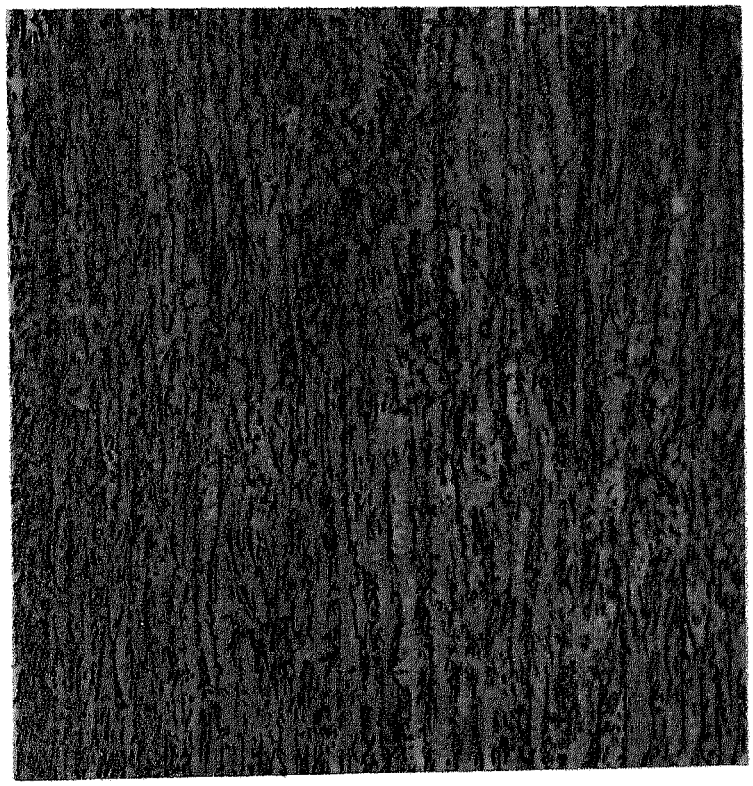
PEABODY, MASS.

Julius Bien & Co. Lith.



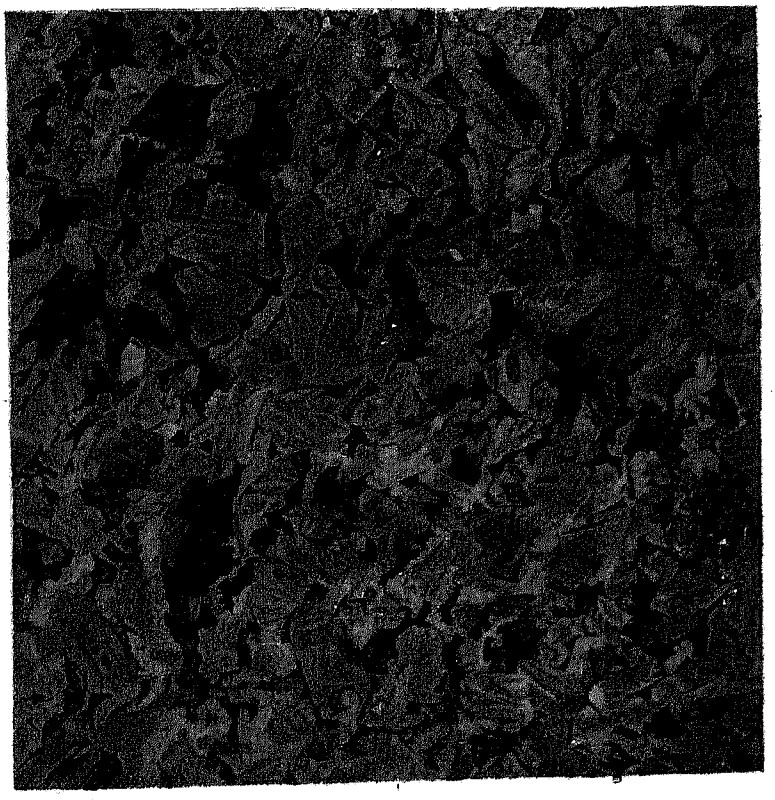
BIOTITE GRANITE

WESTERLY, R. I.



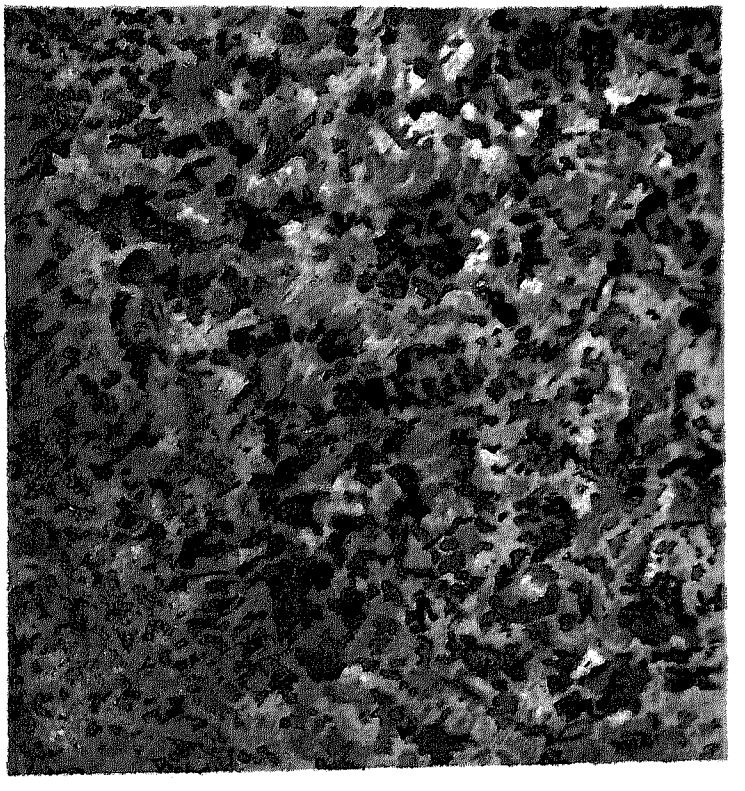
HORNBLENDE BIOTITE GNEISS

MIDDLETOWN CONN.



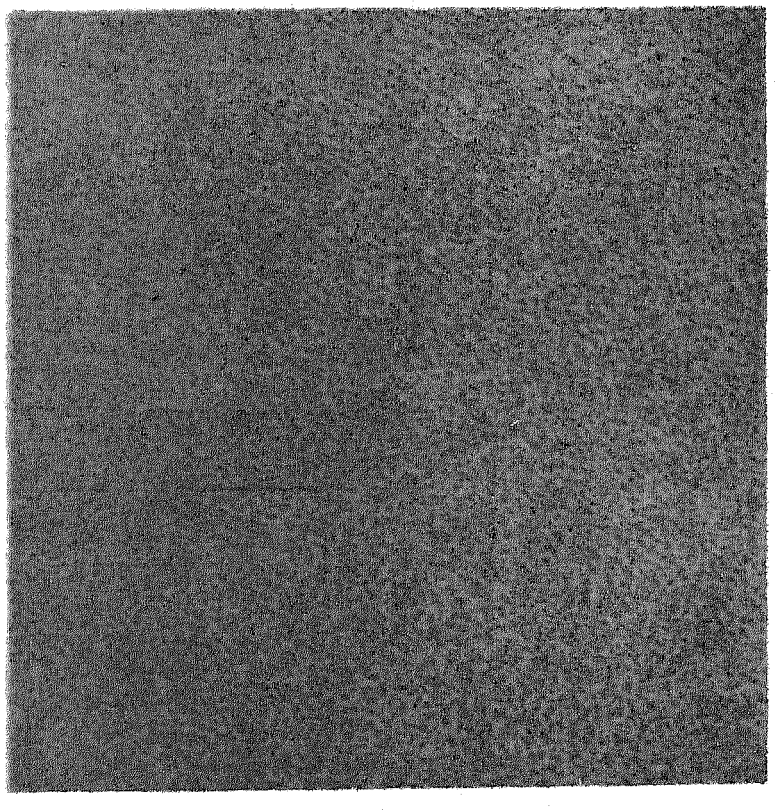
HORNBLENDE GRANITE

GRINDSTONE ISLAND, JEFFERSON CO. N.Y.



MARBLE

PORT HENRY, ESSEX CO., N.Y.

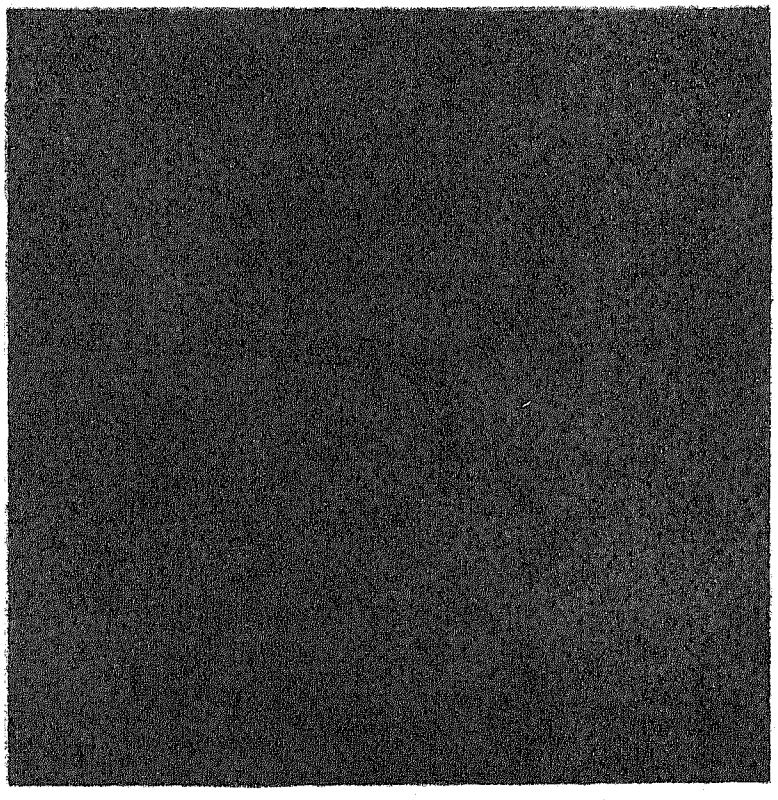


SANDSTONE

HUMMELSTOWN, DAUPHIN CO., PA.

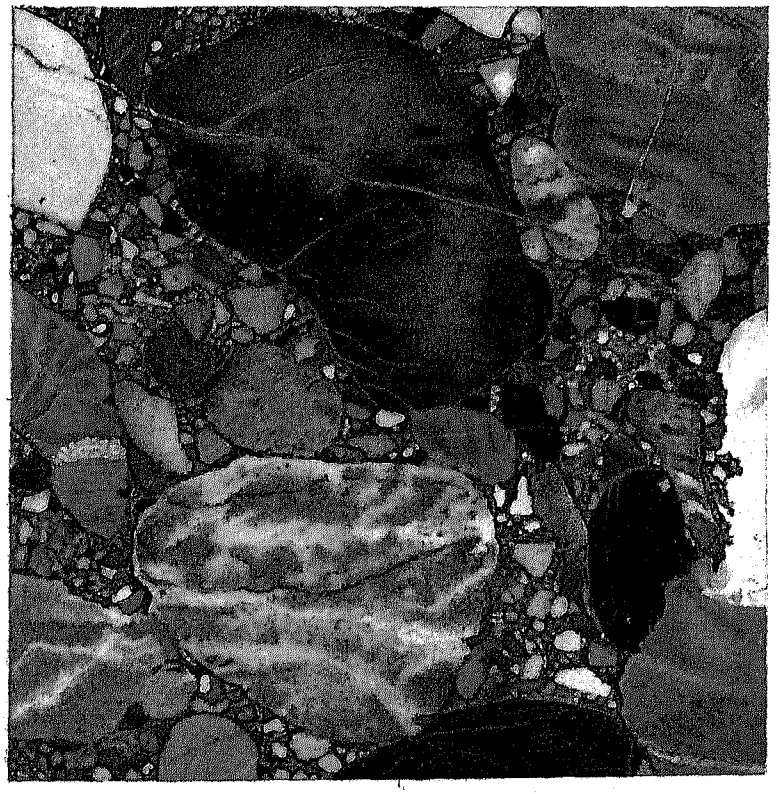
MARBLE

KING OF PRUSSIA, MONTGOMERY CO., PA.



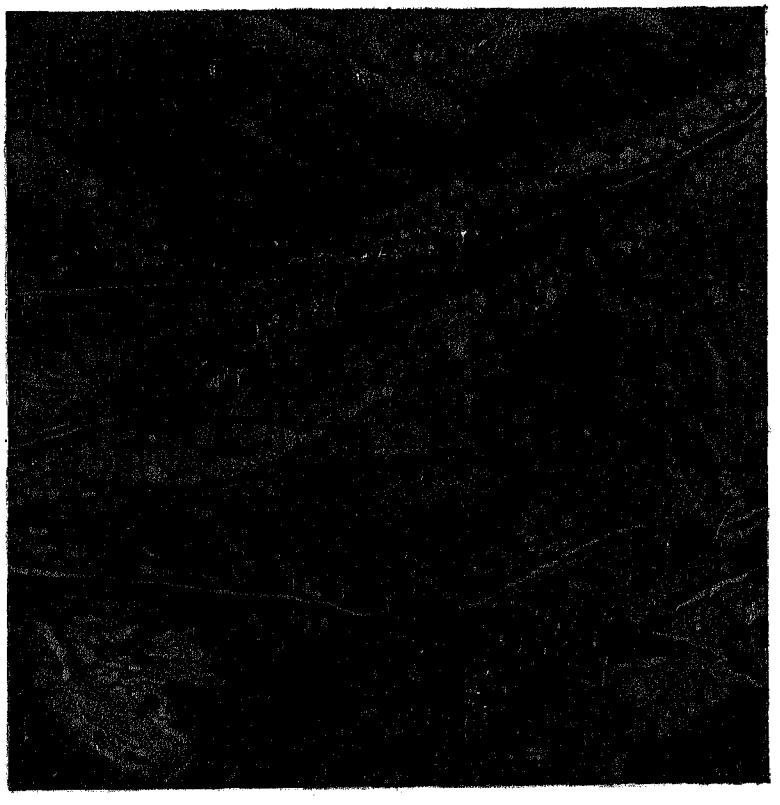
TRIASSIC SANDSTONE

SENECA CREEK, MD.



LIMESTONE BRECCIA.

POINT OF ROCKS, MD.

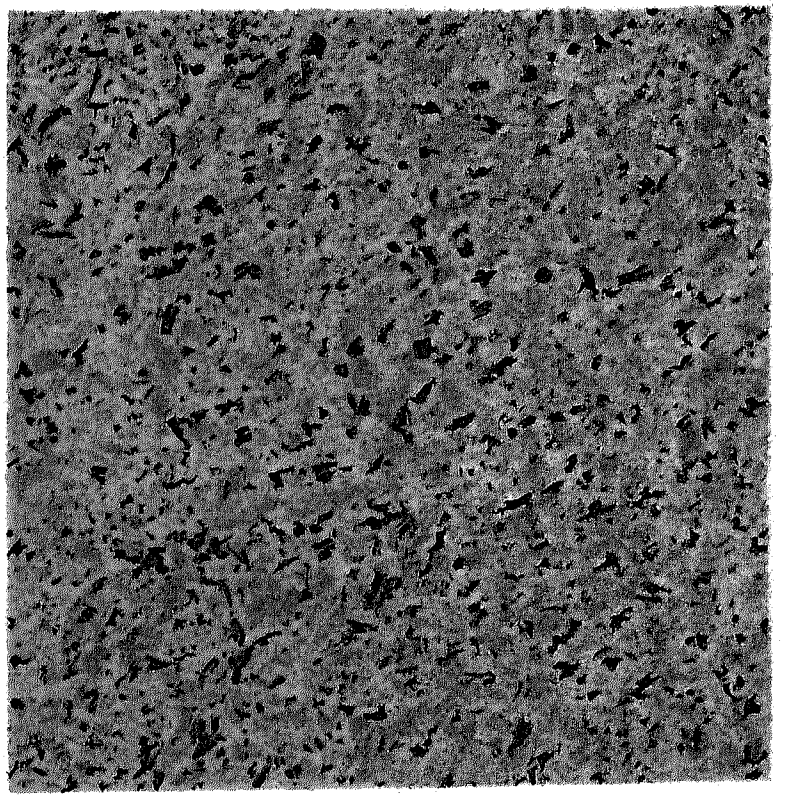


SERPENTINE.

HARDFORD CO, MD.

MARBLE

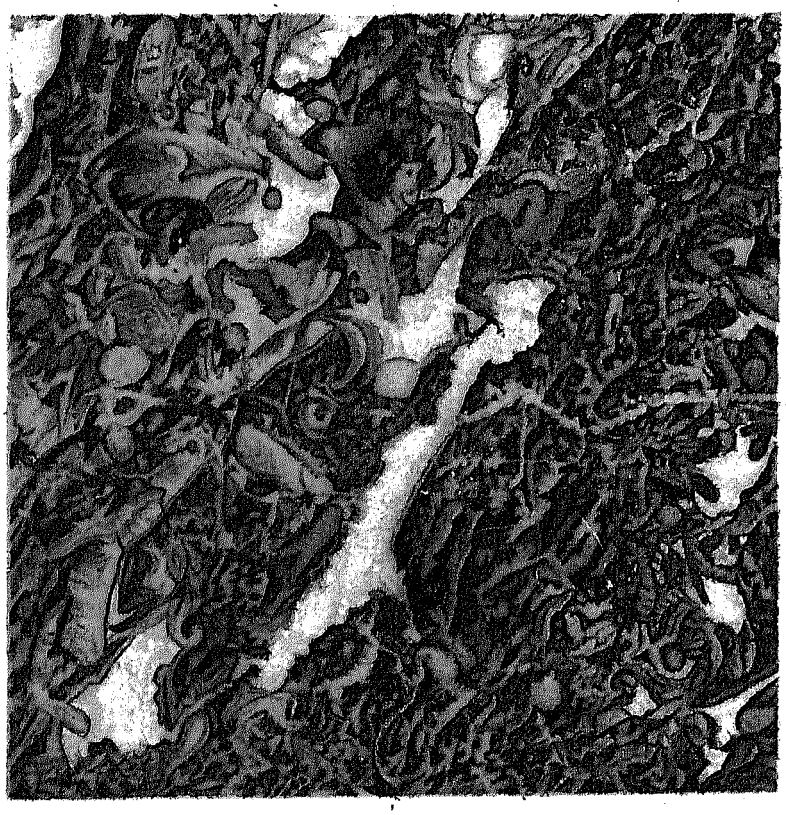
SWAINE CO., N. C.



BIOTITE GRANITE

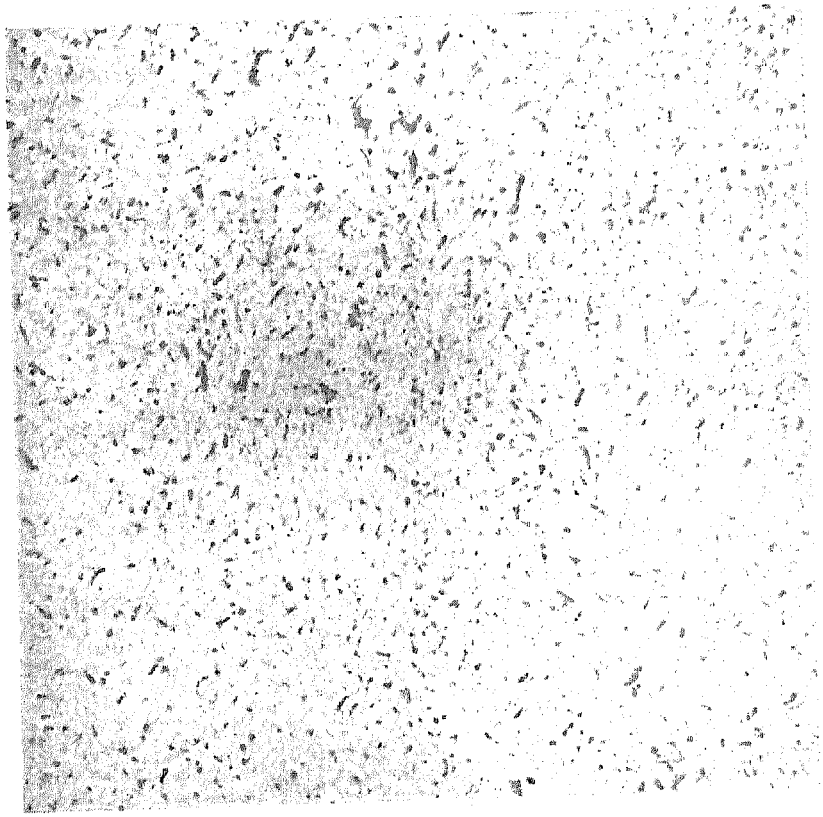
BENNETT CO., TEXAS.

Julius Bien & Co. Lith.



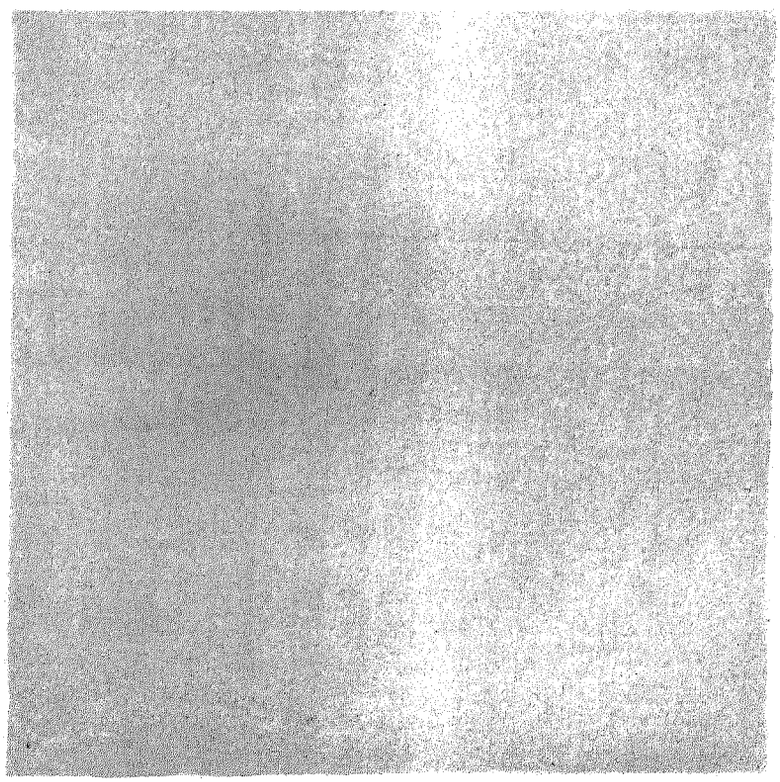
MARBLE

ROGERSVILLE, HAWKINS CO, TENN.



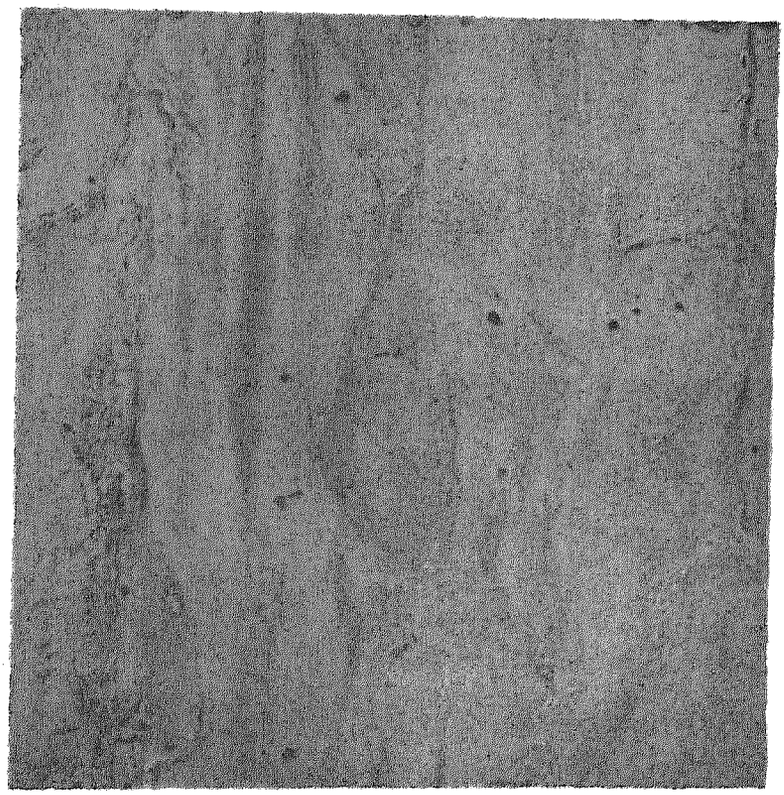
SANDSTONE

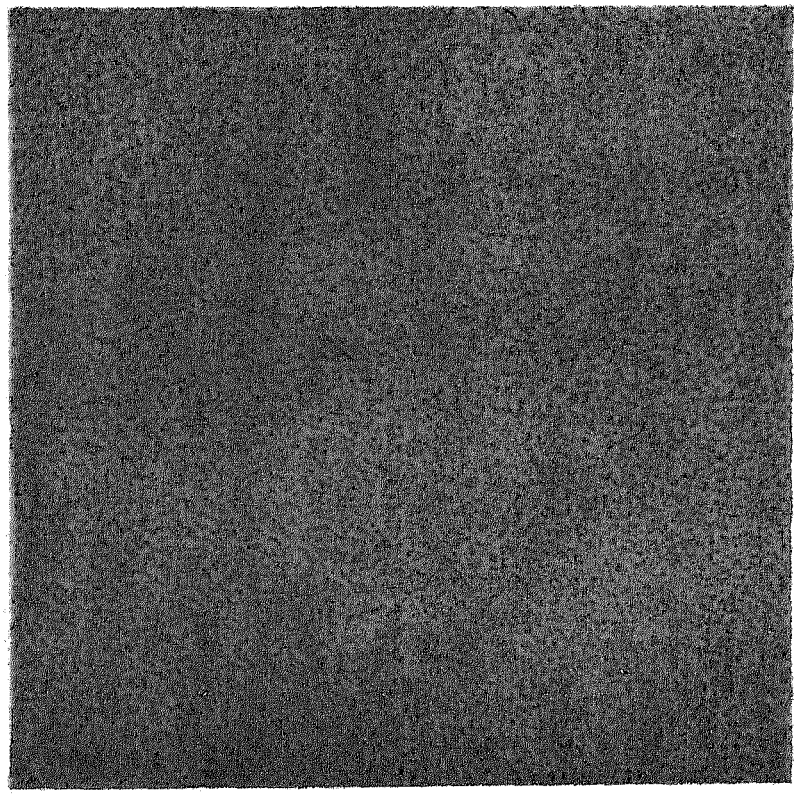
AMHERST, LORAIN CO., OHIO.



WAVERLY SANDSTONE

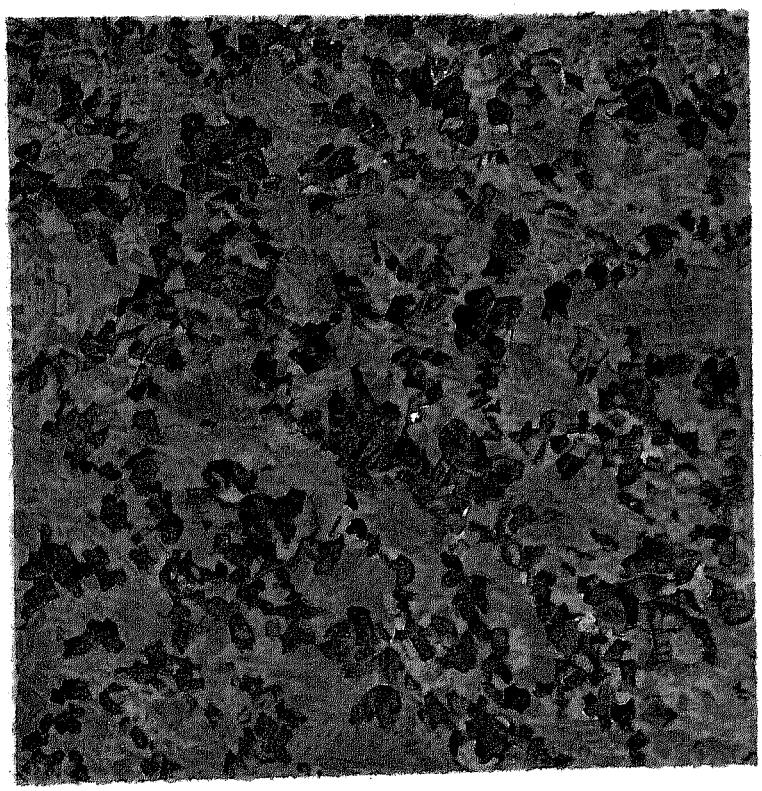
SUNBURY DELAWARE CO. OHIO.





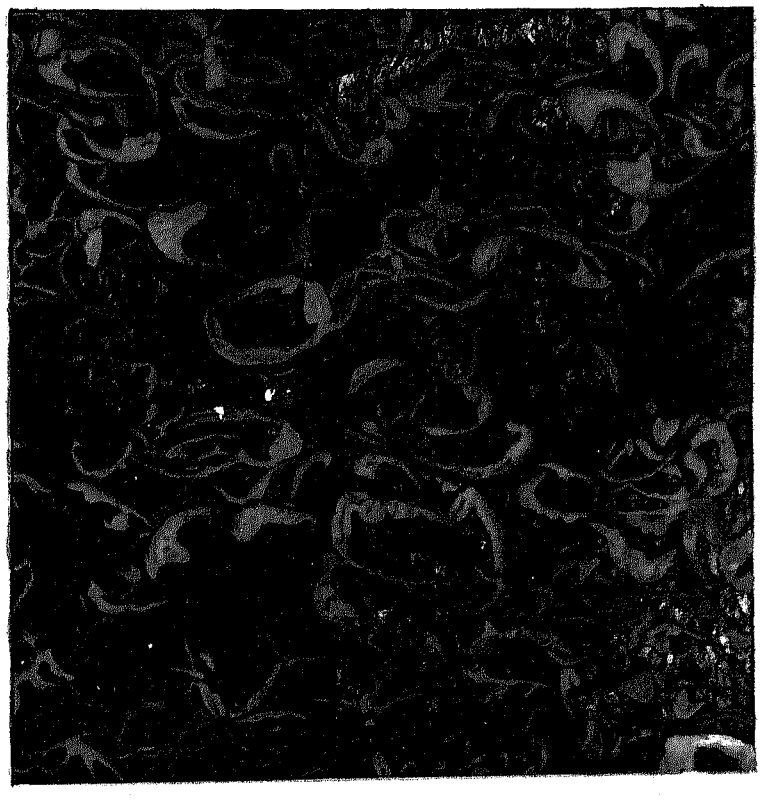
LIMESTONE

BEDFORD, LAWRENCE COUNTY



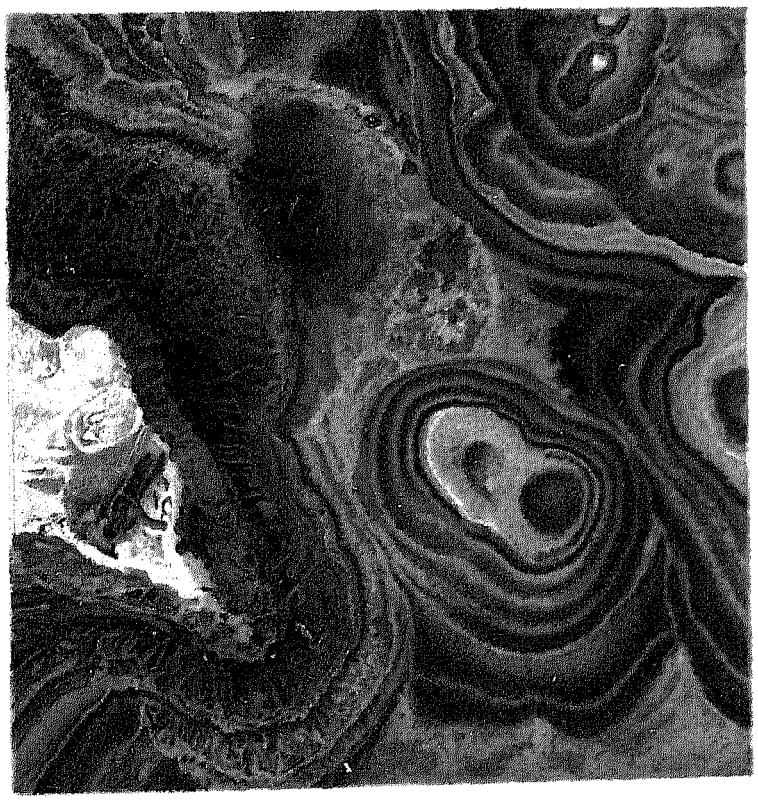
BIOTITE GRANITE

IRON TOWNSHIP, IRON CO., MO



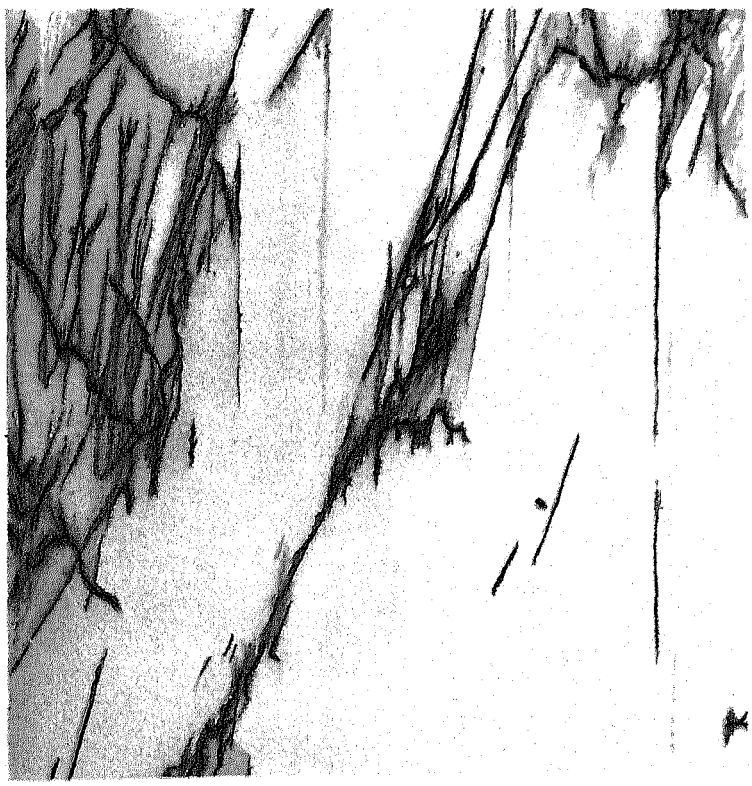
MARBLE

PAYSON, UTAH



STALAGMITE MARBLE

SOLANO CO., CAL.



MARBLE

INDIAN DIGGINGS, ELDORADO CO., CAL.

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