## "Trade Names and Descriptions of Marbles Limestones, Sandstones, Granites and Other Building Stones Quarried in the United States, Canada, and Other Countries"

Compiled by Frank A. Lent

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This book, which begins on the next page, is presented on the Stone Quarries and Beyond web site.

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## Trade Names and Descriptions

Marbles, Limestones, Sandstones, Granites and Other Building Stones Quarried in the United States, Canada and Other Countries



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HE compilation of this list of the trade names and descriptions of the building stones herein contained represents the collection of data over a number of years, from sources throughout the World. All

known works on the subject have been consulted, quarrymen, scientists, travelers, and collectors have been interviewed and samples of stones examined to assure accuracy. Special mention is made and credit given to the works of Mr. John A. Watson: "Marbles in The Sedgwick Museum, Cambridge, England"; Dr. J. P. Merrill: "Stones for Buildings and Decorations"; The United States Geological Survey Reports and various State Reports; also stone and marble producers to whom requests for samples of their products were sent.

Names of producers, producing companies, and locations of quarries not given in the limited space available for descriptions of the various building stones, marbles and granites herein contained, will be furnished upon application to STONE PUBLISHING COMPANY. Errors in names or descriptions, or additional names, will be corrected and added in later editions if notice of same is sent to the publishers.

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## Marbles of the United States

"Marble" is not a scientific classification of stone. It is, in reality, a trade name used to designate a crystalized limestone that will take a polish and is attractive enough in color and marking to be suited for decoration and fine building work.

#### Alabama-

Alabama Cream Blanc P (A. C. B. P.)—As its name indicates, it is a creamy white Alabama marble, almost entirely free of clouding.

Alabama Cream A (A. C. A.)—This as a creamy white marble with moderate to free veining and clouding of a grayish tone.

Alabama Clouded Cream (A. C. C.)—Like the Receding grade but somewhat more heavily clouded. Available in reasonable quantities.

Alabama Cream Veined A (A. C. V. A.)—This is a grade of creamy white marble which must be sawed across the grain. It is freely veined but the veins are narrow and pencil like. It is available in reasonable quantities. And should be classified as "XC".

Alabama Pocahontas (A. P.)—A marble with a very creamy background and rather rich veining and clouding varying from black to gray with shades of yellow and orange. As an "XC" marble, it is sawed across the grain, matches perfectly and is available in moderate quantities in any form.

Alabama Ivory Pavonazzo (A. I. P.)—This, also, is an "XC" marble. It occurs in a rather erratic manner, and only in small quantities. Its name indicates very clearly the general nature of the veining and clouding. The background is of a very warm creamy tone.

Madre Cream—A hard fine grained cream white marble, largely used for interior and exterior decorative work, also fine ecclesiastical work. Carves beautifully and is available for jobs of any size.

Madre Veined—Cream colored background with light and dark green and drab irregular veinings. Takes a high polish, and is used chiefly for interior decorations in matched panels.

The letter "X" means that the marbles saw like any ordinary marble without any special difficulty or unusual expense. The letter "A" means that the marble polishes in a normal manner and does not require waxing, sticking, patching or liners. The letter "C" indicates that some of these special operations are required in finishing the marble but that the amount thereof is not excessive.

#### Alaska-

Alaska Tokeen—A fine crystalline marble having a pearl white ground-mass in which are bluish black veins and clouded patches of gray and black markings.

Gravina—A hard crystalline marble with striking gray and black veins and clouded patches.

#### Arizona-

Arizona Marble—Wide variety of color and markings ranging from almost jet black to pure white, dominating color in each instance has veins of other color. Another variety in black and gold. There are also shades of blue from light to dark. The deposits are near Bowie, but not operating.

Yava Onyx—A light green translucent onyx marble with amber colored veinings, Quarried in Yavapai County.

#### Arkansas-

Batesville—An oolitic limestone of light gray and cream color, quarried in northern part of state. It is harder and more crystalline than many oolites and some varieties take a good polish, making it adaptable for both monuments and buildings. There is also a darker variety with dark patches interspersed.

Red Ark Fossil—A dark red marble with small white calcite spots sprinkled abundantly through the groundmass. Takes a high polish, Used for interior decoration.

#### California-

Barstow Breccia—A green brecciated marble. The ground-mass is of a sap green with numerous angular fragments of white calcite. Quarried in San Bernardino County.

Dark Columbia—Differs from light Barstow Breccia variety. It contains an abundance of dark, thread-like veins and is darker and harder. Quarried in Tuolumne County.

Inyo Marble—Dolomitic marble quarried in southeastern California. It is of varied colors. Two varieties have a ground-mass of white or brilliant yellow, with feathery fern-like markings of black and dark brown.

Light Blue Columbia—A grey mottled marble of coarse crystallization that takes a good polish, Quarried in Tuolumne County. Light Columbia—A fight-colored gray marble with a few dark veins transversing the ground-mass. Quarried in Tuolumne County.

Portola—A marble with a light flesh colored matrix with rich orange colored markings and occasional dark gray veinings. Quarried in Tuolumne County.

Veruga—A white and gray colored hard and coarse crystalline marble of uniform color. Not operating.

Victor Serpentinous—A marble with a pale yellowish green ground-mass, abundantly streaked with dark green yeining. Quarried in San Bernardino County.

White Columbia—A snow white, fine grained marble, similar in color and texture to Italian statuary marble. Quarried in Tuolumne County,

#### Colorado-

Amazonite—A light green slightly varigated feldspar, used mostly for ornaments.

Beulah Red—A marble with a pink ground-mass through which run numerous red veins and markings. Quarried in Pueblo County.

Colorado Yule—A white marble of high quality, ranging in color tone from pure white to white slightly clouded with gray. In the same belt are several varieties of a light blue or dove colored marble. Quarried in Gunnison County.

Golden Vein-Another variety of marble from the quarries in Gunnison County. It is white, but intersected with faint clouds of golden yellow veins.

White Colorado—A pure white marble of fine texture and said to contain at least 99 per cent, pure carbonate of lime.

#### Georgia-

Georgia Marble—A crystalline marble produced in the Tate District of Georgia consisting of four distinct varieties of color tones, namely: White, Gray, Pink and a dark heavily veined variety known as Creole. The White Varieties of Georgia Marble are produced under the trade names of Amicalola, Kennesaw, Southern and White Georgia. All of these contain the same characteristics in texture and color but are named after the quarry from which they came.

#### (White Varieties)

Amicalola—A white marble that takes a high polish and is employed for general building work.

Kennesaw—A white marble with very faint gray patches which show on the polished surface.

Southern-A very white marble used extensively for building work.

White Georgia—A white marble that takes an excellent polish and is used for all kinds of interior and exterior building and monumental work.

White Southern-Same as White Georgia

#### (Gray Varieties)

The Gray Varieties of Georgia Marble are listed under the trade names of Cherokee, Silvery Gray and Mezzotint.

Cherokee—This marble has a light gray background with clouding and veining occurring in waves well distributed.

Mezzotint—As its name implies, is between the Silver Gray and Creole, being similar in texture but lighter in color than Creole.

Silver Gray—Is a uniform light gray marble practically free from veining or clouding. For exterior work it presents a light pearly appearance when axe finished.

Pink—This marble ranges in color from a very light salmon to a deep rose pink and slightly clouded with greenish-black and gray patches, also known as Etowah.

Creole—A mottled marble having a white, or a very light gray background with prominent black or bluish-black veinings and figures. It is produced in light to dark tones and is correspondingly called Light, Medium and Dark Creole according to the amount and character of the coloring, Used for building and decorative work and matched panels.

#### (Green)

Georgia Verde Antique—A dark green serpentinious marble with mottled veins and markings of a lighter green.

#### Idaho-

Agatha-A very coarse crystalline snow white marble.

#### Illinois-

Athens Marble—A trade name frequently given to a finegrained, very light colored limestone of the Niagara formation.

#### Indiana-

Wellington Cream—A rich cream buff colored hard limestone with fine perpendicular markings. It is sound and takes a good polish.

#### Iowa-

Birds Eye—A fossil coral that polishes well. It is hard and of a light yellow color.

Chequest—A limestone that takes a fair polish, sometimes called Chequest Marble,

Iowa Marble—A light yellowish buff or brown magnesian limestone, veined with iron oxide. Takes a good polish.

Maderpore—A marble with a light drab ground-mass with markings varying in color from a light yellow to a dark brown.

#### Maryland-

Beaver Dam-A white crystalline dolomitic limestone with light gray markings and spots in the white matrix.

C. P. Co. Emerald—A trade name given to a marble of light to a dark green. It takes a high polish and is quarried in Cecil County. Calico Marble—A coarse conglomerate or breccia quarried at Point of Rocks, Frederick County. Fragments vary from fully rounded to sharply angular, and the colors vary from white to brilliant red and are embedded in a ground-mass of red or gray brown. This marble was used for columns and decorative work in Washington, It is also called "Potomac Marble." The quarries are not operated at present.

Cardiff Green-A dark grass green serpentine, with mottled veins and markings.

Cockeysville Dolomite—A white marble with light brown wavy veins and floral markings. Takes a fair polish. Marvela (see Cockeysville Dolomite).

Potomac Marble—A conglomerate composed of rounded and angular white, pink, buff and blue-gray fragments embedded in a gray brown calcarous groundmass.

Venato—A minutely crystalline cream colored marble with delicate yellow veinings runing in parallel lines through the mass,

#### Massachusetts-

Ashley Falls Marble—A medium grained white marble, siliceous and banded. Formerly quarried in Berkshire County. Used for building and trim.

Chester Goodale Marble—Medium grained and very white. Quarried near South Egremont. The quarries have not been operated in recent years.

Lee Marble—A fine grained white dolomitic marble quarried in Berkshire County. It is used for structural purposes.

Lee Pure White—A marble of three varieties, pure white, light gray and dark gray tones.

Westfield Green—A spangled marble, black being the dominating color profusely mottled with a rich deep mass of green that takes an excellent polish.

#### Michigan-

Michigan Verde Antique—A green serpentinous marble filled with beautiful veinings of still deeper green and varicolored minerals of red and white. Gives a rich finish.

#### Minnesota-

Kasota Stone—A fine grained crystalline dolomitic limestone, which takes a polish and is often called marble. Both the yellowish and pink varieties are used for carved work and interior and exterior decoration. The stone is called Fleuri when sawed with the bed, and Veine when sawed across the bed.

#### Missouri-

Carthage—A grayish-drab marble with occasional brown markings scattered through the mass.

Colonial Gray Veined—A gray marble with distinct darker gray veining. Takes a high polish and used for both interior and exterior construction and decorative work.

Colonial Gray Veinless-Same as Colonial Gray Veined but without the distinct veins.

Imperial Gray—A light gray marble, clouded with darker shades.

Napoleon Gray Marble—A hard and highly crystalline limestone of a close, even texture, with a slight grayish tint. The presence of the remains of crinoides gives the stone fine pencil markings and reveals attractive patterns when sawn cross the bed. Takes an excellent polish. It is used extensively for interior and exterior building work.

Ozark Gray—A marble of warm gray color suitable for both interior and exterior structural work, the interior marble being both veined and veinless.

Ozark Gray Veinless—A light gray marble slightly mottled.

Quaker Gray—A light gray marble with veinings of a darker shade.

Quaker Gray Veinless-A dark gray marble with clouds of a darker shade.

St. Genevieve Golden Vein-A brecciated marble of which the ground-mass is of silver gray with occasional golden markings. Resembles the foreign Formosa marbles.

St. Genevieve Rose—Rich pink in coloring resembling the Rose Tavernelle in color tone.

Seneca Gray Veined—A dark gray marble with markings of a darker shade intermingled with parallel veins. The Seneca Gray Veinless is of a lighter gray.

#### Nevada-

American Carrara—A medium grained marble having a blue-white ground-mass with blue and golden markings. Another variety is called **Nevada Siena** which is of a yellowish brown. Quarry now idle.

#### New Jersey-

Rose Crystal Marble—Large white, flesh pink and rose colored crystals of calcite interspersed with black mica, green pyroxene and black tourmaline are its chief characteristics. Found in Warren County. Quarries are not operated at present.

#### New Mexico-

Alamora Marble-A decorative marble with a mottled gray background traversed with fine gray and golden veins,

Ricolite—A green marble with light and dark ribbon veinings. Quarried on the shores of the Gila River.

#### New York-

Catskill Marble—The popular name for a fossiliferous limestone, dark brown in color, with crinoidal markings. It is very hard and dense and takes a good polish. It is used chiefly for engineering works.

Dover White-(See South Dover.)

French Gray-A hard non-absorbent dark gray marble quarried in Yates County.

Glens Falls Black—At one time very popular for decorative work, but now used almost exclusively for lime burning. It is fine grained, compact, with a dark-blue black magnesian mass.

Gouverneur-A coarse crystalline white and a light gray marble. Used for building and monumental work.

Onondago—A marble with a ground mass of cream white, with scattered crystals of gray. Another variety has a beautiful rose hue. Takes a brilliant polish. Used for interior decorative work.

Pink Lepanto—A mottled dark pink marble tinged with gray. It is very hard and non-absorbent, Quarried in Yates County.

Roosevelt Marble—A marble with a ground mass of cream-white, with scattered crystals of gray. (See Onondago).

St. Lawrence Marble—A marble extensively used for buildings and monuments, with a color range from white through light gray to a rather dark blue. It is coarsely crystalline in structure, resembling granite when dressed.

Snowflake Marble—A white dolomitic marble with grains coarser than usually are found in white marble, a characteristic that explains its name.

South Dover Marble—Medium grained, very white dolomitic marble, used extensively for fine building work. Quarried in Dutchess County.

Tuckahoe-A white, coarse grained dolomitic marble. At one time extensively used for building work.

York Fossil—A black marble dotted with numerous small white spots. It takes a high polish. Used for interior and exterior building work.

#### North Carolina-

Regal Blue Marble—The trade name for a medium grained marble, ranging from light to dark blue, with veinings and mottlings of white. Used for decorative and monumental purposes. Quarried in Cherokee County.

Regal Blue No. 1—Dark blue, of crystalline structure, traversed with a few irregular white calcite veins. In another variety the white veinings are absent. Quarried in Cherokee County.

#### Pennsylvania-

Myerstown Marble—A dove colored marble traversed with wavy black veins. A few small patches of white calcite appear on the polished surface. Quarried in Lebannon County.

Pennsylvania White—A crystalline granular dolomitic marble, often veined or mottled. Found in Chester and Montgomery counties. The quarries were opened before the Revolutionary War and the marble was widely used for building work. The sarcophagi of General and Martha Washington at Mount Vernon are of this marble.

Royal Green-(See Sylvan Green.)

Sylvan Green Marble—A serpentine, quarried in Northhampton County. It is of a rich leaf-green color, both mottled and veined. Used for interior and exterior decorative work.

Unfading Blue Marble—A fine-grained marble, ranging from a very dark blue to a dove color, with white veinings and mottlings. It is quarried in Montgomery County. Used for decorative and monumental purposes.

Verde Antique-An ophitic marble, or mottled form of serpentine.

Verdolite-A variety of serpentine, quaried in Lehigh County.

Verdolite—The trade name given to a stone found near Easton, consisting of rose-colored dolomite crystals, scattered in masses of serpentine. Formerly extensively used for decoration, but the quarries are not operated at present.

York—A finely crystalline marble ranging from white to black, occuring in York County. Drilling specimen show a variety of markings and color tones. Not quarried at present.

#### Tennessee-

American Tavernelle—A brownish-pink, slightly mottled marble. Takes a good polish.

Anderson Pink-A marble, light pink in color, that takes a high polish and is free from crows' feet.

Appalachian Champion Gray-Medium to fine grained and light gray in color, with intermittent and many small and slightly obscure fossils.

Appalachian Champion Pink—Uniformly fine grained, with delicately blended blushes of pink and gray and disdistinct dark veins.

Appalachian Dark Chocolate—Coarse to medium grained of a dark chocolate color, containing obscure veins and many inconspicuous fossils.

Appalachian Golden Vein—Coarse to medium in texture, with cream colored tints and yellowish brown veins. This variety contains a few pink and reddish grains and several distinct fossils.

Appalachian Gray-A marble of fine texture, of a gray color, with obscure fossils and distinct dark veins,

Appalachian Pink.—A deep pink fossiliferous marble, coarse grained and varying in color from deep red through pink to white and with obscure dark veins. Also called American Pink.

Appalachian Roseal—A fine grained, grayish-pink marble, mottled by splotches of white, pink, rich red and black.

Appalachian Silver Gray—A light gray marble of medium to fine grain, containing intermittent veins and many small, slightly obscure fossils. Arancia-A light gray marble, with irregular golden veins.

Arancio—A coarse to medium grained marble, having cream colored tints and yellowish brown veins. This variety contains a few pink and reddish grains and several distinct fossils.

Black.—This is a limestone, dense black, but with some textural characteristics of marble.

Bull's Eye-A wavy, concentric marble.

Bond Pink Tennessee—Coarse grained, fossiliferous, dark pink in color, with prominent dark variegated veins.

Champion Pink—A light pink marble composed of medium sized grains and inconspicuous fossils varying in color from gray through pink to reddish tints. Veins, if present, are dark colored.

Champion Pink Tennessee-Another variety from the same bed as the Holston Pink, but of a lighter shade and finer in texture.

Chester Valley—A white marble, streaked with blue. Formerly used extensively for front door steps in Philadelphia and for structural work.

Crystal Gray-In this gray marble with fossil running in the vein-like formation the characteristic is a pink flush, more or less marked in different blocks.

Dark Chocolate—A coarse to medium grained dark chocolate colored marble containing obscure veins and many inconspicuous fossils,

Dark Cedar Tennessee-A dark chocolate colored marble, with fossiliferous fragments.

Dark Cedar—A coarse to medium grained chocolate colored marble containing obscure veins and many inconspicuous fossils.

Diamond C. Pink—A medium to fine grained deep pink marble containing obscure fossils,

Domestic Tavernelle-A clear faced marble that carries a yellow dot and other markings.

Eagle Gray-A marble of fine texture, containing obscure fossils and distinct dark veins.

Eagle Pink—Light pink in color, composed of medium sized grains and inconspicious fossils which vary in color from gray through pink to reddish tints.

Friendsville Pink-Coarse grained, pink, fossiliferous, with prominent dark veins.

Golden Vein Tavernelle Pink-Coarse to medium grained, having cream colored tints and yellowish brown veins.

Havlin Pink—A pink to reddish tinted marble with light clouds and dark veinings.

Holston Pink—A delicate pink colored marble, with occasional white patches scattered through the mass, giving it a mottled appearance. Imperial Pink—Light pink in color and composed of medium sized grains and in conspicuous fossils varying in color from gray through pink to reddish tints.

McMullen Gray-A marble of fine texture, of gray color, and containing obscure fossils and distinct dark veins

Peerless Gray-Another gray marble, with obscure fossils, but distinct dark veins,

Peerless Pink—A uniformly fine grained marble containing delicately blended "blushes" of pink and gray, with distinct dark veins.

Rose-Pale rose in color, massive, compact and crystal-

Roseal—A variety of Holston Pink of fine texture and containing veins and large patches of white and pink calcite, together with a few black veins.

Roselle—A fine grained marble, distinguished by its grayish-pink background, strikingly mottled by splotches of white, pink, rich red and black.

Ross Dark Cedar—Coarse to medium grained of a dark chocolate color, containing obscure veins and inconspicuous fossils.

Ross Golden Vein Gray—A marble of a cream colored tint, with yellowish brown veins of a coarse to medium grain. This variety contains a few pink and reddish grains and several distinct fossifs.

Ross Gray—Light gray in color, of medium sized grains and inconspicuous fossils that vary in color from gray through pink to reddish tints. Veins, if present, are dark colored.

Ross Pink-This marble has the same character as the Ross Gray except it is of a light pink color.

Ross Pink Clear Face—A veinless light pink marble composed of medium sized grains and inconspicuous fossils which vary in color from gray through pink to reddish tints.

Ross Tavernelle Gray—Coarse to medium grained, with cream colored tints and yellowish veins. This variety contains a few pink and reddish grains and several distinct fossils.

Silver Gray—Medium fine grained, light gray marble, containing intermittent veins and many small slightly obscure fossils. This variety is similar to gray Tennessee, except that the dark markings are not so clearly defined.

Victoria Pink-Similar in color and texture to the Holston Pink.

#### Texas-

San Saba—A hard monotone marble of several varieties in attractive veinings of fine blue and red. There is also a white and pink variety similar to Italian Tavernelle.

#### Utah-

Birdseye—A warm brown fossiliferous marble, with little splashes of white quartz sometimes resembling a bird's eye. In another variety the brown is mingled with pure golden yellow.

Nebo Golden Travis.—The rich golden brown background of this marble is relieved by variegated markings of antique rose and golden tints.

Utah Onyx-A bright lemon colored Onyx marble, with numerous orange colored sinuous veins intersecting it.

#### Vermont-

Acolian—A white marble with numerous very dark to light green wavy bands giving a moss-like effect. Quarries not operating.

Africano-A very dark gray marble with darker clouds of clear black.

American Pavonazzo-A fine grained decorative marble with a creamy groundmass, with dark green veins.

American Sienna—A light lemon yellow fine grained marble with very sinuous darker veins of irregular width. Takes an excellent polish.

Avenatto—A very hard and close grained marble, with a white background and grayish clouds. The same marble as Pittsford Italian, but sawed so as to show the veins.

Branden (see Vermont Statuary).

Brocadillo—One of the variety of mottled green Vermont marbles, even in texture and color, in which the green veinings are present in great abundance.

Champlain Black—A hard black marble, generally used for base, trim and counter tops, etc.

Champlain Marbles—The commercial name for a quartzose dolomite. They contain much silica, are considerably
harder and more difficult to work than marble, but take
a more brilliant and durable polish. They have been used
in all parts of the United States for decorative work and
floors. The chief varieties include Royal Red, Jasper, Lyonnais, Olive and Oriental.

Clarendon Marble—A medium to coarse grained marble of bluish-white color, with light to dark bands. Used for structural work.

Corona—A hard white marble carrying a touch of color.

Danby Marble—A structural marble, close grained, faintly cream tinted with inconsciences mottlings or streaks

ly cream tinted with inconspicuous mottlings or streaks of greenish-gray.

Dorset Marble—"Dorset A" is coarse grained, ranging from a cream tint to a very light faintly greenish smoke color. It is used for structural purposes. "Dorset B" (See Plateau White). Dorset Green Bed is coarse grained, of faintly greenish to pale cream color, with light to very dark greenish gray streaks. It is used for interior decorative

work. Dorset Mountain also is coarse grained in texture, but of faintly bluish white tint, irregularly mottled with very light gray. It is used in structural work.

Dove Blue—A marble with a bluish drab groundmass with numerous small white markings. Takes a medium polish.

Eastman's Blanc Clair—A delicate cream tinted marble with indistinct pale green and yellow irregular veinings. Used for interior decorative work.

Eastman's Blue—A fine grained decorative marble of medium bluish-gray color.

Eastman's Cipollino, Light and Dark—A medium grained decorative marble of greenish-gray with a green groundmass, intersected with irregular bands of darker green.

Eastman's Oxford Fleuri-A very dark gray and clouded marble.

Eastman's M Pavonazzo-A marble with a cream colored groundmass, medium grained with greenish gray veinings.

Eastman's Statuary—Fine and even grained and takes a high polish. There are two varieties, cream statuary and green veined cream statuary, both of a delicate cream tint, the latter with very pale greenish veining.

Eureka-A marble used for exterior purposes, light ground with clouding.

Extra White Rutland-A nearly pure white marble, used for high-class interior work.

Fisk Black.—This stone in reality is a fossiliferous limestone, which, when polished, is almost jet black, except for occasional white fossil shells. It is used extensively for floor tiles. Is the same as Champlain Black.

Florence Marble—A medium-grained building and monumental marble, with bluish-gray ground and cloudings and veinings from dark gray to black.

Florence Thred Stock-A blue shade marble described under Florence Marble.

Florence W .-- A blue-shade marble with clean markings, hard and non-absorbent,

Florence X.—Another marble from the Florence quarries in which the markings are less distinct. It is especially adapted for toilet rooms and similar uses.

Florentine Blue—A fine grained stone used largely for electrical purposes, monumental and polished work. It is dark bluish-gray in color, with very dark and light gray straight bands.

Freedley—A light bluish gray marble with irregular gray spots.

Gray Building Marble—A bluish-gray stone with light spots and occasional white veins, used extensively for building, but frequently for polished work,

Gray Vermont-An even gray marble.

Highland-A light colored marble carrying considerable color.

Imperial—A hard white marble with white background and a small amount of veining.

Isle La Motte-See Champlain Black,

Jasper—One of the so-called "Champlain Marbles." It is widely used for decorative work. It is very hard and clear grained, with a bright-reddish ground, enclosing pinkish and white brecciated corals.

Kiels's Green.—The trade name for a medium to coarsegrained decorative marble. It is cream to flesh colored with bright greenish-gray wavy veinings.

Light Cloud—White background with faint green clouds.
Light Rutland Italian—Pearl white background with green clouds.

Light Vein-A marble similar to Light Cloud, but carrying more color.

Listavena—A green and white decorative marble, Pink Listavena has a salmon-colored ground, with greenish veins,

Livido—A decorative marble quarried at West Rutland. It is a fine grained stone of bluish-gray color, with dark almost black gray veinings.

Lyonnais—Another of the so-called "Champlain Marbles," It has brownish-red rounded or irregular spots, with the interspaces filled with whitish crystalline dolomite. It is extensively used for decorative work. It is similar to the Jasper, but somewhat harder.

Manchester Blue—This is a coarse grained, very light bluish-gray marble used for exterior and interior building work. There is also a Breccia, Clouded and White variety.

Middlebury—A fine grained white, sometimes slightly pink and somewhat translucent marble adaptable for decotative and monumental purposes.

Middlebury Pavonazzo—A fine grain interior marble with a delicate cream-white groundmass and distinct dark olive-green veinings.

Mountain White—An extensively used marble for building purposes. In structure it is close grained, white, with occasional brownish veins.

Northern White—A hard, pearl white, non-absorbent marble.

Olive—Another of the "Lake Champlain" marbles. It has a ground of light, faintly greenish-gray, enclosing very irregular lenses of light pinkish-gray color. Used for decorative purposes.

Olivo-A decorative marble of medium grain greenishwhite color, with greenish gray veinings.

Oriental—Another "Lake Champlain" marble. It has a ground of dark reddish-brown enclosing irregular spots of dark purplish-gray and white. Used for decorative purposes.

Pittsford Italian—This marble is of medium grain with a groundmass slightly creamy-white, with faint narrow veinings and irregular mottlings of yellowish-gray. Used for decorative purposes.

Pittsford Italian W.—A very hard and close grained marble with a white background and prominent grayish clouds.

Pittsford Italian X.—The background of this marble is creamy and the markings more prominent than in the Pittsford Italian W.

Pittsford Valley—A decorative marble of light bluish gray, with fine veinings and irregular mottlings of a darker gray.

Plateau White—A medium grained, light cream colored stone, with gray, or smoke colored cloudings. Used for exterior building.

Riverside Marble—It is close grained, translucent, of a slightly bluish-white color, with gray bands and mottlings.

Riverside W .- Similar to forgoing.

Riverside X .-- In this variety from the same quarries the markings are more prominent and more frequent,

Royal Antique—This marble, which is most effective in large slabs; varies from a grayish-brown groundmass to a pure white with bold wavy light and dark green markings.

Royal Red—Another of the so-called "Lake Champlain" marbles. It is of a dark reddish-brown color, with irregular, slightly lighter clouds and some whitish streaks. Used for decorative work.

Rubio—A decorative marble of fine grain and a delicate pink groundmass, inclining to salmon color, with veinings of light green.

Rutland Italian—A medium grained, light bluish-white marble, with faint irregular grayish mottlings. Quarried at West Rutland.

Rutland Light Cloud—The trade name for a very light, mostly white, decorative marble, with indistinct veinings hardly visible, except when polished.

Silvestre—A hard, white marble, with numerous wavy green veins.

Standard Green-A marble of a heavy dark green color that is generally used for wainscoating.

Striped Brocadillo—This marble is striped green and white, the veins being wider and darker than the Listavena and the white background is lighter,

Venoso—A heavily veined marble, with cream colored background.

Verdos—A West Rutland decorative marble of medium grain with a light groundmass, with dark green veinings.

Vermont Statuary—Several grades of statuary marble are quarried in Vermont. These include Brandon Statuary, a very fine grained and faintly ivory tinted marble; Rutland Statuary, from West Brandon, a very fine grained marble of a milk-white tint, and Second Rutland Statu-

ary which is also milk-white, but with faint grayish to yellow clouds.

Vermont Verde Antique—The trade name for a serpentine, extensively used for columns and polished work generally. It has a groundmass of dark green, almost black, with irregular veinings of white and light green.

Westland Cream Pavonazzo-A marble with a pink or light flesh colored background, with bright green markings.

Westland Cipollino—A marble very similar in texture and color to the Swiss variety of Cipollino, although the green contorted bands are not so clearly defined.

#### Virginia-

Antwerp Black—A dark gray almost black marble quarried near Harrisonberg. Another variety is a jet black.

Calico Marble—A coarse grained marble found in Loudoun County, composed of well rounded to sharply angular fragments of limestone of various colors imbedded in a reddish calcareous matrix. Not developed for commercial purposes. Also called "Potomac Marble."

Cave Onyx—Stalactitic and staglamatic material of nearly white, creamy, and amber-yellow color, occurring in the numerous limestone caverns in the Valley of Virginia. Deposits are developed in several caverns of the Upper or Shenandoah Valley,

Goose Creek White—A pure white fine even-grained marble of uniform texture. Formerly quarried near Goose Creek.

Goose Creek Verde Antique—A marble containing a large amount of serpentine, the dominant color of which is green, though streaked and blotched in different shades of color, and is often brecciated. Not operated,

Holston Marble—Beds of fine-grained white and pink and coarsely crystalline blue and gray marble occur in the Walker and Glinch mountain areas of southwest Virginia, more especially in the Glinch mountain area. Similar to the Holston Tennessee marble. Not quarried,

Rotary Pink—Coarse grained, pink fossiliferous marble, with prominent dark veins. Not quarried.

Royal Rouge—A marble of reddish brown groundmass, with dark brown veins and slender markings.

Special Gray-A styolite of fine texture, gray in color and containing obscure fossils and distinct dark veins.

Travertine Onyx—A banded, crystalline, translucent, nearly white to light honey-yellow and darker yellowishbrown marble. Occurs near Bridgewater, Rockingham County, and a limited amount supplied to the trade.

## Limestones of the United States

Limestone is essentially carbonate of lime, but it always contains some additional constituent. Limestones are said to be siliceous, argillaceous, furrugineous and magnesian or dolomitic, according as they may contain quartz, clay, iron or magnesia. The texture ranges from amorphous to crystalline. One popular limestone is made up of somewhat rounded concretionary particles like the roe of a fish and is called oolitic, from two Greek words meaning egg and stone. The amorphous limestones that take a polish and are used in interior decoration are familiar as monotone marbles.

#### Alabama-

Darlington Limestone—The trade name for a light gray-buff colite, quarried in Colbert County. Used for building purposes.

Rockwood Oolitic Limestone—An oolitic limestone, of light gray-buff color and even texture, quarried near Sheffield, Ala. Used for building purposes in the South. Also called Darlington Limestone.

#### Arkansas-

Batesville—An oolitic limestone sometimes known as Batesville marble. It takes an excellent polish, found in two colors, a blue and a buff, both of them of soft and warm attractive tints, close texture and fine grain.

Eureka Springs Limestone—A light gray and cream colored magnesian limestone of finely crystalline texture, quarried in Northwestern Arkansas, and used for local building, paving and heavy masonry.

#### Colorado-

Amazonite—Commonly known as Amazon stone, is a green variety of Microcline feldspar. It is translucent and sometimes classed as a marble. Quarried near Pike's Peak.

Colorado Travertine—A hard cellular, firm and compact building, paving and heavy masonry. flesh colored tint.

#### Florida-

Coquina—A Spanish name for a shell limestone, consisting of a mass of shells cemented together. Soft and easily worked. Used for building work in Florida, Cuba and the West Indies.

Marianna—A fine-grained soft and easily worked gray limestone. Local use only,

Ocala—A white granular and highly fossiliferous rock containing an abundance of small shells and fossils. Used for local building work, road construction and lime burning.

#### Illinois-

Joliet-A fine grained finely crystallined hard white

dolomite which changes to a buff color after exposure; minute particles of pyrite sometimes present.

Lemont Limestone—A fine-grained, white and gray hard massive limestone, used for road metal, agricultural lime, and railroad ballast.

Niagara—A buff to gray compact, slightly porous hard and brittle dolomitic limestone. Quarried for road material and agricultural purposes.

Trenton—A medium grained limestone, dark gray in color. Not operating.

#### Indiana-

Indiana Oolitic Limestone—The product of the Indiana Limestone District is separated into several regular grades under the Indiana Limestone Quarrymen's Association classification as follows:—Select Buff, Standard Buff, Select Gray, Standard Gray and Variegated, as marked by an asterisk in the following list, in addition to which there are various special grades and the products of the different quarries that are marketed under individual trade names.

Bedford Stone—The name formerly given to Indiana Limestone named after the town of Bedford, Indiana, where the first large quarries were operated. The district from which the Indiana Limestone now produced covers a large part of Lawrence and Monroe Counties, including Oolitic, Dark Hollow, Peerless, Sanders, Bloomington, Ellettsville and Stinesville.

#### Regular Grades

\*Select Gray—A fine grained gray limestone, graded as "Select" on account of its uniformity of texture and color tone.

\*Select Buff—A fine grained buff limestone, graded as "Select" on account of its uniformity of texture and color tone.

"No. 1 Buff or No. 1 Gray"—The term No. 1 Buff or Gray as used by some of the quarry producers and the cut stone trade is intended to imply what is now designated as "Select" under the Association classification customarily used.

\*Standard Gray—Same as Standard Buff but gray in color tone. The grade that is recommended for general building purposes.

\*Standard Buff—The usual fine grain buff limestone that constitutes the major part of the buff output of the Indiana limestone quarries, similar to "Select" excepting that it will not average so fine or uniform in texture. The grade that is recommended for general building purposes.

\*Variegated (Mixed)—The product of the Indiana Limestone quarries that is produced from quarry blocks in which both buff and gray color tones are present in varying quantities. Particularly suited for large structures.

\*Coarse Buff—This grade of stone is fairly uniform in color, but of a coarser texture than either the Select No. 1 or Standard grades. The texture varies however in the same block, from the finest grain to an extremely coarse shelly honeycomb formation, and is designated Rustic Buff and Travertine by some of the producing companies.

#### Special Grades

Select Buff Statuary Stock—A very fine grain uniform buff limestone produced in limited quantities by some of the quarries.

Rustic Buff—A buff limestone having a coarse texture and distinct shelly formation with more or less flint or crystalline matter. A stone especially suited for sawed ashlar, but on account of its texture, more difficult to cut than the regular grades of Indiana Limestone

Special Hard Buff—The dense hard and somewhat crystalline buff stone that is produced by some of the quarries in varying quantities. A grade which the quarry producers recommend for steps, grade courses and other work subject to hard wear.

Special Hard Gray-Same as above but gray in color tone.

Travertine—A Limestone having a distinctive honeycombed formation somewhat similar to the Imported Travertine—comes in buff and gray tones. Production limited.

The following specialties of the various operating producers are arranged in alphabetical order:

Bloomington Stone—See regular grades Association classification.

Dark Hollow Gray-A trade name for an extensively used fine textured medium tone gray limestone.

Doyles Quarry Buff-A trade name for a light buff stone of a uniform texture.

Doyles Quarry Gray—A trade name for a medium gray extensively used limestone,

Ellettsville Stone—See regular grades of Association classification.

Fürst-Kerber Travertine—A buff limestone having a distinctive honeycombed formation somewhat similar to the imported Travertine.

Hoosier Buff-The trade name for a buff stone, light in color, and of a uniform texture.

Hoosier Silver Gray—The trade name for one of the lightest in color of the gray stones produced in the Bedford district. An easily worked, fine grained and even textured stone.

Hunter Valley Stone—See regular grades of Association classification.

Nortons Blue-A dense hard dark bluish gray limestone.

Old Blue Hole—A hard, dense, rather dark gray stone with bluish cast, specially suited for steps, grade courses, as well as for building work.

Old Gothic-(See Travertine.)

Peerless Antique Buff—The trade name of a special grade of a creamy yellow buff colored limestone with orange streaks, giving it a warmer and more mellow tone than the average buff, fine texture, easily worked. Used largely for interior stone work.

Peerless Buff-Trade name for a light, yet distinct buff colored, easy working, fine grained, buff limestone.

P-M-B Buff—The trade name for a buff limestone of uniform texture and color.

Reeds Buff-Trade name for a fine textured light colored buff limestone.

Reeds Gray-Trade name for a light and medium gray limestone of a fairly uniform texture.

Sanders Buff-Trade name for buff Indiana Limestone, of a fairly uniform texture.

Sanders Gray-Trade name for a light and medium gray limestone, easy working and of a fairly uniform texture.

Sanders Stone—See regular grades Association classification.

Sanders Travertine—A gray limestone having a distinctive honeycombed formation similar to imported Travertine.

Wellington Cream—A hard light colored cream buff limestone with fine perpendicular markings, will take a good polish and is used for both interior and exterior building work.

#### Iowa-

Anamosa Limestone—The trade name for a fine-grained, compact, gray and yellow limestone, quarried at various places in Cedar, Clinton, Jackson, Jones and Scott Counties, Iowa. Used for building work, bridges and heavy masonry.

Burlington—A white, buff and yellow limestone. Used locally for building, rubble and crushed stone.

Cedar Falls-A light and dark gray magnesian limestone. Building and bridge work. Local use only.

Charles City—A white dolomitic limestone, hard and compact. Local work only.

Chequest—A limestone that takes a fair polish. Sometimes called Chequest Marble.

Clinton-A brown to bluish gray magnesian limestone. Not operating,

Columbus—A gray colored sub-crystalline pure limestone. Not operating.

Guttenberg-A fine-grained gray magnesian limestone. Not operating.

Lithographic—A limestone which on account of its extreme fineness of grain makes it suitable for lithographic purposes. From light buff to nearly white in color. Not operating.

#### Kansas-

Cottonwood—A light drab cellular magnesian limestone at one time quarried for building work.

Fort Scott-A dark colored, fine grained, semi-crystalline limestone. Local work only.

Silverdale—A light cream colored limestone about the same color and texture as the French Caen stone. Used for both interior and exterior building work.

Winfield—A light colored fine-grained cellular limestone. Soft and easily worked. Local use.

#### Kentucky-

Bowling Green Limestone—An onlite quarried in Warren County. The fresh stone is buff-gray, but it changes on exposure to a very light gray, almost white. The bleaching is attributed to the evaporation of a small amount of volatile petroleum contained in the stone. Used for building work.

Kentucky Blue—A blue and light gray freestone, hard and suited for platforms, steps and building work.

#### Minnesota-

Biesanz's American Travertine—The trade name for a cream-colored limestone, of a very cellular texture. It is hard when first quarried and when sawed shows a mottled buff surface somewhat similar to Italian Travertine

Columbian Travertine, (See Biesanz American Travertine.)

Frontenac Limestone—Quarried in Goodhue County, It is of pale yellow to light cream color, and of a rather cellular texture. Used in exterior and interior structural work and trim. Not operating.

Jasper-A highly indurated pale pink quartzite, rather hard, used for paving stones, building and rubble.

Kasota—A dolmatic limestone ranging from deep yellow to pink. Used for exterior and interior decoration.

Mankato—A fine to coarse grained, compact, semi-crystalline dolomitic limestone, sometimes cellular in texture, and ranging from a buff to cream, yellow and gray. There is also a pink and reddish buff variety. Used for building and decoration.

Oneoto Dolomite—See Biesanz's American Travertine, Pipestone—A hard, dense red clay-like rock found within the massive quartzite deposits in Pipestone County. Used for ornamental trimming.

St. Lawrence-A thinly bedded and closely-joined buff magnesian limestone. Used for local work.

Shakopee—A buff-colored dolomitic limestone, finegrained and somewhat sandy. Quarried in Scott and Washington Counties. Not operating.

Tracon—The trade name for a cellular, cream-colored limestone, somewhat similar to Italian Travertine. Quartied near Winona. Used for building and interior finish.

Winona-A buff-colored dolomite of fine and uniform

#### Mississippi-

Ripley Limestone—A fossiliferous limestone blue in tone, used locally.

Selma Limestone—A soft white to bluish gray chalky limestone, used locally for agricultural purposes and lime burning.

Vicksburg Limestone—A buff and bluish gray medium textured limestone. Takes a good polish. Used locally.

#### Missouri-

Bethany Falls-A limestone used for road metal. Quarried near St. Joseph.

Burlington—A light gray crystalline limestone that takes an excellent polish for interior decoration. Quarried in the southwestern part of the state.

Cape Girardeau—A durable, coarse-textured limestone, usually of a bluish gray, or brown color. Not operating.

Carthage—A gray and hard limestone with a tool finish of white. Produced with or without a vein. Used for building.

Cassville—A gray and buff-colored limestone. Not operating.

Cotton Rock—A popular name given to a light-colored dolomitic limestone. Quarried near Jefferson City.

Fulton—A fine grained buff and also light gray limestone, will polish—local work.

Phenix (Napoleon Gray Marble)—A limestone of a general color tone of gray with brown markings. Used extensively for interior and exterior building work.

#### New Jersey-

Franklin-A coarse-grained crystalline white limestone. Will polish. Used occasionally for local building work.

Kittatinny—A dense, massive, fine-grained magnesium limestone, usually of a light gray to dark bluish gray. Used locally for foundations, rough walls, and at one time for building work.

#### New York-

Catskill-A strong-fossiliferous limestone of a brownish color. Not working.

Cobleskill Limestone—A dense crystalline limestone, medium-grained and dark blue-gray in color, quarried in Schoharie County, N. Y., and used for building purposes and carved work. It is very similar in appearance to Irish Limestone, and like that stone, it tools white. Local use.

Little Falls—A magnesian limestone of a drab blue gray and dark blue, almost black, color. Used for local building.

Niagara—A gray sub-crystalline limestone. Used for local building work,

#### Ohio-

Cincinnati Limestone—A limestone when freshly quarried shows colors ranging from dark gray to blue with a crystalline texture, located in Clermont County. Quarries not operating.

Clinton—A crystalline limestone sometimes mistaken for marble. Its colors are of light shades, gray, white, pink, red, and blue.

Columbia Stone—A medium-grained hard limestone, used for building work, also sills and small grindstones.

Columbus Limestone—A white and hard stratified limestone formerly used for building work in the State of Ohio. Also curbing and flagging. Not operating.

Dayton Limestone—A yellowish brown, also light gray and blue limestone, formerly quarried in the vicinity of Dayton. For building, curbing and flagging. Local use.

Hillsboro-A buff-colored, massive limestone used principally for foundations.

Monroe—Occurs in thin beds, rarely measuring ten inches. It has a drab color. The thicker coarse are occasionally used for building. Other uses are for lime and crushed stone.

Niagara Limestone—A gray and blue-gray, highly fossiliferous limestone often full of holes, occasionally quarried for foundations and abutments, but used principally for the production of lime.

Piqua Limestone—A calcareous limestone. Soft and easily worked. Uneven beds. Used principally for fluxing and marble dust.

Sandusky Limestone—A dark blue limestone used locally at one time for building rubble walls and foundations. Changes on weathering to a light gray.

Springfield—A blue and gray limestone used for curbing and bridge work. At one time used for building in the southwestern section of Ohio.

#### Oklahoma-

Bromide—The trade name for an oolitic limestone of a light gray color, fine-grained and even textured.

Oklahoma Limestone—A limestone of various colors and textures. In one vicinity of the state it is creamcolored and even-textured, though coarse and full of small fossils. Near Pawnee some of the limestone is nearly blue, while near Tulsa it is usually white or light gray. Quarried for local use.

Wapanucka—An oolitic limestone of light and dark gray colors. Local use only,

#### Pennsylvania-

Much of the limestone quarried in the state is used for road-building, flux and ballast, that being produced for structural purposes finding little beyond local use for foundations, walls and occasional small buildings. At an earlier period, however, its use for architectural and structural purposes was much more extensive. In color, texture and durability the stone can be classed as fine-grained, dark in color and of even texture, some varieties being capable of taking a polish. They are classified under various names, usually from the locality or quarry from which they are taken, as for example, York, Chambersburg, Helderberg, Birdsboro, Conshocken, and vary in color from a light bluish-gray to a dark blue.

Chambersburg—A dark, fine-grained limestone, used locally for building and lime-burning.

Foxcroft—A blue-colored fine grained limestone. Used for fluxing.

Helderberg-A dark gray, fine-grained limestone, used for flux, paying and foundations.

York—A deep blue, fine-grained, compact, uneven limestone, used locally for railroad ballast, flux and foundations.

#### Texas-

American Cream White Lens—A trade name for a finegrained, cream-white limestone, easily carved. Used for interior decorative work.

Cedar Park—A soft, light, cream-colored limestone, uniform in coloring. Used for building, vault and mausoleum work.

Duval—A soft, cream-colored limestone, quarried in Duval County.

Leander Limestone—Same as American Cream-White Lens.

Lueders Limestone—A trade name for a fine-grained, even-textured limestone of a light gray color, well adapted for carving and used for both interior and exterior building work.

Virginia—

Roanoke-A blue limestone, used locally,

#### Wisconsin-

Beloit-A blue and buff limestone. Occasionally used for foundations.

Bridgeport—A straw yellow limestone. Quarries now idle.

Cassville—A buff and blue limestone, used for foundations, sidewalks, etc.

Green Bay—A magnesian limestone of bluish gray color—sometimes called Duck Green Stone. Used for building, foundations and bridge work.

Knowles-A light buff limestone, used for building, foundations and lime burning.

Lannon-A gray magnesian limestone, formerly used for local building, flagging and curbing.

Oshkosh—A blue to bluish gray limestone, formerly used locally for building, curbing and flagging.

Sturgeon Bay-A buff to bluish gray limestone, used for piers, rip-rap, rubble, etc.

Waukesha-A light buff and bluish limestone, used for local building, bridges and monumental work. Now idle.

## Sandstones of the United States

Sandstones are rocks made up of grains of quartzose sand, which are cemented together by siliceous ferruginous calcareous or argillaceous material.

Bluestone—Is a sandstone and may be either siliceous or argillaceous.

Brownstones-Are ferruginous sandstones, owing their color to the presence of iron.

Quartzite or "Jasper"—Is a sandstone in which the mineral particles have become vitrified or glassy, so that the stone will take a polish. True Jasper, however, is a gem.

#### Alabama-

Yellow Sandstone—Soft when first quarried, but hardens on exposure and is quite durable in the climate of that state.

#### Arkansas-

Arkansas—A sandstone of a gray and cream color readily split and easily worked. Generally used throughout the state.

Cabin Creek Stone—A fine-grained, hard and compact bluish-gray sandstone, quarried near Lamar. Used for building and paving.

#### Arizona-

Arizona—A fine-grained sandstone of warm and attractive colors of pink, red, and brown, and also in white. Quarries not operating.

#### California-

Angel Island-Fine grained sandstone of bluish, or greenish-gray color,

Colusa Sandstone—A very even grained, blue-gray sandstone, well adapted for general use as a building material. Quarried in Colusa County.

McGilvray-Same as Colusa.

Sespe Sandstone—Quarried in Ventura County, Calif., is a fine-grained somewhat calcareous stone, brown in color. Used for building.

#### Colorado-

Canon City Stone—A fine-grained light gray or buff sandstone, quarried in Fremont County, used for local building work.

Coal Creek-Fine-grained, grayish, or buff stone. Quarried in Fremont County.

Fort Collins Stone—The local name for sandstones quarried near Bellevue and Stout. The Bellevue stone is fine-grained, deep red in color, and is used for heavy masonry and the lower courses in building. The Stout stone is practically a quartzite, medium-grained, almost white in color, and is used for foundations and paving. (Arkin is same as Bellevue.)

Lyons Sandstone—A fine-grained, dark red stone, quarried in Boulder County. Used mainly for sills, platforms, and paving.

Manitou Stone—A fine-grained, somewhat soft sandstone, of a warm light red color, quarried in El Paso County. Used for building.

Peachblow Sandstone—A fine-grained, light red stone, quarried near Aspen, Pitkin County. Used for building.

Pueblo Sandstone—A fine-grained soft gray, white, and gray-veined sandstone, quarried along Turkey Creek, near Pueblo. Used for exterior and interior building work.

Turkey Creek-See Pueblo Sandstone.

#### Connecticut-

Connecticut Brownstone—One of the first and most widely used building stones of America, the quarries along the Connecticut River at Portland, having been operated continually since the middle of the 17th century. It is a fine and even-grained sandstone of a uniform warm brown color. Used for fine building work in almost every state. Quarried at Middletown and East Haven as well.

Portland-See Connecticut Brownstone.

Windsor Red Stone—A fine-grained red sandstone, quarried at East Windsor, Conn. Used for building.

#### Idaho-

Boise Sandstone—The trade name for a medium-grained sandstone, varying in color from light gray and buff to darker tones, often with brown and purplish veinings. Used for building work.

#### Illinois-

Carbondale Brownstone—A medium-grained sandstone, ranging from light to dark brown, quarried in Jackson County. Used for building.

Xenia-A very fine-grained, light bluish-gray laminated

#### Indiana-

Mansfield—Medium to course-grained massive sandstone. While soft and friable it is also fairly durable. In color it varies from some shades of brown to red, purplish and chocolate brown, buff and gray. Not operating.

Indiana Portland-Gray-blue in color.

Riverside—Light blue-gray to drab, evenly stratified, fine grained and well adapted for carving and ornamentation. Not operating.

#### Kentucky-

Green River—A buff sandstone used for interior finish—easily worked.

Kentucky Bluestone—A light bluish-gray sandstone. It is hard and is used for platforms, steps and buildings.

#### Maryland-

Seneca Red Sandstone—The trade name for a fine and even-grained sandstone, quarried along Seneca Creek, Montgomery County. Used for building purposes. Soft when first quarried, but hardens on exposure. Color varies from a light reddish brown to a deep purplish brown.

#### Massachusetts-

Kibbe Sandstone—The trade name for a fine evengrained sandstone of a warm brick-red color, quarried at Kibbe. Used for building.

Longmeadow Sandstone—A fine and even-grained sandstone, of a dark reddish brown color, quarried at East Longmeadow, and widely used for building purposes.

#### Michigan-

Jacobsville Sandstone—A medium-grained stone of a bright red color, quarried on Keweenaw Bay and used for general building purposes and trimming.

L'anse Brownstone—A sandstone of medium-grain, dark brown in color, sometimes with dark spots (called Raindrop), quarried in Barraga County. Used for building purposes.

Marquette Sandstone—A medium-grained stone, of reddish brown color, quarried in Marquette County, Used for building purposes.

Portage Entry—A fine-grained sandstone of a bright red color, quarried between the Portage River and Keweenaw Bay. Used for building.

#### Minnesota-

Catlinite—An indurated clay of a dull red color often flecked with small yellow spots. Found mainly in Pipestone County. From the fact that the Indians used the material from which to carve their pipes it is popularly called "Pipestone."

Fond du Lac-Medium texture of a brown or reddish color closely resembling Connecticut brownstone. Isle Royal and Sault Ste Marie are other names for this same stone.

Kettle River Sandstone—A fine-grained, very hard stone, almost a quartzite of a very delicate salmon or flesh color. Quarried at Sandstone, Pine County. Used for building purposes, heavy masonry and paving.

New Ulm-A very hard, compact, red quartzite. Not used extensively in building.

#### Mississippi-

Grand Gulf—A light gray, varying to nearly white sandstone and in hardness varies from a friable mass that crumbles to a hard quartzite. Quarried in Rankin County.

Mississippi—A heavy bedded sandstone varying from a light gray to a white, of medium fine texture, firm and easily quarried.

#### Missouri-

Warrenburg—A hard light gray and red sandstone quarried in Carroll County.

#### Montana-

Columbus Sandstone—A fine and even-grained stone, of light bluish-gray color, quarried in Yellowstone County. Used for building purposes.

#### New York

Ambluco-A natural bluestone product with hard fine quartz.

American Bluestone-Used for curbing, flags, steps, trim, etc.

Erie Bluestone-Same as preceding.

Medina Sandstone—The Medina formation, in geology, is a member of the Upper Silurian named for its appearance at Medina, but found in various states. It is a moderately fine-grained, hard, siliceous sandstone, varying in color from light gray to red, and quarried mainly in Albion County. The red stone is used for building, and the gray mostly for paying and curbing.

New York Bluestone-Used for curbing and paving.

Potsdam Sandstone—A dense, strong, very hard quartzite, composed wholly of quartz grains with a siliceous cementing material, and varying in color from a rather light pink to a reddish brown. In former years it was widely used for building work.

Warsaw Bluestone—A fine-grained bluish-gray argillaceous sandstone, quarried in Wyoming County. It is easily worked and carved and has been widely used for building and ornamental work, especially for trimmings.

#### New Mexico

Las Vegas—Light gray, brown and pink in color, of fine texture, Used mainly for local building work.

#### New Jersey-

Argillite—A massive mud rock hard and durable. It occurs in several colors, gray, purplish-reddish brown, and used as a building stone in several places in New Jersey.

Belleville Brownstone—A uniform light chocolate brown sandstone. Not operating.

Patterson Brownstone—A fine-grained light and dark brown sandstone. Not operating.

Princeton Argillite—A hard sandstone of two distinct colors, one is a reddish brown to purplish and the other a dark bluish-gray, uniform in character. Used locally as a building stone.

Raven Rock—A light gray to almost white sandstone, uniform texture.

Stockton—A medium-grained creamy-white to gray sandstone uniformly speckled with small brown dots. Used for local building work.

Wilburtha—A light gray fine-grained sandstone. Not operating,

#### North Carolina

Graystone—A sandstone varying in color from gray to purplish gray to almost white and in texture from fine to coarse. It has been quarried in Lee, Chatham and Orange Counties.

Leopardite—This stone is a quartz porphyry with a dense ground mass of quartz and feldspar. It is nearly pure white tinged a faint greenish tone in places and penetrated by long parallel streaks of a dead black shade. When cut at right angles it appears spotted with irregular black points up to one-half inch in diameter. When cut parallel it presents a surface streaked with irregular parallel lines. It is found at Belmont, Mecklenburg County.

North Carolina Brownstone—A sandstone, varying in color from light to dark brown and in texture from fine to medium coarse grain. It has been quarried in Anson, Lee, Moore, Chatham, Durham, and Wake Counties.

Orbicular Diorite—A dark-greenish rock with a pronounced mottled appearance. It has areas filled with clear white cleavable and highly lustrous feldspar. The stone takes a good polish and has been used for decorative purposes.

Wadesboro Brownstone—This stone occurs in two colors, red-brown and chocolate brown. Both are fine grained and uniform texture. Formerly quarried extensively near Wadesboro, Anson County. Production is now limited.

#### Ohio

Amherst—A stone of nearly pure silica—homogeneous in texture. The prevailing color is light blue-gray, although some ledges produce a light buff and variegated buff. It is used principally for flagging and break water. Quarried at Amherst.

Berea.—A fine-grained sandstone of a very light buff, gray or blue gray color, evenly bedded, even texture and works readily in any direction and is easily carved.

Briar Hill—A general buff sandstone with decided variegations in markings, blending in color from a golden buff to mottled and banded markings of deeper shades. Used for exterior and interior building work.

Buckeye Buff.—A sandstone of the same characteristics as "Buckeye Gray," but buff in color.

Buckeye Golden Vein—A sandstone similar in texture and other characteristics to "Buckeye Gray," except that it is streaked with brownish veins or reeds. Its production is limited.

"Buckeye Gray"—A siliceous sandstone of a distinctive shade of rich light gray, with natural variations in tone, uniform in texture and possesses unusual enduring qualities.

Buckeye Mahogany—A sandstone of a decided brownish cast, but as the name implies mahogany in color in some cases a mixture of mahogany, light and dark colored stone. The production is limited.

Buckeye Spider Web—A gray sandstone of the same formation as Buckeye Gray with the exception that it is irregularly streaked with fine brownish lines. Production is limited.

Buena Vista—A uniform light blue gray and buff sandstone. On exposure it loses its blue tint and becoming a gray or light buff. Used for building, break water and grindstone.

Buff Mountain—A warm even buff colored sandstone with some variegations. Used for interior and exterior building work. Belongs to the northern Ohio group of sandstones.

Elyria—A massive and cross bedded rock used for breakwaters.

Euclid—(Sometimes called Euclid Bluestone.) A blue sandstone of fine even-grain and compact. Used principally for flagging, trim, sills, caps, grindstones and foundations.

Gray "Canyon"—A fine grained sandstone of light bluegray color, even in texture, resistant to fire. Used for building purposes only, exterior and interior. Quarried at Amherst.

McDermott Sandstone—A medium fine-grained, even bedded sandstone found in buff and blue colors, easy to work and carves well. It is especially adapted for all kinds of trimmings for buildings, grave vaults, flagging, etc.

Mahogany—A stone that presents almost the exact markings of freshly sawn mahogany, the veinings closely simulating the grain of the wood. Used for interior work, Quarried at Amherst,

Ohio Buff-See "Buckeye" Gray.

Variegated Buff.—This stone is used largely for rockfaced ashlar and smooth finish interior work, and also for ornamental garden walks. Quarried at Amherst.

Wakeman Buff—A sandstone of fine grain and light buff color, showing slightly many variations, commonly referred to as "Spider Web." It is used for both interior and exterior building work. Quarried at Wakeman.

Waller Stone—A buff and blue gray freestone similar in color and texture to the McDermott sandstone. Quarried in Scioto County.

#### Oklahoma-

Oklahoma Sandstone—A sandstone found in the east central part of the State. It is usually light brown to gray in color, regularly bedded, and of fine texture, quarried for local use.

#### Pennsylvania-

Aldenville-A gray stone that raises in thin lifts suitable for flagging.

Brinton Green Stone-A dark green sandstone uniform in color, quarried in Chester County.

Dingman—Sometimes referred to as Decker Quarries Bluestone. Used for flagstones and burial vaults. Production limited.

Foxcroft—A light-gray sandstone, even grained. There is also a light blue-color.

Green County Sandstone—A light gray sandstone.

Massive bedded. Even grained, soft and easily worked when freshly quarried.

Hummelstown Brownstone—A medium-grained, dense and massive sandstone, varying in color from reddish to purplish brown, quarried in Dauphin County. Used for building.

Kimbles-A bluestone used chiefly for curbing and flagging.

Laceyville-A bluestone used for flagging.

Lackawaxen-A bluish-gray stone. Used for curbing, flagging and building.

Lanesboro—A greenish-gray sandstone used for building. It is fairly hard and durable. Present output is used for curbing and flagging.

Meshoppen—Name given to a stone from several quarries in Wyoming County. The colors vary from greenish gray to gray, bluish and reddish. Used chiefly for floors in college and public buildings and for garden walks.

Pennsylvania Bluestone—Also called Wyoming Valley Stone, is a fine-grained, compact, hard sandstone, of a blue-gray color, quarried in Wyoming County. Used for trim, paving, etc.

Pond Eddy—A durable bluestone. Used extensively for flagging in the New York metropolitan district.

Roaring Run-A sandstone blue in color. One time used for building work.

South Montrose—A flagging and curbing bluestone.
Standard Bluestone—Quarries in Pike County now idle,
Stevens Point—A bluestone produced at two quarries in
Susquehanna County. Used for curbs and flagging.

Waynesburg-See Green County sandstone.

Wyoming Valley Stone—Trade name for a hard, compact, fine-grained sandstone of bluish-gray color, similar to Hudson River Bluestone, quarried in Wyoming County. Used for building work, mainly for trim, and for paving.

#### South Dakota-

Sioux Falls—A brilliant pink and purplish red quartzite, close grained, strong under pressure and takes a glass-fike polish. Used for rough building work and for interior ornamental purposes. Sometimes called Jasper.

#### Tennessee-

Parksville—A fine grained, light pink sandstone. There is also a course gray variety. Not working.

Sewanee—A pink sandstone mostly used for random ashler and veneer rock face in local buildings.

#### Texas

Carboniferous sandstones occur on the Tex, & Pac. R. R. near Brazos River. Used in U. S. Court House, Dallas, Tex., and several private houses—gray in color.

Burnet—A sandstone of coarse texture and ranging from dark-brown to red. Used for rough construction work in immediate vicinity.

Mormon Mills—Fine, light buff carboniferous stone, resembling somewhat the light-colored Ohio sandstones, Quarried at Mormon Mills, Burnet county.

Ranger—Fine grained light buff, studded with fine black points. Found in Ranger and Eastland Counties.

#### Utah-

Kyune—Gray-red and salmon colored sandstones. Quarries not working.

Manti-A cream white sandstone used for building work.

Sanpete—A fine grained sandstone of white and cream colors. Used for building.

#### Virginia-

Alberene Stone—The trade name given to a dense and massive soapstone, blue gray in color, quarried in Albemarle and Nelson Counties and used for sanitary and electrical purposes.

Aquia Creek Stone—A light gray and buff cretaceous sandstone quarried in the town of Aquia Creek, Stafford County.

Colonial Sandstone—(See Aquia Creek.) George Washington—(See Aquia Creek.)

Unakite—A striking decorative stone found in Page and Grayson Counties. It is coarse-grained, showing an irregular crystallization of red feldspar, quartz and green epidote.

#### Washington-

Chuckanut Sandstone—A fine-grained bluish-gray sandstone, quarried on Bellingham Bay, near Whatcom and used in many public building on the Pacific Coast.

Hercules—A blue and buff sandstone of even texture, works readily. Used for building,

Sucia Island Sandstone—A hard, massive stone, of very coarse texture, and of dark brown color, quarried on Sucia Island, Washington, and used for heavy masonry.

Tenino Sandstone—A fine-grained, sandstone found in buff, blue and gray, quarried a few miles southeast of Olympia. Used for exterior and interior building work.

Wilkerson Sandstone—A medium-grained hard sandstone, light gray in color, easily worked. Quarried in Pierce County. Used for building and paving.

#### West Virginia-

Kingwood Stone—The trade name for a hard quartitie, from medium to coarse-grained, quarried at Kingwood. The color varies from antique yellow and light buff to a rather purplish buff. The groundmass is white quartz, but the color is caused by innumerable brown spots of completely oxidized iron. Used for heavy masonry and building work.

Littleton Sandstone—A fine and even-grained sandstone of light to bluish gray, sometimes banded, quarried in Wetzel County, Used for building work.

Preston County Bluestone—A fine-grained, compact, blue-gray sandstone, quarried near Rowlesburg. Used for structural purposes and paving.

#### Wisconsin-

Ableman—A red and white sandstone used locally for building base courses and trim.

Bayfield Sandstone—A medium-grained stone of a dark red color, quarried near Bayfield and Ashland. Used for building.

Black River-A yellowish white sandstone, Quarries not working.

Dunville Stone—A very fine-grained light buff sandstone, quarried near Dunville. It is soft when first quarried, but hardens on exposure. It is susceptible to the finest carving and is much used for interior and ecclesiastical work.

Fond du Lac Stone—A fine-grained sandstone, light brown in color, quarried near Duluth. Used for building.

Lake Superior Brownstone—The general name given to the sandstone quarried along the south shore of Lake Superior. There is quite a range of brown tints, some of the beds having a decided bluish tone, while others are a cheerful red. The stone from various sections of the quarry area has been widely used for building.

La Valle-A red and white variegated sandstone. Quarries not working.

Port Wing Brownstone—A sandstone of uniform texture and of a warm reddish brown color, quarried on the south shore of Lake Superior, about thirty miles from Superior. Used for building.

Rain Drop Stone—A trade name given to certain of the Western brownstones that are mottled with small dark brown spots due to the segregation of iron oxide. The mottled stone at one time was very popular for building work.

## Granites of the United States

Granite is a crystalline rock, consisting of feldspar, quartz and mica as the essential mineral constituents, and often many others, as hornblende, pyroxene or epidote as accessory minerals. Granite is an igneous rock and hence never contains fossils or other indications of life. It is popularly called the "bed rock of the world."

Biotite—A pearly to submetallic brown or green to black magnesian iron mica of monoclinic crystallization. The properties or functions of living organisms.

Gneiss—is similar in composition to granite but differs in texture, being strongly laminated or schistose in structure.

Hornblende—The greenish black and black varieties of ferrous magnesium, calcium, aluminum. A metamorphic rock with either feldspar quartz or mica.

Muscovite-A potassium mica.

Syenite is a granite rock variously defined by different geologists. Modern usage declares it to be different from true granite, in having but little quartz and in having hornblende as a substitute for mica. As the name is derived from Syene, in Egypt, from which a famous red granite was quarried, the term is loosely applied to any red granite.

#### Alabama-

There are no operating granite quarries in the state of Alabama but numerous masses of granite are exposed in a number of counties, as for instance near Almond P. O. in Randolph County, Blake's Ferry, Milltown in Chambers County. Quarried for local use only.

#### Arkansas-

Pulaskite—A coarsely crystalline dark bluish gray syenite, quarried on Fourche Mountain, Pulaski County, and having a limited use for building. Locally the stone is called Fourche Mountain Granite.

#### California-

Porterville-A light colored granite quarried in Tulare County,

Raymond—A biotite-muscovite light gray granite, with the biotite mica in excess of the muscovite, and an occasional crystal of black hornblende. It is medium fine grained. Used for building and monumental work.

Rocklin-A light colored granite similar to the Ray-

Silver Gray—A bluish-gray and also a silver gray finegrained granite. Used for monumental and ornamental work.

#### Colorado-

Cotopaxi—A medium grained, hornblende bearing, biotite gray granite with prominent white feldspar and quartz, Used for building and monumental work. There is also a coarse grained pink variety.

Foxton-A coarse, pinkish granite, used for building. Not operating.

Gunnison Gray-A moderate coarse grained gray granite.

Mt. Princeton—A light gray granite of even texture, used for building and decoration.

Platte Canon—A coarse massive granite of a reddish color, Used for local building and monumental work.

Salida—A fine grained bluish gray monzonite granite, quartz diorite used mostly for monumental work. The stone is known as Salida Blue, Dark Salida, Bon Accord and Rose Pink.

Silver Plume—A medium grained gray granite used for monumental work.

South Platte—A coarse and medium grained pink granite, used for construction. Not operating.

Texas Creek—A fine to medium grained, light pinkish gray biotite granite. Used for monumental work. There is also a coarse red variety called Texas Red.

#### Connecticut-

Connecticut White—The trade name for an extremely fine grained monumental granite, of a medium buff-gray color

Golden Pink—The trade name for a fine-grained monumental stone, of a medium pinkish-gray color.

Millstone—A dark gray granite, used for building and monumental work.

Stony Creek—A warm, reddish colored granite, varying from medium to coarse grain, with veinings in a bold pattern. Used for building and monuments.

#### Georgia-

Elberton Blue-A bluish gray granite of fine grain used for building and monumental work,

Elberton Gray—A light gray granite of medium grain used for mausoleum and building work,

Long Blue-A dark blue, biotite granite.

Oglesby Blue-A very fine grained biotite granite of an azure blue color. Takes a high polish.

Stone Mountain—A medium grained stone, of a uniform light gray color. The stone is taken from a solid boss of granite, 686 feet high and seven miles in circumference, rising from a level plain. The granite is widely used for general building purposes, heavy masonry and monumental work.

#### Maine-

Goss Pink—A coarse, pinkish-lavender tinted medium gray granite, used for building and monumental work.

Hallowell—A light gray granite of fine texture, used for monuments, mausoleums, buildings and bridges. Jonesboro-A medium coarse grained pinkish gray granite, biotite. Used for building and monumental work.

Moose-a-bec Red—A coarse grained dark reddish gray hornblende granite having white and pinkish feldspar. Used for building and monumental work.

North Jay—A fine and even grained stone, light gray in color, but known in the trade as a "white granite." Used for building and monumental purposes.

Palmer—A pinkish biotite granite of medium texture. Used for buildings and bridges.

Somes Sound—A coarse, inclined to medium, grained biotite granite of a light grayish buff color.

Stonington Pink Gray—A coarse grained pinkish and lavender tinted medium gray biotite granite. Used for building and monumental work.

Vinal Haven—An even textured fine grained light gray granite. Used for monumental work.

#### Maryland-

Ellicott City—A medium grained, dark, blue-gray granite, used for building purposes.

Guilford—Ranges from a coarse-grained red, through a medium-grained reddish gray tone, fine-grained medium gray. Used for building and monumental purposes,

Port Deposit Granite—A light, bluish-gray granite gneiss, medium grained, quarried on the Susquehanna River, about three miles above Harve de Grace. Used for building.

Woodstock-A medium grained gray granite, used for building, monumental and paving purposes.

#### Massachusetts-

Chelmsford Gray—A light gray medium grained muscovite-biotite granite. Used for heavy masonry and monumental work.

Milford Pink—A pink granite of medium to coarse grain, mottled with black mica spottings. Used for monumental and building work.

Moose-a-bec—A dark reddish gray granite with white and pinkish feldspar of coarse even grained texture. Used for building.

Plymouth Seam Face Granite-(See Seam Face Granite.)

Quincy Granite—A hornblende pyroxene granite, quarried in and around Quincy. The general color is from a medium gray, or bluish-gray, to a very dark bluish-gray, all with blue or blue-black spots. Its texture is from medium to coarse, and even grained, and it is noted for the high polish it takes, due to the absence of mica. For monumental purposes the granite goes under the names of Medium, Dark, and Extra Dark. Quincy granite is now used mainly for monumental work, but it was one of the first stones used for building in this country, and many of the most noted older structures in the Atlantic States are of this material.

Rockport Gray-A light gray and dark gray, medium

even grained granite, used for building and monumental work.

Rockport Sea-Green—A dark olive green granite spotted with black, of medium even grained texture. Used for building and monumental work,

Rockport Seam-Face—A medium grained dark yellowbrown, bright rust-brown, light yellow-brown hornblende granite. Used for monumental and building work.

Seam-Face Granite—A granite with color blendings including brown, golden, yellow, green, gray, and purple. It is fine grained and gives a fine and easy split. The seams divide the granite into absolutely plane sheets varying in thickness from one inch to eight feet. The sheets are so smooth that no cutting, dressing or polishing is required.

Split-Face Granite or Rock-Face—A fine grained granite of a gray and light brown sap-face color. Used for building ashlar, flagging and monumental work.

Stony Creek-A red and black veined granite of coarse grained texture. Used for monumental and building work.

Victoria White—A white granite of a very fine grained texture. Used for statuary, monumental and building work.

West Townsend—Fine to medium grained, and from light pink to buff gray in color. Quarried in Middlesex County. Used for structural and monumental purposes,

Weymouth Seam Face Granite—(See Seam Face Granite.)

#### Minnesota-

Hinsdale—A porphyritic granite with pink feldspar crystals about half an inch across. The general color effect is pinkish-gray.

Mora Gray-A fine grained uniform light gray granite, consisting of light gray to white feldspar,

Morrison County Gray—A granite of two distinct types one is fine grained and nearly black, the other coarse and gray in color.

Morton—A medium to coarse grained biotite granite with red feldspars and darker minerals interspersed.

North Redwood—Two varieties—one a greenish gray medium grained biotite gneiss the other variety is a gray to pale pink medium grained granite a quartz diorite, consisting chiefly of much gray to pale pink feldspars.

Ortonville-A medium to coarse grained biotite granite of a deep red color. Takes an excellent polish.

Richmond Red-See Ortonville.

Rockville—A coarse grained granite. The feldspars being one-half to three-fourths of an inch across. It is pinkish gray and consists of pale pink feldspars, quartz and black mica.

Sauk Rapids Gray—A coarse grained granite of both a red and gray variety. The red is a hornblende granite. The gray has a slight pinkish cast and the texture is finer.

St. Cloud Granite-Is used for monumental purposes and

to a limited extent for building. There are three varieties, a medium-grained pinkish gray, a fine-grained gray, and a red.

#### Missouri-

Missouri Red—The leading granite quarries of the state are in the Graniteville area. The stone is medium to coarsegrained, of a rich red color. It has been used for columns and monuments, as well as for structural work.

Ozark Gray Veined—A fine textured gray granite having black veins, used for exterior and interior marble work.

Ozark Gray Veinless-A fine textured gray granite used for exterior and interior marble work.

#### New Hampshire-

Black Pearl—The trade name for a fine to medium grained dark bluish-gray granite. Used for monumental purposes.

Concord—A medium-grained light to medium gray granite used for building and monumental purposes.

Conway Green—A coarse grained dark yellowish greenish gray granite with black spots, biotite hornblende. Used for building and monumental work,

Conway Pink—A coarse grained light pink mottled with large gray and small black spots. Used for building and monumental work.

Crotch Island-A coarse-grained brownish pink granite used for building and monumental purposes.

Fitzwilliam—A light gray fine-grained granite used for building and monumental work.

Milford—A fine to medium grained light gray granite, quartz-monzonite. Used for building and monumental work.

New England White-A fine-grained bluish-gray granite used for monuments, buildings, mansoleums and paving.

Silver White. The trade name for an extremely finegrained light bluish-gray monumental granite.

Troy White—A fine-grained and light, inclining to bluishgray in color. Used for monumental and building work.

Victoria White—A fine-grained light gray biotite-muscovite granite. Used for building and monumental work.

#### New Jersey-

Dover-A light gray to greenish gray medium grained granite.

German Valley—A gray granite of medium coarse texture. Haskell—A light gray granite, gneiss, fine-grained, uniform and massive in character. Formerly use for local building work.

Pompton—A coarse grained pink granite with light yellow and green mottlings. Not operating,

#### New York-

Alexandria Bay-Light gray color, Fine texture. Used for paving and rough structural work.

American Killarney—The trade name for a granite of medium and even grain, and of a rich, dark moss-green color. Used for monumental and decorative purposes.

Ausable Forks—Medium to light gray on rock face; gray in rough dressed surfaces. Characterized by granulated felspar ground mass with generous percentage of dark silicates. General building material,

Syenite—Dark to very dark green on rock face and polished surfaces, but gray green on hammered work. Medium grain.

Breakneck—A dark green hornblende, feldspar and quartz are chief minerals. Granular and compact. Formerly used for construction stone, paving blocks, crushed stone.

Fordham—A banded gneiss, medium to dark gray and averages darker than Yonkers with pinkish tone. Texture inclines to finely granular.

Garrison—A fine grained massive to faintly gneissoid textured gray granite, Building stone and foundation material.

Gloversville—Fine and massive gneissic rock. Compact grain with coarser particles of quartz and feldspar. Dark gray in color. General construction purposes.

Grindstone Island—Coarse texture due to large feldspars. Polishes to a bright red. Lighter color on rock face, and very light on hammered work. Adapted for monumental or interior work.

Harrison—Gneissoid texture. Chief minerals, quartz, alkali-feldspar and biotite. Dark gray with bluish tint, Hammered surface a lighter color. Used for building purposes and monumental work.

Horicon—Porphyritic appearing rock due to pink feldspars up to an inch long, thickly distributed through the ground mass or dark gray color, composed of greenish feldspar, quartz and biotite.

Keeseville Gray—Medium to coarse in texture depending on relative proportion of granulated and residual uncrushed feldspar. Monumental and decorative work.

Keeseville Green—On fractured surface, light green with mottlings of dark green to black caused by uncrushed remnants of feldspar. Polished surface sea-green, some mottling. Used for paying blocks, building and polished work.

Kensico—A granite of two distinct markings. Pink and gray variegated.

Manhattan Schist—Quarried in Westchester County, Manhattan Island and the Bronx. Chief minerals quartz, feldspar, biotite and muscovite, being more micaceous than the Fordham. Gray, medium to dark in color. Texture generally fine, even, granular. Often quite massive.

Mohegan—Quarried near Lake Mohegan. It is mediumgrained, generally a yellowish gray color, but in one variety bearing the trade name of Old Gold, the feldspar is brown, giving the stone a golden tint. Used for churches and building work. Mt. Adam and Eve—Hornblende granites containing some biotite. Coarse texture, generally massive. Color, medium gray with bluish or greenish tints, sometimes giving wav to darker rock. Lack of uniformity a drawback. Formerly dimension stone.

Parishville—Dark red, fine-grained with branching veinlets of bright red colors which shade off on the borders and sometimes developed into nuclear patches giving lighter cloud effects. Monumental and structural purposes.

Peekskill-See Mohegan.

Picton Island—A closely textured red granite suited for building and monumental work. Two varieties are found one fine grained with uniform pink tint used especially for monuments; the second, medium-grained with bright red body flecked with black.

Pochuck Granite—The trade name for a medium-grained granite, with mottlings of pink, gray and black. Used for building.

Ramapo—A gneiss, pink or gray in color and ranging from foliate thinly bedded types to heavily jointed massive examples. Chief minerals, are feldspar, quartz, and hornblende or biotite. Used for construction work and in the past monumental stone.

Storm King—Medium-grained, grayish or reddish, somewhat gneissoid granite with streaks, dikes and irregular bodies of reddish pegmatite.

Thousand Island—A general term embracing various granites quarried on the Thousand Islands, St. Lawrence River. Includes granite from Grindstone, Picton, and Wellesley Islands.

Wellesley Island.—One of the Thousand Island granites to which description of Grindstone Island equally applies.

West Point—Coarseley jointed biotite gneiss, veined and broken by more massive granite material. In a given quarry uniform, however. Dark gray that is attractive even though sombre. Used locally for building at West Point.

White Lake-Oneida County, Medium grained, compact, gneissoid rock, Pink in color.

Yonkers—A gneissoid granite. Bluish cast on cleavage surfaces, but color across foliation is prevailingly pink. Hammer-dressed surfaces are a medium gray. Medium to fine in grain. General construction purposes, foundation work, and crushed stone

#### North Carolina-

Balfour Cream—A trade name given to a granite identical in every way to Balfour Pink except that it is a very light pinkish cream color.

Balfour Pink—A trade name for a medium grained granite of eyen texture and of a uniform flesh pink color. It takes a high polish and is used as a building and monumental stone.

Blue Pearl Granite—A trade name for an even grained medium textured dark gray to almost black gabbro. It is very tough, takes a good polish and is used for monumental stock.

Mt. Airy Granite—A trade name for a medium grained, even textured, light gray to nearly white biotite granite. It is used for monuments and building purposes. Quarried at Mt. Airy.

Rolesville—A light gray medium grained biotite granite. Used for building and monumental work,

Salisbury Granite—A pink and also white fine-grained granite. The pink stone is almost a flesh color, and takes a good polish. The so-called white granite is a very light gray. Used for building and monumental purposes.

White Mt. Airy—A very light gray granite whose predominating colors are black and white with a few quartz crystals that are a faint pink scattered through it. It is of medium grain, used for building and monumental work.

#### Oklahoma-

Oklahoma Granite—Quarried in the south central and southwestern portions of the state. The stone varies from dark red to light pink. There is also a dark blue and a mahogany color from moderately coarse to finely granular. Used for building and monumental purposes.

#### Pennsylvania-

Baltimore Gneiss-Light colored with gray hands; medium to coarse grain. Quarried near Philadelphia.

Black Granite—A dark, finely crystalline diabase or trap. Not a true granite. Quarried at many places in southeast Pennsylvania.

French Creek—A fine grained, hard, dark colored granite. When polished the surface is almost black, the hammered surfaces are light. Used for monumental work, also building. It takes a high polish.

Gabbro—A common term for a dark colored granite rock near Philadelphia; too dark to be popular as building stone but suitable for curbing and paving blocks.

Germantown—A dark gray hornblended gneiss quarried in the vicinity of Philadelphia. Used principally for rough work, foundations and rock-face work.

Holmesburg Granite—A granite gneiss; medium to coarse grain, typically gneissoid.

Leipersville Granite—Medium to coarse grain, banded granite gneiss. Used locally.

Philadelphia Granite—Warm gray, medium grain granite

#### Rhode Island-

Blue Westerly-A fine textured, bluish medium gray

Oakland White—A fine-grained light gray granite. Used for building and monumental work.

Pink Westerly-A fine textured, pinkish buff medium gray granite.

Red Westerly-A medium to coarse grained granite of

reddish-gray speckled with black. Used for building and monumental work.

Westerly Granite—A very white granite when hammered and a bright, clear, dark blue when polished. Fine grained. Used for memorial work,

#### South Carolina-

Health Springs Granite—A fine-grained stone, of a uniform dark gray color, quarried in Lancaster County. Used for monumental work.

"Silk of the Trade"—A trade name of a fine-grained, bluish-gray granite used for monumental purposes.

Winnsboro Blue—A bluish-gray granite of fine-grain texture. Used for monuments.

#### South Dakota-

Black Hills Dark Pearl Granite—This has a distinctly bluish cast, especially in the rough or hammered surface.

Sioux Falls Granite or Jasper—The trade name for a dense, compact quartzite, taking a high and durable polish, quarried on Big Sioux River. Used for building, paving, and, to a limited extent, for polished work. The prevailing colors are a light pink and a purple or "peachblow" shade, sometimes banded.

#### Texas-

Llano—A fine grained gray, blue and red granite used for monumental work and also building and heavy masonry.

Opaline Granite—A granite with sky-blue quartz crystals embedded in a reddish-brown and flesh-colored ground-mass. It is a medium grained and takes an excellent polish. Used for building and decorative work.

Texas Granite—Quarried in Llano and Burnet Counties. Is used for building and monumental purposes. The three leading varieties are a coarse-grained pink, a fine to medium-grained pink, and a fine to medium-grained gray.

#### Utah-

Cottonwood Granite—A pure snow white granite with leaves or flakes of black biotite scattered through it, giving it a very lively and attractive appearance. Used for building and monumental work.

#### Vermont-

Ascutney—A medium to coarse dark olive green granite.

Barre—A fine textured, light and medium dark gray granite. There is also a dark blue gray used for polishing only and a light gray for hammered work.

Beebe Plain-A light gray fine grained granite.

Bethel White—A coarse to medium grained slightly bluish milk white with gray spots. Used for building and monumental work.

Dark Blue Hardwick-A medium phorphyritic dark gray granite.

Derby Gray-A medium fine light-bluish gray granite.

Monumental work.

Dummerston—A very light gray medium textured granite. Monumental work only.

Fletcher Quarry.—A medium-grained gray granite used for monuments and buildings.

Imperial Blue—A fine to medium dark-bluish gray granite.

Memorock—A trade name adopted for memorials and monuments built of the Woodbury granites.

Rock of Ages—A trade name for a blue-gray granite of fine grain. Used for memorials,

Ryegate—A medium fine light to medium gray granite. Stanstead Granite.—A gray granite of fine texture. Used for monumental work.

Windsor—A medium to coarse dark olive-green granite.

Woodbury Bashaw—A fine to medium bluish-gray granite.

Woodbury Gray—A medium-grained light to medium gray granite used for buildings and monumental work.

#### Virginia-

Petersburg Granite—A medium-grained gray granite.
Used for building and monumental purposes.

Richmond Granite—A fine-grained, light gray biotite granite. Used for building and monumental work.

#### Washington-

Index Granite—A medium-grained light gray stone. Used for building and monumental work. Idle.

Snake River Granite—A medium-grained light gray granite. Used for building and street work. Idle.

Washington Granite—Granite is quarried at a number of places in the state of Washington, and while it has had some use for building, it is mainly employed for monument bases, curbing, foundations, etc. The leading varieties are a light gray stone, almost a syenite, quarried at index; a dark gray, closely banded gneiss, quarried near Spokane and at Medical Lake, and a light gray granite with large crystals of feldspar, quarried along the Snake River. Local use only.

#### Wisconsin-

Wisconsin Granite—Is found in nearly one-third of the area of Wisconsin and it differs widely in color, crystallization and composition. Quartz porphyries or rhyolites are also sold under the name of granite. The principal varieties on the market are: Mahogany, a medium-grained dark red, quarried at Lohrville; Ruby Red, medium-grained, quarried at Granite Heights; Marinette, fine-grained dark red, quarried at Red Granite; Montello, fine-grained deep red, quarried at Montello; Montrose, coarse-grained, pink and gray, quarried at Middle Islet; Pike River Gray, fine-grained, quarried at Amberg; Parcher Green, coarse-grained dark green and black, quarried at Wausau, and Berlin Rhyolite, fine-grained purplish-black, speckled with pink feldspar, quarried at Berlin. The Wisconsin granites are used for decorative and monumental work.

#### Wisconsin-

Berlin Black-A dark gray rhyolite, ground mass of pinkish feldspar, very hard stone.

Big Falls—Fine-grained pepper and salt, black and white color with intruding dykes almost a light gray. Can only be had in small sizes.

Granite Heights-Coarse-grained deep red granite similar to the Wausau Red.

Marinette Red-Medium grained and very hard of a light pinkish color with ground-mass of white quartz crystals.

Mohogany Red-Medium-grained red granite a little coarser grained than either Red Granite or Montello, with ground mass of reddish feldspar and white crystals.

Montello-A red granite almost maroon, very hard.

Montrose-Very coarse pink and gray granite with crystals as large as half inch.

Parcher Green—A coarse-grained green granite almost solid color with a few white feldspar crystals which emphasize the green tone.

Pike River—A fine-grained gray and marinette red granite quarried at Amberg, Wis. Pike River Gray—A dark gray granite, medium finegrained, with a ground mass of white feldspar crystals and considerable hornblende.

Spring Lake—Medium fine-grained light red granite interspersed with a few black hornblende crystals, similar in a great many respects to the Lohrville mahogany.

Utley Black-Black rhyolite, ground mass of white feldspar crystals. Very hard,

Waupaca—A very coarse-grained rock, principally syenite, has feldspar crystals at times 2 inches in size. It is mottled red and gray in color.

Wausau—Coarse-grained rock very largely banded in structure and of a deep red color. Quartz crystals forming ground mass and showing up well in shading. Known as Red Wausau and Wisconsin Ruby.

Waushara—A fine-grained dull red granite consisting of feldspar and quartz and a very small amount of mica. Used for paving blocks, crushed granite, and large Grout for breakwater and monumental purposes.

West Point—Near Lohrville. Medium fine-grained red granite similar in all respects to the Lohrville Mahogany.

## Marbles of Canada

Alomite—A brilliant blue sodalite marble—occasionally interspaced with thin red veins and spots. Idle.

Arnprior Marble—A coarse-grained white marble, strongly clouded with bluish-gray, quarried in Renfrew County, Ontario. There is little production now, but the marble was used in the construction of the Parliament buildings at Ottawa, and in other structures.

Banded Pink—A dull white marble with faint pink veins passing through it and occasional grayish brown slender markings. Quarried in South Ontario.

Bathurst—A marble showing varied shades of pale green and gray, with a crystalline lustre.

Breche Laurentian—A brecciated marble consisting of angular fragments of fine-grained white calcite, clouded with green, embedded in a brown micaceous cementing material. Quarried in Hastings Township, Ontario.

Breche Rose—A marble of which the groundmass is of a delicate rose color with occasional dark gray markings scattered through it. Quarried in South Ontario.

Byzantine—A light rose colored marble intersected by broad green serpentineous bands. Quarried in South Ontario.

Cipollino Green—A brecciated marble consisting of large fragments of dark green serperntine with occasional lighter colored spots or streaks embedded in the calcite matrix. Quarried at South Ontario.

Imperial Green—A fine grain marble consisting of dull white and green crystals with wave like and eradic markings. Quarried in South Ontario.

Jaune Royal—A light cream colored marble through which run greenish yellow veins and markings. Quarried at South Stukley, Quebec.

Kootenay—A light gray marble with parallel veins running through it of a darker shade. It is of fine grain and takes a good polish. Quarried in British, Col.

Lanark Serpentine—A true serpentine, consisting of a medium-grained white or lavender-colored calcite, marked by cloudings of green or buff serpentine. Quarried in Lanark County, Ontario. Laurentian—A brecciated marble of several varieties, consisting of variously sized fragments of medium grained banded limestone embedded in a mixture of calcite and dark green mineral flecks. Quarried in South Ontario.

Laurentian Blue—A marble of medium fine grain and of a dark bluish-gray color, with fine veinlets of white calcite running irregularly through the mass. Quarried in Hastings Township, Ontario.

Missisquoi—A marble of numerous varieties and colors varying from a white with slender light green markings to sea green and black.

North Lanark Serpentine—A true serpentine marble, medium-grained, quarried in Lanark County, Ontario. Used for decorative purposes. There are three varieties: White groundmass with green cloudings; lavender groundmass with green cloudings, and white groundmass with buff cloudings.

Pink Clouded—One of the variegated marbles of South Ontario with a light pink groundmass and a few small light green patches on the surface. Quarried in South Ontario.

Princess Blue-See Alomite.

Rose Fantasia—A very striking and highly colored marble, showing large and small patches of bright red, salmon and other colored calcite, embedded in a matrix of micaceous material. Green bands are frequent and often appear as rings around the highly colored centers. Quarried in Hastings County, Ontario.

Rose Royale—A white marble through which run broad clouded gray and pink veins,

Royal Veined White—A marble with a white groundmass, irregularly banded and clouded with light greenish gray veins.

Veined White—A white marble with faint clouded gray veins running through the mass. Quarried South Ontario.

Violette—A marble with a pure white crystalline back ground with abundant clouded violet and green veins and occasional slender thread line markings.

## Limestones of Canada

Crookston—A fine-grained, compact limestone, brownish gray in color, but weathering lighter, quarried in Hastings County, Ontario.

Deschambault—A fine-grained crystalline limestone of a light gray color. It gives fine color contrast by useing different dressings. Used for building and trim.

Guelph Dolomite—A fine-grained crystalline dolomitic limestone, yellowish or brownish gray in color, quarried in Gray and Wellington Counties, Ontario, and used locally for building. Kingston—A fine-grained, compact limestone, dark bluish-gray in color when freshly quarried, but weathering almost white, quarried along the shore of Lake Ontario, near Kingston.

Longford—A hard, light gray limestone. Takes a polish. Used for building work.

Ottawa River Stone—A crystalline limestone, generally of a bluish-gray color, flecked with white, quarried in Carleton County, Ontario. Used for architectural purposes, mainly trim, throughout eastern Ontario.

Owen Sound Stone—A fine-grained crystalline dolomitic limestone, of a pinkish or bluish gray color, quarried along the shores of Georgian Bay, Ontario. Used for building purposes, mainly as rubble masonry.

Queenstown—A fine, even grained crystalline limestone of a light blue color, also a silver gray and buff color. It has a faint veining and takes a good polish. St. Mary's Limestone—A fine and even grained stone, of a light gray color, quarried in Perth County, Ontario. Used for building and cut stone work in Southeastern Outario.

Tyndall—A buff and also a blue limestone, some dark mottled. Used for building work.

## Building and Ornamental Stones of Canada

Felsite Breccia—A beautiful decorative material found in Novia Scotia and New Brunswick, notably on Scatari Island. N. S. It consists of a groundmass of hard volcanic glass, green or red in color, through which are scattered crystals of orthoclase and quartz. Not quarried at present.

Huronian Conglomerate—This material shows a ground of light mottled gray in large rounded patches, with large spots of slate blue, brown, and bright red both dark and light. Quarried upon the shores of Lake Superior.

Labradorite—A dull grayish brown feldspar hard and compact and takes a good polish. It is found in various colors, light peacock green, bright orange color and a delicate pink also bright blue. Used principally for making ornaments. Quarried at St. Paul Island, Labrador.

Peristerite—A variety of soda-feldspar with a pronounced bluish opalescence. Found in the townships of Bathurst and Burleigh, Ontario.

Perthite—A highly ornamental stone, made up of fleshred and reddish brown bands of orthoclase and albite, interlaminated. When cut in certain directions it shows beautiful golden reflections. Susceptible to a high polish. Found in the town of Perth, Ontario.

Princess Blue—Sodalite—A mineral composed of silicate of soda and alumnia with traces of chlorine found in various colors; azure blue, torquoise blue and an ultra marine, found in limited quantities at Bancroft, Ontario, and used for interior decoration.

Starry Amphobolite—A very compact and tough aggregation of blades of actinolite, arranged in a radiating manner around centers averaging three-quarters of an inch apart. The polished surface presents the appearance of a series of stars, juxtaposed, in shades of green. Can be had in large blocks, but is suitable only for interior decoration, as it rusts on exposure. Found in Addington County, Ontario. Quarries not operated at present.

Sunstone—A flesh-red feldspar, shining with golden points, found on the northeast shore of Lake Huron and in Renfrew County, Ontario.

Sodalite—A rare constituent of igneous rocks sometimes occurring in large enough masses to be used for decorative purposes. It is a silicate of soda and aluminium in which some chlorine is present. Found in various colors, but the most highly prized variety is of an intense lavender blue, with white veinings and red spots, It is harder than glass or steel, and takes a high polish. The trade names in England, where it has been used in decoration, are "Alomite" (after Mr. Charles Allom, who introduced it), and "Princess Blue." Found in Hastings County, Ontario, quarries are not operated at present.

## Granites of Canada

Bathurst.—A medium-grained stone, with gray groundmass enclosing porphyritic crystals of pink feldspar. Quarried in Gloucester County, New Brunswick. Used for building and bridge work.

Bay of Fundy Granite—The popular name for a coarsegrained red and dark gray mottled stone, quarried at St. George, New Brunswick.

Bocabec Black—Quarried in Charlotte County, New Brunswick. Should properly be called Diabase. Fine and even-grained, with black groundmass speckled with white feldspar crystals. Used for monumental work.

Gananoque Syenite—A coarse-grained dark greenish-gray stone, taking a good polish. Quarried along the northeastern shores of Lake Ontario. Used for building and monumental purposes.

Gypsy Mountain Stone—A medium-grained pink granite, quarried on St. John River, New Brunswick,

Halifax-A very coarse, porphyritic gray granite, or

rather garnodiorite sometimes showing crystals up to three inches in length. Used for building and mounmental purposes. Quarried near Halifax, Nova Scotia.

Scottstown—A hard medium gray granite quarried near Scottstown, Quebec. Used for building.

Spoon River Granite-A monumental granite quarried on

St. John River, New Brunswick. Medium-grained, with feldspar crystals of pink and white in a groundmass of black mica and hornblende.

St. George Granite—Quarried in Charlotte County, New Brunswick, Used for monumental and building purposes. Coarse-grained, and found in dark, medium, and light red, and salmon color.

## Sandstones of Canada

#### Soapstone-

Thermo Stone—A soapstone quarried at Trap Lake, Ontario.

#### Sandstone-

Amherst Red Stone—A medium-grained sandstone, of a warm red color. Quarried in Cumberland County, Nova Scotia and used for building.

Credit Valley Stone—A fine to medium-grained sandstone, quarried along the Credit River, near Toronto and widely used for building. There are three varieties, a gray, almost white, one ranging from chocolate color to deep brown, and a piebald stone of brown and white mixed.

Medina—A mottled gray sandstone, with horizontal lines. Miramichi—A fine textured buff colored sandstone.

Nepean Stone—A fine-grained sandstone, generally of a light gray color, almost white, although sometimes yellow or brown, occasionally banded. Used for building purposes in Ottawa. New Brunswick-See Sackville Freestone.

Nova Scotia-See Amherst, Picton and Wallace sandstone.

Perth Stone—A fine-grained sandstone of a yellowish white color, with broad bands of purple, quarried in Lenark County, Ontario, Used for building purposes,

Pictou Freestone—A medium-grained slightly micaceous sandstone, gray with a slight cast of brown, but weathering to a soft buff color, quarried in Pictou County, Nova Scotia. Widely used for public buildings, churches, and structural work generally.

Potsdam-Beekmanton-A hard white and flinty sandstone with brown spots. Used for building work,

Sackville Freestone—A medium-grained sandstone, of light dove-color, light brown or purplish brown, quarried in Westmoreland County, New Brunswick, Canada. Used for building purposes,

Wallace Freestone—A fine to medium-grained sandstone. Olive and bluish-gray, or light brown, sometimes slightly banded. Used for building work.

## Foreign Marbles

#### Africa

African Antique—A brecciated marble with a black groundmass with large spots of grayish white and deep red, sometimes inclining to purple.

Algerian Serpentine—An unusually hard serpentine, green being the dominating color profusely mottled with black.

Numidian Red (Rose de Numide)—A brilliantly colored marble with rose colored clouded bands mingled with purple and brown veinings.

Numidian Yellow (Giallo Antico)—A rich yellow marble with veins of brown and gray on a reddish brown background.

Phillippeville—A marble with a yellowish ground tending to reddish or pinkish hues, and has small accidental veins of black, reddish brown and brownish violet. It takes a high polish.

Sidi-Yaga—A black marble with white veins. It takes a good polish.

#### Australia

Angaston White—A marble of different shades of color. The white is coarsely crystalline and occasionally employed for sculpture. Another contains faint gray markings. The same quarries yield a colored marble of a light salmon tint.

Attunga—A brecciated marble consisting of a profusion of light fawn and violet colored angular fragments of various sizes in an iron stained ground mass.

Borenore Blue...A slightly brecciated blue marble. There is also a Borenore Red.

Buchan Marble—A decorative marble in grays and buffs. The two leading varieties are Buchan Gray and Buchan Fawn.

Calcula Marble—It is a decorative marble and varies in color. Some varieties are of ivory white, speckled with light purple, while in others there is a pale gray or white ground with irregular red veins.

Fernbrook—A variegated marble ranging in color from a light fawn, with rich red patches and markings, to a dark purplish brown with pink fragments scattered through the ground mass and occasional green markings,

Macclesfield Gray—A gray marble in which white bands traverse the grey ground mass, giving it a streaked appearance, darker and lighter bands alternating. There is also a red, pink and cream variety.

Queensland Marbles—Fine-grained and various colors, from yellow and pink veined to blue and gray banded. Used for decorative work and building.

Warialda—There are two varieties of this marble, one a white with numerous thread-like markings and the other has a pink ground mottled with white. Windellama-A black marble with a few slender white calcite veins.

#### Austria

Almas Marble—A light brown fossiliferous limestone which takes a good polish. Used in buildings of modern Vienna.

Carniolo-A flesh-red marble veined and shaded with white.

Istrian Marble—A light cream colored marble that is very compact and durable.

Repen Zola—A very fine grain compact marble varying in color from a light brown to a delicate cream tint. The development of the quarries date back at least to imperial Rome.

Tyrolese Onyx...A slightly translucent onyx marble; when polished displaying veins and patches of a rich orange color.

Tyrolese Serpentine—A very dark green marble with a few imperceptible veinings of a slightly lighter shade.

Ungarisch Grau—A dark fawn colored marble with light pink markings and a few white patches which appear on the polished surface. It takes a high polish and was used in all of the Municipal buildings at Dresden.

#### Belgium

Belgian Black—One of the most famous of black marbles. It is of a deep, uniform black color, very hard and takes a brilliant polish,

Blue Belge—A black marble with slender white markings sometimes known as Grande Antique Belge.

Breche De Dourlais—A brecciated Belgian marble with brownish groundmass in which are embedded black, white, and reddish angular fragments. Also called Waulsort.

Breche De Waulsort—A brecciated marble composed of black, pink and white angular fragments embedded in a reddish brown matrix.

Leopard—A reddish gray marble spotted with darker gray and black and with crystalline veins slightly tinged with bluish gray and running like rivers upon a map.

Malplaquet.—A bluish gray marble with large black and pinkish white spots. A marble quarried at Malplaquet, Belgium, has a ground of pale reddish yellow, sprinkled with irrregular patches of lighter color, fringed at the edges with a darker tint, Another variety quarried here has a black ground covered with large reddish gray patches shaded at the edges.

Noir Belge No. 11—A black marble used for decorative work, especially of ecclesiastical all over Europe.

Petit Granit-A marble of several varieties. They have

a black ground with irregular gray and white spots and veins, tolerably evenly distributed. In some varieties the white spots are large and more irregular, while the veins are larger and disposed in directions more or less parallel. In others there are fewer white spots, which, with the gray spots and veins are more irregularly disposed.

Rouge De Flandre No. 1-A very dark red marble of which the white calcite veinings are more numerous.

Rouge De Rance—A fossiliferous marble with a reddishbrown groundmass and large white mottlings. Ancient quarries were reopened a few years ago. The stone is sound and is used for columns, as well as for decorative work.

Rouge Fleuri—A light red marble with veining that somewhat resembles floral designs.

Rouge Griotte-A brilliant red marble.

Rouge Imperial—A marble of a red groundmass, in which are white calcite patches.

Rouge Royal—A red marble with clearly defined markings.

St. Anne—A marble of two sorts. One has a ground of dark gray with whitish spots amongst which are madreporic fossils. The other has a groundmass of lighter gray with irregular and dirty spots.

St. Remy—This variety of marble is widely known as the red marbles of Belgium. A highly decorative stone with clouded gray, white and blue veinings. Same as Rouge De Rance, but groundmass is lighter.

Theux-A marble with a ground of deep gray, blended in varied shades with angular black spots,

Tournai Marble—The ancient name for Black Belgian marble widely used for monumental purposes from the 12th century.

Violon—A marble having a dark gray groundmass, blended with lighter and slightly pinkish gray, with numerous gray veins, traversed by paler and more irregular veins.

#### Egypt-

Egyptian Alabaster—A stalagmitic rock of a light amber color, slightly translucent and marked with wavy bands.

Green Porphyry—Has a dark olive green groundmass with light green feldspar crystals sprinkled through it and occasional small blue agats.

Red Porphyry-A stone of a dark red groundmass with small white and dark red feldspar crystals.

#### England

Ashburton Marble—A fossiliferous marble, blue-black in color, with veinings of white and bright red. Takes a high polish. Largely used for bases and exterior decorative work.

Babbacombe—A marble of several varieties. One exhibiting varied shades of light brownish-red, with small bluish-gray spots. Another resembles red granite in gen-

eral hue, but with large veins of white, gray and dull pink. Some are of a dark greenish-gray with white and yellow veins. Others exhibit patches of pinkish-gray, small spots of pink and gray, rays of pale gray and yellow, and a thin network of dark red yeins.

Ballacullish—An ash-gray marble of uniform grain. Takes a high polish.

Bird's Eye...A marble varying in color from a dark gray to a medium brown interspersed with gray crinoidal fragments, the sections of which sometimes resemble a bird's eye.

Blue John—A marble with a clouded white and warm gray groundmass, tinged with iridescent amber color, with wave-like bands and lines of very dark purple. It is translucent.

Bristol—A marble of several varieties. Most of them show different shades of light, brownish red. Some specimens have a groundmass of blackish green, with whitish fossil spots and rings.

Cornish Serpentine—A green marble of various colors and textures, different shades of green predominating. The colors varying from a red and black mottled variety to a brownish red and a rich bright red, while others are wholly red, purple or black in a rich dark matrix.

Gotham—A light fawn colored marble, having dark brown, nearly black markings throughout. Sometimes called Landscape Marble.

Derby Fossil—A medium gray marble sometimes known as Monyash marble, with encrinite stems interspersed. Some varieties possess a bluish shade of color, with slender light purple marking.

Devonshire Marble—Fine to coarse-grained fossiliferous marbles, ranging in color from gray to all shades of red, and often brilliantly marked, are widely used for decorative purposes. The different colors have the following trade names: Gray, Plymouth Dove, Silver Gray, Prince Rock Gray; yellow, Devon Sienna, Clouded Yellow; pink and red, Devon Spar, Rose Red, Spangled Red (also known as Bay Vein), Spangled Pink and Favositidae.

English Birdseye—A fossiliferous marble, of a dark gray to brown groundmass, with light gray crinoidal inclusions. Used for bases and interior decorative work.

Frosterley Marble—A decorative marble with a dark gray groundmass, boldly marked with large light gray fossil shells. It is very hard and takes a high polish.

Harpenden Puddingstone—A marble with a gray and yellow groundmass with large orbicular spots, mostly orange, with red in the middle and brown at the edges.

Hopton Wood Stone—A light cream colored hard limestone used for decorative purposes in England. Takes a fair polish.

Ipplepen Stone—A compact limestone, taking a good polish, of a pink tone with white veining and gray mottling. Jasper Stone—A very dense and crimson colored stone with veinings of darker shades,

Little Beltor—Commercially known as Little Beltor marble. There are two varieties. A pink and yellow, both intersected with white veins and of calcite.

Luxullianite—The name given to a unique decorative porphyry found at Luxullian. The base is of quartz and black tourmaline in which are distributed large crystals of red orthoclase feldspar. Used for decorative and monumental work. The sarcophagus of the Duke of Wellington in St. Paul's Cathedral, London, is of this material.

Mona Marble—A serpentinized marble. It is light and dark green, sometimes purple, irregularly blended with white. Has had limited use for decoration,

Moneyash—A marble of two varieties. One has a ground of light mottled gray, while the other has a similar ground of a bluish tint. The former has purple veins, which spread out in ramified forms and both contain numerous fossil crinoid shells.

Petitor—A marble of four varieties in color. Yellow clouded, gray clouded, red and fossil clouded with small pink veins running through the ground mass at all angles.

Plymouth Black—A deep black marble with a few white veins and small patches. Used in the pulpit of St. Paul's Cathedral, London.

Poolvash Black Marble—The popular name for a finegrained, compact blue-black limestone. It is too soft to take a very durable polish, so it is sometimes coated with black varnish and used for interior decorative work.

Purbeck Marble—A fossiliferous marble, of different textures and colors, varying from a light blue-gray, a greenish-gray, to a reddish-brown.

Red Ogwell Marble—A bright red marble with large light colored fossil inclusions, used for decorative purposes.

Red Ogwell (Dark)—A brownish red marble variegated with gray and white veins and marking. It also runs in dark and light variety of red, and also gray.

Sussex Stone—The trade name for a highly fossiliferous stone, variegated greenish-gray in color, and taking a high polish.

Weldon Stone—The popular name for a blue shelly limestone, yellow or brown when long exposed. It is very hard and takes a polish.

#### France-

Bise Africain—A brecciated marble largely composed of gray, red and yellow angular fragments cemented together by a dark green matrix.

Bleu Dore-A bluish marble with veins of yellowish gold.

Boisjourdain—A fossiliferous marble, dark blue, with white veinings and small red markings. Used for interior decorative work.

Breche Aleppe-A marble with a yellowish green ground-

mass, with spots of green, white, yellowish red, violet, olive and brown, with pale gray veius traversing the spots.

Breche Grand Antique—A brecciated variety of Grand Antique. It has large black spots with a few fossil shells and is crossed by zigzag white lines.

Breche Petit Antique—A brecciated variety of Grand Antique. It resembles Breche Grand Antique, but the spots in it are smaller and instead of being black they are dark gray.

Breche D'Aste...A brecciated marble with an orange colored base with white angular fragments traversed by thin veins of the same color as the matrix.

Breche Des Pyrenees—A brecciated marble of several varieties. Some are reddish brown with black, gray and red spots; others are of a clear orange yellow with white spots; and others again are yellow with small black spots closely placed.

Breche Medoux—A brecciated marble, colors covering a wide range including black, white, gray, yellow and brown, the matrix being a deep orange.

Breche Porter—A brecciated marble composed of black and dark gray angular fragments in a brownish gray matrix with a few yellow thread-like markings.

Breche Souris-A blue-black variegated marble, not a breche, used for bases and interior decorative work.

Campan-A marble of several varieties. Some of a delicate rose-colored groundmass, which in some places merge into a dark red, with a few white spots and pale green veins. This variety is called Campan Isabelle. Campan Rouge has a dull, blood-red ground, with veins of darker red and bronze green, and spots of fleshy, and sometimes greenish white. Campan Vert is of two kinds, the clear and the dark. The former has very light shades of green softly blended as a ground with thin veins of dark green, forming a network with long meshes. The dark Campan Vert has a ground of dark green with numerous flesh-colored spots. Sometimes there are also spots of transparent green, or small red spots and thin white veins. The mixed Campan combines all these varieties, which are found in layers, each occupying a space of from a few inches to three or four feet in depth.

Campan Melange—A merble composed of pink, green and white markings, alternating with bands of dark red, veined with green, intersected with thick white shattered veins.

Campan Rose—A pink and white marble with slender green and white veins.

Champville—A cream colored interior marble.

Dauphin-A pale red marble melting into white and sometimes to an agate violet. It takes a good polish.

Desert (Le)—A marble of several varieties. A marble comprising a white statuary. Some of which are white, pink and green with some green veins; and a Poudingue Vert, or green puddingstone which contains rounded patches of white, gray, green, yellow and black.

Doue-A marble showing varied shades of purple and small white spots.

Echaillon—A fine-grained and compact limestone, or monotone marble, that takes a high polish. It is strongly marked with fossils. The stone found at Saint Quentin is white, with occasional beds of rose color. That from the Commune de la Riviere is of a warm, rich yellow color.

Elmentier—A marble showing several semi-transparent tints mingled with silver upon a red ground.

Escalette—A pink and cream yellowish marble with red and brown veined markings,

Estendar—A marble of several varieties. Some have a gray ground with black spots and brilliant yellow veins. A kind called Isabella du Var, is light brownish yellow tinged with red.

Estival—A serpentine marble. It is of a deep green, with clear green crystals embedded in it,

Fleur De Pecher—A grayish white marble with red veins, exhibiting shades of peach-color, white, pink, purple and brown.

Grand Antique—A marble with a black groundmass with large irregular white blotches.

Grand Chartreuse-A marble of several colors and varieties, a mottled white, brown, yellow, gray and pink.

Grand Jaspe—A marble showing combinations of gray, yellow, brown, green and white.

Grand Noir-A black marble with markings of white and gray.

Grand Rouge—A marble of several varieties. Some show mixtures of white, gray, and red and are very effective.

Griotte De Sost—A French variegated marble. It gets its name from the griotte cherry, because of its brilliant red color and also because the crystals, marked by fine white veins, somewhat resemble a mass of flattened cherries. Used in decorative work.

Griotte D'Italie—A marble with a very dark red or brown groundmass with cherry colored patches, with white spots. There is another variety which lack the white markings known as Fleuri.

Gris Louverne—A decorative marble. It has a black ground with white veinings.

Hauteville—A compact calcareous stone of a clear yellow, fine-grained, fossiliferous, calcite crystals filling the mass. Used as a marble for decorative and monumental work. Takes a brilliant polish.

Jaspe Du Var—A brecciated crystalline rock in which cream-colored patches or fragments are cemented together by red calcite. Used for decorative work.

Jaune Jaspe....A yellow marble with a mottled appear-

ance with white calcite veins running through the mass intersected by red thread-like markings.

Joinville—This marble possesses the same delicate fawn colored matrix that is present in the Napoleon marble, but the thread-like markings are more clearly defined.

Langres—A brownish gray marble with numerous white semi-transparent fossils. Some varieties contain small yellow shells.

Manche—A marble of several varieties. Some are white speckled with varied shades of gray, with some white and gray crystalline zones.

Napoleon—A marble of several varieties of colors and tints with veins of white, gray, auburn, pink and brown. Some are brecciated.

Rose De La Peliviere—A marble with a red groundmass interspersed with gray patches and slender rose colored and white veins. It takes a good polish.

Rose Des Alpes (Susanne)-A yellow marble intersected by thin red markings.

Rose Eujugeraie—A marble with a red groundmass interspersed with patches of pearly gray, and with bright red and white veins. It takes a good polish.

Rose Vert—A marble with combinations of pink, green, yellow, and a little violet. A bluish gray marble is found in the same locality.

Rosso Antico—A marble also called Rouge Antique has a groundmass of blood-red with thin white veins and minute white dots.

Rouge Antique—A marble of a deep red color with occasional white streaks somewhat similar to the famous Rosso Antico. Used to some extent for small decorative work.

Rouge Francais—A marble with a groundmass of varied red, with white veins and black and red spots.

Rouge Jaspe Antique—A brilliantly colored bright red marble with broad orange colored streaks.

Rouselet (Le)—A yellowish marble tinged with gray and veined with white.

Russ—A marble of several varieties, containing numerous fossils. Russ Brun is brown and Russ Vert has mingled shades of brown and green.

St. Just—A serpentinious marble of green with greenish white veins.

St. Quentin-A marble with various shades of gray and slate-blue.

St. Remi-A marble with a clear yellow groundmass speckled with violet and with crystalline fragments.

St. Remy-A marble of several varieties. Most of them have combinations of white, yellow, and red.

St. Romain.—A brecciated marble with a dull brick-red groundmass, with angular spots of egg-yellow.

Sarancolin—A marble with a grayish groundmass with large blood-red spots and greenish yellow, and large vein-like patches of white and rose.

Stalactite Du Bedat-An onyx marble with numerous wavy slender veins, some being dark brown and others rich amber while milky white lines appear occasionally.

Vert De Grezain—A very dark green marble nearly black with patches of bluish green scattered through it. It does not take a high polish.

Vert Maurin-A green and black serpentinious rock with fine white veins.

Vert Moulin De Caunes—A cloud-like colored marble consisting of green and white patches blending into each other, the latter containing red spots and the whole traversed by senuous dark veins which are intersected by slender white markings.

Violet Pale—A pink and white marble with white patches and occasional green black veins.

Violet Rouge—A rich red colored marble with white calcite veins.

#### Germany-

Alma...A grayish pink marble with broad white calcite veins and slender purple and golden colored markings.

Bavarian Green-A cream and pink colored marble freely intersected with dark green and blue veins,

Famosa—Also known as Formosa—A marble of various colors displaying pink, gray, and cream colored shades. Another variety has orange colored veins running through a pink and white groundmass.

Goldedar—A deep black colored marble with white and well defined calcite veins, some of which are stained with iron.

Green Poppenberg—A fawn colored marble slightly tinted with green, with a network of dark green veins and occasional red thread-like markings running through the mass.

#### Greece-

Cipollino—A marble with alternate bands of white and pale green. Used in Europe in Cathedrals and public buildings since the days of the Roman Empire. It received its name from the fact that its layers resemble those of an onion.

Green Porphyry—A stone with a dark olive green groundmass with light green crystals and occasional small bluish agates sprinkled through it.

Hymettian Marble—An antique marble of dingy white with a slight tinge of green and long parallel dark gray veins of varying breadth.

Nero Antico.—The famous black marble widely used in Ancient Rome, is fine-grained, of a deep black color, taking a high polish.

Parian—A white marble considered at one time to be the finest statuary marble in the world, with a delicate and sub-translucent appearance. The output at present is small as the pure white variety can only be obtained in small pieces.

Pentelic Marble-One of the most famous and widely

used of Grecian marbles, is fine-grained, and of a warmer white than the ordinary Carrara marble. Quarried on Mount Pentelicus, near Athens, Greece. It is furnished in three grades, Ordinary (structural), Selected (decorative) and Statuary. There is also a blue-gray variety.

Rosso Antico-A close-grained marble of a deep rich red.

Skyros—A marble of several varieties usually of a light cream shade but the veinings differing considerably both in color and form. Some dark, and others of an orange color and bright red. The varieties are designated as Skyros A Gslia—Skyros 14, Skyros 12. The most popular are Skyros A Gslia, Skyros 14 on account of their highly decorative qualities.

Tinos No. 3—A green marble of a rich light green ground tone, with white veins, very sound, known as Vert Tinos.

Verde Antico—A brecciated serpentine of three varieties, light, dark and intermediate color, used since the days of the Roman Empire.

Vert Tinos-A green marble of deep reddish green ground with strong zig-zag light veins running through it.

#### India-

Dolerite—A compact rock, deep black in color with numerous white porphyritic crystals of feldspar scattered through the groundmass.

Gray Bichia—A light gray marble with black and white mottling; hard, and takes a good polish. Also known as Image Stone and Pot Stone.

Green Felsite—A pale green stone that takes an excellent polish, used for ornaments and all kinds of decoration work.

#### Ireland-

Armagh—A cream-colored marble. There is also a variegated marble having different shades of light red tending to purple, brownish yellow and dove color.

Ballinahinch—A marble exhibiting varied shades of light green, with brown and greenish white markings.

Ballykiloboy-A dark gray marble with fossils embedded in it.

Black Madrepore—A black marble interspersed with gray fossil corals.

Connemara—A green serpentine varying in colors from a light, medium dark, and dark, with twisted and interlacing bands of green varying from a deep sap green to a translucent pale yellowish green with veinings of white.

Cork Red—The trade name for a variegated marble. The color varies from light red, with white mottlings, to brown, with small red and white spots and brown veining. Also known as Victoria Red.

Dunkerron—A marble of several varieties. Some show combinations of black and white, white, yellow and purple, and purple veined with dark green. Galway Gray-A gray and dark gray marble with minute flecks of white.

Golden Breccia—A brecciated marble with fragments of light pink and deep red.

Irish Black—A fine grained marble of various colors. The dominating shades being black and drab, being chiefly used for walling and road making. Another variety has occasional white spots.

Irish Gray—A gray marble, the fossils of which lie at all angles.

Kilkenny Black-A decorative black marble.

Killarney—A beautiful marble striped with red and white. Middleton—A brownish red marble, with spots and veins of white and whitish red.

Royal Connemara—A serpentine, largely used for columns and decorative work. The color varies from light yellowish green to very dark green, with occasional patches of purple. The marble is generally beautifully clouded, mottled or veined. Sometimes called "Galway Green."

Tardree Stone—A porphyry with a light straw-colored groundmass and crystals of a smoky quartz. Used mainly for trimming. It is a dark brownish-gray when first quarried, but becomes much lighter on exposure.

Tipperary-A fine purple marble.

Victoria Red—A variegated marble of a brilliant red, with light colored patches and mottling.

## Italy-

Agrellei—A brecciated marble, with a greenish groundmass and large and small inclusions of white and brownishred. Used for decorative work,

Alcino—A marble of several varieties. A brocatello has a dark violet ground, with interlacing white veins. Another variety is black with white veins. Another is black with white spots and resembles a breccia.

Alps Green—A dark green marble with mottles and waves of light green and white. Takes a high polish.

Aurora Rossa-A marble with a pink groundmass, with white patches and slender brown white markings.

Bardiglio Fiorito-A dove colored marble, of which the veinings are interlaced and run into flower like forms.

Bardiglio—A dove colored marble of a hard close grain texture often used for flooring.

Bergamo—A marble of two varieties. One comprising the black called Paragone, which is of superior quality and takes a high polish. The other a breccia, which has a greenish gray groundmass with black and gray spots.

Bianco Breccia-A marble known as Carrara statuary second with numerous gray patches.

Bianco P—A milk white marble generally free from veins or markings, but occasional light clouds and spots.

Black and Gold—Comes from the quarry in three grades: No. 1, black with yellowish yellow, reddish yellow or brown veins, varying from small wavy lines to large flat mark-

ings; No. 2, same as No. 1, except that a portion of the veins are grayish white; No. 3, same as No. 1, except that the yellowish veins are only occasional and the grayish white veins are prominent.

Bleu Fleuri-A marble with mingled shades of yellow, pink, red, green and violet.

Blue Turquin-A clouded dove colored marble with numerous white markings.

Botticino—A marble of several varieties in color running from a uniform dark cream, light cream, and light fawn color with nearly white patches. A light cream with slender brown markings, and another with a groundmass of light color which renders the brown markings more conspicuous.

Breccia Aurora—A distinctly brecciated marble, having light fawn colored fragments embedded in a brownish red matrix, with a few dark slender red veins running through the mass.

Breccia Di Serravezza—A marble of several varieties. It has a white groundmass tinged with purple, with spots of red, and sometimes, but rarely of black. Some varieties are red, rose-color, lilac, peach color or yellow. See Serravezza.

Breccia Di Verona—A fine marble presenting a crystalline mass of pale red, mixed with yellow, black and skyblue.

Breccia Di Smyrne—A brecciated marble similar in character to the Breccia Violetto. It consists of angular patches cemented together in a brownish groundmass, tinged with green.

Breccia Violetto—A brecciated marble composed of white and occasional red or brownish purple fragments. The veins, which constitute the cementing material, varying in color in the different beds. Another variety has small white, pink, red and brown angular fragments cemented together by a matrix which varies from light purple to dark green.

Breche Opal-Cream-white background with various light colors and purple fragments. It takes a high polish.

Candoglio—A light salmon colored marble having a slight mottled appearance when polished. It was employed in the construction of the celebrated cathedral at Milan.

Claret—A marble with a groundmass of white and gray speckled with black.

Convent Siena—A marble having a rich orange shade, with numerous purple and black veinings. The name Siena is also applied to other marbles possessing yellow tints. The quarries which yield this variety are the property of the Convent Montaronti, hence the name Convent Siena.

Cunard Pink—The trade name given to a monotone marble of a yellowish pink tone, recently introduced into America. Used for interior decorative work.

Dove—A marble of several varieties presenting a bluish gray or dove-colored hue. These marbles are very hard. Egyptian Green—A marble of two varieties. One has a groundmass of a darkish green with spots of gray and occasionally of white. Another has a red groundmass with clear dark green veins and a network of white lines.

Giallo Antico—A yellow marble. It is of the color of the yolk of an egg, sometimes uniform and sometimes marked with black or brownish yellow rings. Giallo Breccia is a brecciated variety of the same, having a light yellow ground with deeper spots.

Italian Cipollino—A marble very similar to the Greek Cipollino in color and markings, although not so green, but with distinct intersecting hues.

Levanto—A marble of several varieties. They are in masses of dark red and green. Some specimens are of a reddish violet with a background of most varied tones, splashed with white and green markings.

Maremma Red—A brecciated marble with red markings. Not much used.

Mezzano—The trade name for a monotone marble widely used for decorative work. It has a cream colored ground, with cloudings of light pinkish tint and faint gray veinings. There are two varieties: Mezzano Bianco and Mezzano Semiscura, in the latter the pink tint being the more pronounced.

Mischio—A marble of several varieties. Mischio di Serra Valle is of a dirty white intermingled with gray, black and yellow. Mischio Di Marmaroga is clear ash color. Mischio di Volterra is gray intermingled with white and light red. Mischio dei Conti is pale gray with brown spots, Mischio di Mitigliano is pale red mixed with yellow. Mischio quarried in Brescian is pink mingled with white. Mischio di Siena, found in Tuscany, is flesh-colored, mingled with white. Mischio di Frosini, quarried near the Abbey of St. Galgano, is reddish with white spots. Verde Mischio, quarried near Padua, is green with black and white veins.

Molina Rosa—A variegated marble, with a pink and white groundmass traversed by a profusion of dark reddish brown veins.

Montarenti—A marble having a yellow ground, with black veins tending sometimes to purple.

Montarenti Dark and Light Siena—The Montarenti Dark Siena marble contains a profusion of black veins, some of which are slender and thread like, others wide and blurred, forming clouded patches. The light Siena has a groundmass of a richer orange color and the black veinings are more distinctly defined, with occasional patches of calcite.

Parona (White Statuary)—A coarse grain, pure white statuary marble.

Pavonazetto—A marble with a white faint yellowish crystalline ground through which run violet bands and dark green veins.

Pavonazzo-A white marble of several varieties, with a

display of golden colored and dark purple veins and markings. The matrix has a faint yellowish tint. One has a light colored matrix with an ivory shade throughout, with dark purple veinings. Another varying from a gray to a dark purple. Another variety has dark green veins and markings. The name Pavonazzo is said to have originated from the resemblance of a plumage of a peacock.

Persecchino—An antique marble of two varieties. Persecchino Grande has a white ground with lilac and violet colored spots. It is sometimes called Violet Breccia. Persecchino Piccolo is like Persecchino Grande only its spots are smaller. Some rare varieties have rose colored spots.

Piastraccia—A marble of two varieties. One of a white groundmass with slender dark greenish gray veinings. Another of white statuary dominating the mass, with the green shade in the veins lacking,

Pisa—A marble called Fiorito di Pisa has a ground of clear yellowish white, with numerous black spots and small specks. Vert de Pise is pale greenish gray.

Polcevera—A mottled dark green marble with waves of a lighter green. Takes a high polish.

Poppi-A grayish green brecciated marble veined with yellow,

Portor—A black marble traversed by yellowish, reddish and brown veins.

Pratolino—A marble of several varieties. Liniato di Pratolino is grayish green, with bands ad veins. Verde di Pratolino is of a dirty green. Tagliaferro is grayish green with bands and veins. Another variety has blended shades of green and pale red.

Red Carrara—A marble with a red groundmass through which run a few small white patches.

Red Verona—A marble with a reddish brown groundmass, with occasional dark red veinings.

Rhondona-A brecciated marble with white fragmentary patches tinged with pink,

Rosso Di Levanto—A serpentinous marble found in two varieties. One a purplish or brownish black, sometimes veined with dull green and a green variety with white veins

St. Just Marble—The English name for a cream colored monotone marble. Used mainly for carved and ecclesiastical work.

Serravezza—A marble of several varieties. Most of them are white with purple veins and occasional red spots.

Sicilian—A marble of several varieties. Two well-known kinds are the veined and the clouded. The first is white with well-defined bluish veins. The latter is more of a pale gray than white, and its veins are blurred and clouded.

Sicilian Jasper—A marble with a red groundmass, with zig-zag bands of white, red and sometimes green.

Sicilian Statuary—A clear white marble. There is also a veined variety with light veins.

Tavernelle Claire—A light creamish yellow marble, slightly variegated. Takes a high polish.

Tavernelle Flurie—A light rose creamish marble with rose veins of varying shades. Takes a high polish.

Tavernelle Rose—A pinkish yellow marble, slightly variegated with rose markings. Takes a high polish.

Tulanto (White Statuary)—A white statuary marble of the Carrara group, with a few gray lines running through the mass.

Veine Dore—An orange colored marble a little lighter in shade than the Convent Siena marble.

Verde Di Genova—A dark green brecciated serpentine with a black groundmass, spotted with white calcite and occasional white thread-like markings.

## Norway-

Antique Fonce—A decorative marble with soft clouded white and greenish gray veinings, beautifully blended.

Breche Rose—A colored variety of marble with a groundmass of light rose color, and with white patches with occasional light green veins running through it.

Citron Furuli-A close crystalline marble possessing a faint yellow tint.

Fo-A fine grained cream white marble used for exterior and interior work.

Gjelleboek Marble—A decorative veined Norwegian marble of gray color, with an unusual tinge of green and brown

Leifset Gloire—A Norwegian decorative marble with a white groundmass and pink and green bands. Where the pink tone predominates, the marble is called Sunset Rose.

Norwegian T. O .- A white marble with a faint creamish background crystalline, and with easy working qualities.

White Salten—A pure white crystalline marble of a very course texture and very bard.

## Portugal-

Abancado Das Lameiras—A variegated marble possessing several shades of pink, giving it a mottled appearance.

Alentejo—A fine yellow marble which resembles yellow Siena.

Almiscado Escuro-A marble with yellow veinings running through a light gray and violet matrix.

Arrabida Marble—A brecciated marble, with an endless variety of small pebble fragments of various colors, including black, purple, red, pink, gray and white, united by a yellow cement.

Borba (Red)—A light pink marble with clouded blood colored veins. There is also a lighter variety with the markings much less defined. Encarnado (Emperor's Red)—A red marble, varied with specks of pale pink and white, and faint outlines of small fossils.

St. Silvester—A beautiful marble with combinations of delicate pink and semi-transparent white.

Vidraco No. 1—A delicate bluish fawn colored marble, marked with slender faint streaks of a reddish brown. There is another variety of which the groundmass is darker and the slender veins of a deeper red.

#### Scotland-

Assynt—A white, bluish gray and dove colored marble. Blairgowrie—A white statuary marble.

Dunbar-A dark grayish-brown marble.

Iona Marble—A light green serpentinous marble with dark blue and green veins. Used for decorative purposes.

Skye—A marble of a light gray groundmass, with a suggestion of violet and pink, and occasional thread-like black markings.

## Spain-

Blanco Rosado—A white marble with yellow and rose colored patches.

Breche Rose—A brecciated marble composed of white fragments cemented together with a light pink material.

Chercos Blanco—A white statuary marble freely employed for ecclesiastical and sculptor work in Spain.

Griotte D'Espagne—A bright red marble containing white calcite veins. There is another variety of a red cherry color, but the white calcite veinings are lacking, which gives the marble a darker and less variegated appearance.

Guipuzcoa-A red marble veined with gray and closely resembling Saraccolin.

Juane De Cuenca-A rich orange colored marble with light brown markings.

Mallorca—A brecciated marble, with small angular white and green fragments scattered through a red ground.

Marmor Rosa—A light pink marble with slender dark red markings.

Mola—A variegated marble of a light pink, with white veins and a few thread-like markings of deep red.

Molina—A red, yellow and white marble, having a coarse, granular texture.

Noir Veini-A deep black marble interlaced with numerous well defined white calcite veins and markings.

Rouge Clair—A red marble, with a reddish brown mottled ground, traversed by white and transparent veins.

Rouge St. Isidro—A variegated marble variously tinted with oxide of iron, which gives it a red appearance.

Tortosa Brocatello—Sometimes known as Brocatell d'Espagne, made up of a red background, in which there are numerous fossils which vary in color from yellow to snow white. It is chiefly used in Spain in small panels,

mantel pieces and clock cases. Also for ecclesiastical decorative work.

Valencia—A marble of two varieties. One is a dull violet colored marble with orange yellow spots, and another is of a dull red with black veins.

Verde Moulin—One of the variegated marbles of the Navarra provinces of Spain. It has a violet and pink flowered groundmass intersected with light green and white veins. Used as a decorative material in some of the churches and private residences in Spain.

## Sweden-

Swedish Green (G.3)—This represents the light colored variety of Swedish green marble. It is obtained from what is known as the G quarry. The veining in this variety is somewhat irregular and has a slightly mottled appearance.

Swedish Green (N.Y.T.2)—A dark variety of Swedish green marble. The groundmass of which is much darker than the other grades marbles. It is classed among the mottled marbles. Swedish Green (T.G.)—A name given to another variety of the (G) marble when sawed across the bed, the veining is more clouded and slightly darker than the (G) variety.

#### Switzerland-

Soleure Yellow—A marble varying in color from a light blue gray to a deep orange or a light primrose shade and highly fossiliferous,

Swiss Cippolino—A widely used decorative marble. It has a pale green ground, with straight, thin veins of a deeper green. When sawn with the bed it shows a fine pattern. There are two varieties: Grand Antique, in which the banding is not strongly marked, and Rubanne, with heavy veins.

Villeneuve (Light).--A lighter variety of marble quarried at Canton Vaud.

Villeneuve (Dark)—A dark veined variety of marble much used for tombstones.

Vionnaz—A compact gray marble of several shades. Some of which are freely veined with calcite.

# Foreign Limestones

#### Australia-

Cashmere Hills-A gray toned hard limestone used for building work.

Oamaru Stone—A medium-grained, light cream colored, shelly limestone. It works and carves easily and is widely used in New Zealand and Australia for the superstructures of building and ornamental work.

Mt. Somers-Same as above, but much harder.

Timaru-A hard bluestone used in trim of local build-

## Austria-

Lorrettorn-A white medium grained calcareous lime-

Mannerdorf-A light gray fine grained fossiliferous

St. Margit—A medium grained, cream colored limestone, quarried near Budapest.

## Belgium-

Hainault—Limestone of several varieties and colors and produced in Belgium. A light also dark blue gray, a blue gray, highly crystalline medium grained, and a gray and white mottled used for building work.

Petit Granite—A black compact carboniferous limestone, fine grained, crinoidal and takes a fair polish.

## Egypt-

Batur Limestone—A close grained cream colored limestone.

Chemari—A dark cream colored medium grained chalky limestone, slightly shelly.

Ducka—A fine grained, light cream colored chalky limestone.

Giuschi—A dark cream colored limestone, soft and easily worked.

Mokhattan—A limestone of several varieties in texture, some are soft and chalky, others are hard and compact.

Palomba-Same as Ducka.

Tura-A light cream to yellow, fine compact limestone, slightly shelly.

## England-

Ancaster Stone—A crystalline limestone. Used for building purposes. The Weather Bed is coarse-grained, mottled brown and gray. The Free Bed is fine-grained and cream colored.

Barnack Stone—One of the most famous building stones used in Ancient England, and employed by King Wolfere in building Peterborough Cathedral, A. D. 664. Many of the oldest colleges in Cambridge are of this stone, but the quarries were exhausted in the Sixteenth Century. It is a medium grained cream colored, shelly limestone.

Bath Stone—The general name given to an oolitic limestone of extensive range in Southwestern England, getting its name from characteristic beds in the vicinity of Bath. It varies from fine to medium-grained, and from light gray to cream and buff in color. Bath Stone has been widely used for building since the days of the Roman occupation. It is generally obtained from underground workings. For the usual varieties supplied to the building trades see Box Ground, Bradford Stone, Combe Down, Corn Grit, Corsham Down, Farleigh Down, Hartham Park, Monks Park and Stoke Ground.

Beer Stone—A fine-grained, compact, almost white chalky limestone. Used for many centuries for building, interior and carved work. It is soft when first quarried, but hardens on exposure.

Box Ground—Called in recent years St. Aldhelm Stone. It is a variety of Bath Stone, quarried for centuries on and about Box Hill, near Bath, Wiltshire, and used for building for more than 1,200 years. It is medium-grained, and light brown when freshly quarried, but turns cream color on exposure.

Carlisle Stone—The general trade name given to imported English and Scotch freestones, from the fact that they were brought in ballast by sailing vessels from Carlisle.

Casterton Stone—A medium-grained colitic limestone of a warm cream color. Sometimes called Stamford Marble.

Chilmark Stone—A yellowish-brown, siliceous limestone, used for building purposes for many centuries.

Clunch—A term used generally in England for all chalk rocks that can be utilized for building purposes, but applied specifically to a white, compact, fine-grained chalky limestone. Used in some of the earlier college buildings at Cambridge, but the work has since been replaced by a more durable stone. Used for ecclesiastical and carved work.

Combe Down Stone—A Bath colite. It is a mediumgrained, cream colored stone. This is the stone used by the Romans in the second and third cenutries. Employed largely for church work.

Corn Grit—One of the beds of Bath Stone. It is a coarse and rather shelly onlite, cream colored, and is generally used for interior work, like platforms, steps, columns, etc.

Corsham Down Stone—Is one of the most widely used of the Bath Stones. It is moderately fine-grained, of an even texture, and of a light cream color. Used for exterior and interior work.

Dapple Limestone—A close grain, compact limestone of two varieties. One a light cream color and the other a dark cream, with dark brownish feathery patches. Sometimes called New England marble.

Doulting Stone—A cream colored crystalline limestone, ranging from fine to coarse-grained, the coarser stone, konwn as the "Chelynch" or "Brambleditch," is adapted for exterior use, and the "Fine Bed" for interior work. Doulting Stone has been used for centuries for the construction or restoration of famous cathedrals in England.

English Alabaster—A soft granular variety of hydrous sulphate of lime, commonly called Gypsum, unally white and translucent with occasional light brown orange colored bands and veins. It hardens when exposed to the air and takes a good polish. Another variety has reddish brown veins with green markings. Others are without markings of any kind.

Farleigh Down Stone—A Bath Stone. It is fine-grained and even-textured, and of a rich cream color. Used only for interior work.

Ham Hill Stone—A limestone mainly composed of comminuted shells cemented together by ferruginous matter, with an open or cellular texture. One variety is a light brown or buff tint, and is known as the "Yellow Bed" and another, much darker, is called the "Gray Bed." Used from the time of the Roman occupation and employed in the construction of many famous churches.

Hartham Park Stone—A Bath Stone. It is a finegrained oolite, of even texture and warm yellow color.

Hopton Wood Stone—A fine-grained crinoidal limestone, It ranges from cream to medium gray in color, with crinoidal fragments of a lighter tone. It takes a fair polish.

Ketton Stone—A medium-grained granular limestone, light pinkish or yellowish-brown in color. The original quarries are exhausted, but the name is given to stone of similar quality taken from quarries in the neighborhood.

Monks Park Stone—A Bath Stone. Fine and evengrained, cream color.

Nailsworth Stone—A fine-grained, light cream-colored oolitic limestone is obtained from underground workings at Ball's Green, near Nailsworth, Gloucestershire. Used for interior church work and carved work.

Painswick Stone—A light cream colored, fine-grained, granular limestone. Used for interior and ecclesiastical

Pisolite—From the Greek word meaning pea, is a limestone of colitic structure, in which the individual grains are the size of a pea. It is rather common in some of the colitic beds of England, where the stone is given the popular name of Peastone or Peagrit.

Purbeck Stone—The name given to a sandstone and a limestone. Used for building purposes. Both stones are fine-grained and of a light cream color.

Ribblesdale Stone—A compact crystalline limestone, widely used for structural work. A light gray variety is known as Ribblesdale White, and a bluish-gray variety as Ribblesdale Blue.

Stoke Ground Stone—A Bath oolite. This is light brown in color of medium grain and somewhat open texture. Used for building and carved work.

#### France-

Artiges-A white colitic limestone of hard and close

Caen—A light-colored limestone, easily worked and used principally for interior building.

Chassignelles Limestone—A compact, fine and evengrained oolite, almost white in color, and carves well. The decorative stone from the lower beds is known as Pierre Marbree d'Ancy-le-France.

Comblanchien of Corgoloin—A compact, fine-grained oolitic limestone. Yellowish-gray in color, with some touches of rose, and whitens on exposure.

Coutarnoux Anteor—A hard colitic limestone of a light golden-yellow color. Used for building work.

Crazannes—A hard and close textured limestone of a light golden-yellow tone.

Echaillon—A semi-crystalline limestone with brilliant silver reflections.

Euville Stone—A fine to medium-grained limestone, varying from a silvery white to cream color. There are two varieties, one for building and the other for carved and interior work.

Eysus, Pierre D'—A hard, compact limestone, of a deep rich gray color, taking a high polish. Used for decorative work. It was formerly popularly called a granite, although it has none of the qualities of that stone.

Foret Des Brousses-A very fine-grained and hard limestone, almost milky-white in color,

Lerouville Stone—A medium-grained, shelly limestone, light gray or yellow in color.

Lignerolles-A hard cream-white limestone.

Lunel, Pierre De, or Napolean Marble—A whitish-gray limestone, variegated with rose color-

Merouil—A compact, hard limestone, almost pure white. Pierre de Lens—A fine-grained, compact white crystalline limestone. Worked since the time of the Romans. Building and monumental.

Pombreton-A soft calcareous limestone of a warm vellow tone.

Pouilleney Brun—A limestone of three varieties, brown, pink and gray. The stone is calcareous. It is used for building work.

Rippes-A very hard limestone of a yellow tone.

Roche de St. Quentin-A light cream-colored limestone used for building. The texture is hard.

Sereuil Ameline—The trade name for a medium-grained limestone, gravish-white in color.

St. Meme Anteor—A cream-colored limestone of a light and dark shade, soft in texture and easily worked when first quarried, but hardening upon exposure.

Terce Limestone-A fine-grained, white oolitic limestone. Tourris, Pierre De-A fine and even-grained limestone, of a uniform ivory tint. Used for sculptural and ornamental work.

Vaurion—A fine-grained brownish-yellow limestone.
Villars—A pinkish-white limestone of a very fine grain.

## Germany-

Crailsheim—A light brown sub crystalline limestone. Rottenberg—A dark gray compact limestone.

#### Ireland-

Irish Limestone—A compact, fine-grained stone, often fossiliferous. It varies in color from dark gray to blue-black. Much of it takes a high polish and tools white.

## Italy-

Doria—A fine to medium-grained cream buff colored cellular limestone. Soft and easily worked.

Florentine White Alabaster—There are several varieties of this alabaster, including veined, spotted, clouded and yellow, agate, gray and white, while others lack markings of any kind.

Italian Lava Stone—The name generally given to a heavy gray trachyte, much more dense than "Piperno" or "Peperino."

Italian Tuff—A soft fragmental rock, yellow or gray in color, often with black inclusions. Generally used for interior work.

Peperino—The popular name for a volcanic stone in which are embedded bits of black lava, giving it a peppered appearance, whence its name. It was used from the earliest time for building purposes in Italy and many of the most famous structures of Ancient Rome were of this material. The two classic varieties were Lapis Albanus, light gray, Lapis Gabinus, light brown, and harder than the former. Peperino is still quarried at Marino, near Lake Albanus.

Piperno—The popular name for a gray lava stone, containing flame-like streaks of darker lava. Used for building. Not to be confounded with Peperino.

Selce or Lapis Silex—A very hard, dense, dark bluish colored basaltic lava, used for thousands of years for paving purposes in Italy.

Travertine—Is a stone formed by calcareous deposits precipitated from running water. It is of a creamy color, of a very cellular texture, and so soft that it is easily cut by a saw, but hardens on exposure. Travertine was one of the most widely used stones of Ancient Rome, the Colosseum and many other famous structures being built of it. Large quantities of Italian Travertine have been brought to America for structural work and interior finish. The word "travertino" is an altered form of the old Roman Lapis Tiburtino, "stone from Tibur," the ancient name of Tivoli. For the American varieties of this stone, see Biesanz's American Travertine and Tracon.

## Jerusalem-

Mizzeh—A cretaceous limestone of several varieties of color, cream and brown mottled, pink with red veins, light drab, bright pink with yellow veins and straw colored with pink veins. It is fine grained and hard. Another variety is slightly crystalline and takes a fair polish, Quarried in the vicinity of Jerusalem.

#### Malta-

Malta—A very fine grained arenaceous limestone of a light straw color. There is also a white variety and occasionally with a pinkish tint. It is soft when first quarried. Employed for building purposes.

## Russia-

Elkair-A pink colored fine grained cretaceous limestone.

Kreise Wenew—A light yellow medium grained chalky limestone used for building.

Reval—A light buff, very fine grained limestone, building work.

St. Koloma—A light yellow, slightly mottled, compact limestone.

## Spain-

Almorgni—A light cream medium grained limestone. Cornicabra—A fine grained light buff limestone. Morata de Tajuna—A light pinkish cream fine compact

#### South America-

Mar del Plata—A light cream fine grained limestone, another variety is of a very light fawn color and slightly crystalline. Quarried near Buenos Ayres.

# Foreign Sandstones

limestone.

# Africa-

Cave Sandstone—The popular name for a fine-grained, light yellow sandstone.

Forest Sandstone—A fine to medium-grained sandstone, of light pink, salmon pink, or white tinged with pink. Largely used for building. This stone was employed by the unknown race that built the prehistoric cities of Africa.

### Australia-

Graytown Stone—A medium and even-grained sandstone, of a rich cream color. Used for building purposes.

Rosetta Stone—A fine-grained, light greenish-gray sandstone, used for building.

Barrabool Freestone—A fine-grained, dark gray calcareous sandstone. Extensively used for building in Melbourne and other Australian cities,

Donnybrook Freestone—The trade name for a fine to medium-grained sandstone, varying in color from light buff to yellowish-brown, occasionally banded. Used for public and business buildings,

Hawkesbury Freestone—A fine to medium-grained sandstone. It is readily worked and carved, and is widely used for public buildings and churches, as well as for general building work. It varies in color when freshly quarried from a light gray to a yellowish-brown, but weathers to a buff color.

Malmsbury-A dark and light gray bluestone used for rough building work, rubble and paving.

Pyrmont-A yellow sandstone. Used for building work.

# Egypt-

Gebel Selsella or Nubian Sandstone—A cretaceous sandstone of many varieties in color tone. Light yellows, gray, fine grained and compact. Orange brown banded, a red and white streaked and a straw colored, there is also a coarse grained light pink variety.

# England-

Black Pasture Sandstone—The popular name for a finegrained stone, light buff in color. Used by the Romans for the bridge over the North Tyne and for the great wall between the North Sea and the Solway. Used in modern times for building work.

Darley Dale Stone—A sandstone of varying color and texture, and used for building and heavy masonry. There is a close-grained light drab, a fine-grained salmon-pink, and a medium-grained light brown stone.

Denwick Sandstone—A fine-grained micaceous sandstone, varying in color from greenish-gray to light brown. Used for carved work and building.

Doddington Hill Stone—A light purplish-gray, finegrained sandstone. Widely used for building.

Forest of Dean-(See Pennant Stone).

Horderley Stone—A fine-grained dark purple sandstone, sometimes slightly banded, used for building purposes.

Mansfield Stone—A fine-grained calcerous sandstone. Used for building and for carved work. There are several colors, a light and a warm red, and a light and a warm yellow.

Merstham Fire Stone—The popular name given, because of its fire-resisting qualities, to a fine-grained, whitish-gray calcareous sandstone. Used for building purposes for many centuries. Used for Old London Bridge, 1176 A.D. Pennant Stone—The general name for a hard, closegrained sandstone. Extensively used for building. It varies in color from blue-gray to pinkish brown, and is known as Blue Pennant and Red Pennant.

Rainhill Stone—A medium-grained sandstone, ranging from light to dull red in color. Used for exterior and interior building work.

Reigate Stone—A fine-grained greenish-gray calcareous sandstone. Used for important buildings for centuries.

Runcorn Red Sandstone—A dull red, medium-grained, rather porous sandstone, used for building work, especially churches. A mottled variety is called "Flecked Sandstone." Limited use only.

St. Bees Red Freestone—A fine-grained sandstone, bright red and slightly banded. Used for building purposes for many centuries.

St. Boniface Stone—A very fine-grained, light gray calcareous sandstone. Used for building.

Self-Faced Flagstone—The trade name given to a medium-grained sandstone, yellow and brown, banded. Used for paving, platforms, etc. It gets its name from the fact that it splits smoothly along the lines of stratification and does not require tool-dressing.

Woolton Stone—A fine-grained, dull red sandstone. Used for building purposes,

## Germany-

Cordel—A light drab, medium grained and slightly

Daufenback—A light purplish red medium grained sandstone.

Freudenstadt-A medium to fine grained sandstone varying in color from a dull and light red tone pink and drab,

Maulbrom-Red and brown mottled medium grained, another variety is nearly white.

Nurtingen-A light drab sandstone with yellow spots from medium to coarse grained, building work.

Oderheim-A drab colored limestone with brown ferrugineous spots, medium grained.

## Ireland-

Scrabo Sandstone—A fine-grained, light pink stone, frequently banded with yellow. Used for building and ornamental sculpture.

Shamrock Stone—The trade name for a compact, finegrained sandstone that takes a polish. It is of a dark bluegray color and is used for steps, flagging, and building work.

## Italy-

Pietra Sirena—A fine-grained, light greenish-gray sandstone. Used for building purposes in the Tuscan cities and in Rome. The fine-grained stone is known as "Macigno" and a coarser variety, used for heavy masonry and paving, is known as "Cicerchia" or "Cicerchina."

#### Russia-

Radom—Several varieties of color tone. Dark red, bright yellow and light buff, all fine grained.

#### Scotland-

Alloa Freestone—A medium-grained, light pinkish-gray sandstone. Extensively used for building.

Annanlea Stone—A fine-grained, slightly micaceous sandstone, pink and light buff in color. Used for building. The two varieties are known as Red and White.

Ballochmyle Red Stone—A fine-grained, bright red sandstone, with ferruginous specks. Extensively used for building. In former years the stone was brought to America and Canada for construction work.

Blue Liver Stone—A fine-grained, micaceous sandstone, of a bluish-gray color, mainly used for heavy masonry and engineering work.

Caithness Flagstone—A tough and compact sandstone, dark blue-gray in color, and used for steps, platforms, paving, etc.

Closeburn Red Freestone—A fine-grained, slightly micaceous sandstone, varying in color from light to warm red. Used for building purposes.

Corncockle—A fine-grained, light red sandstone. Extensively used for building.

Craigleith Stone—A fine-grained calcareous sandstone, of a delicate gray color, and very widely used for building. The original quarries have been exhausted, but a stone bearing the same name, and very similar in color and texture, is now quarried at Barnton Park, a few miles distant from Craigleith.

Cullaloe Stone—A fine-grained sandstone of light cream color and popular for church building.

Dalgaty Sandstone—A medium-grained, light purple, highly micaceous stone. Used for building.

Corsehill Red Stone—A fine-grained slightly micaceous sandstone, of a warm red color. It has been used in this country for fine carved work and building.

Dumfries Stone—A medium-grained, light red, slightly micaceous sandstone. Widely used for building.

Gatelaw Bridge Red Freestone—A medium-grained sandstone, of a bright red color, with small rusty specks. At one time imported into America.

Giffneuk or Gifnock Liver Rock—A fine-grained, light pinkish gray sandstone. Widely used for building.

Hailes Sandstone—A fine to medium-grained stone. Extensively used for structural purposes. It is in various colors from light pink to gray, and is known to the trade as Blue, Pink and White.

Humbie Sandstone-Widely used for building. It ranges

from fine-grained light drab, to medium-grained light yellow, with brown ferruginous specks.

Locharbriggs Freestone—A medium-grained, light red

Moorstone Rock—The general name given to a group of medium to coarse-grained stones of the Millstone Grit measures. Used for building. The color varies from light straw to yellow, often speckled or slightly banded. Swinton Stone-A fine-grained, micaceous sandstone, of a delicate pink tint, and used for fine building work.

### Switzerland-

Molasse—A Swisa sandstone, fine-grained, and ranging in color from greenish-gray to greenish-yellow. Widely used for building. It is soft and friable. Molasse Marine, made up largely of marine fossils, is the most durable variety.

# Foreign Granites

## Australia-

Australian Trachyte—Used for building purposes in that country. Trachyte is a massive volcanic rock, getting its name from the Greek word meaning rough, because its texture is rough and rather porous. Trachyte is of wide occurrence, but only the Australian variety has been utilized for building. Petrologists declare that this particular stone should properly be classed as a syenite. It is considerably harder than granite and takes a beautiful polish, changing from a dull gray to a rich green. Also called Bowral Trachyte, from the town where it is quarried.

## England-

Cumberland Granite—A medium-grained, gray and dark greenish-gray stone. Used for building and paving purposes.

Manx Granite—A medium-grained stone, ranging from light yellowish gray to dark blue-gray, nearly black, Used for building purposes.

Montsorrel Granite—A hornblende biotite granite of a warm rose color.

"Moor Stone"—A name given in the 18th century to the Devonshire and Cornish granites, because they were quarried mainly from moorland tracts. Most of these granites are light gray in color, porphyritic, with distinct black and white crystals. The feldspars are called "Horses' Teeth" by the quarrymen. Both the Devonshire and Cornish granites have been used for nearly two centuries for heavy masonry and fine building work.

Mountsorrel Granite—A medium-grained stone, used for building and paving. It ranges in color from dark pinkishgray to a warm rose color, and takes a good polish.

Shap Granite—A unique porphyritic granite. There are two varieties, light and dark. In a crystalline groundmass of gray or rich reddish-brown large flesh-colored feldspar crystals are rather regularly and closely distributed, sometimes as twins. The granite takes a good polish and is used for columns and decorative work.

## Ireland-

Irish Granite—Is quarried in various districts and is widely used for building and monumental purposes. The principal varieties are: County Dublin, medium-grained, light and pinkish gray; Counties Carlow and Wicklow, moderately coarse-grained, light to dark gray; County Wexford, medium-grained, light to yellowish gray; County Down, fine to medium-grained; light greenish-gray to pinkish-gray; County Galway, fine to coarse-grained, dark gray to red; County Donegal, coarse-grained, silvery-gray and red.

# Italy-

Baveno Granite—Quarried on the shores of Lake Maggiore, is the most famous of Italian granites. The stone is medium-grained and of a delicate pink color.

# Scotland-

Alloa Granite—The trade name for a stone that is not a granite but a diabase, quarried in Kinross and Clackmanan, Scotland, and used for building purposes. It is fine to medium-grained, and ranges from dark greenish gray to nearly black in color.

Ben Cruchan Granite—A medium-grained dark gray stone used for buildings and monuments,

Birsemore Granite—A medium-grained pinkish-gray stone. Used for building.

Bonaw Granite—A medium-grained stone, ranging from light to dark gray. Used for buildings and monuments:

Cairngall Granite—The trade name for a mediumgrained bluish-gray stone and extensively used for important decorative work.

Correnie Granite—A medium-grained decorative and monumental granite. It is a bright pink or salmon color.

Crathie Granite—A medium-grained pinkish stone. Used for buildings and monuments.

Creetown Granite—Used for building and monumental purposes. It is medium-grained and light gray in color. Dalbeattie Granite—Is used for building and monuments. It is moderately fine-grained, and bright gray in color, although the felspar has a buff tint.

Dancing Cairns Granite—The trade name for a mediumgrained light bluish-gray stone. Widely used for building and monuments.

Dyce Gray-The trade name for a medium-grained, grayish-blue building and monumental granite.

Hill O' Fare Granite—A popular and widely used stone for building and monumental purposes. It is fine-grained and dark red in color. Much of this granite has been used in America for monuments.

Iverbrie Granite—A medium-grained very dark gray stone. Used mainly for building.

Kemnay Granite—A medium-grained stone. It is light silver gray, speckled with brown. Used for building, bridge and monumental work.

Peterhead Granite—One of the most famous granites of Great Britain. It is a deep rich red in color, of close texture, and takes a high polish. Ross of Mull Granite—A coarse-grained warm red stone. Used for heavy masonry, bridges, etc.

Rubislaw Granite—A fine-grained, bluish-gray stone from one of the oldest granite quarries of Scotland. Used for buildings and monuments.

Sclattie Granite—A close-grained light blue-gray stone, Used for building and monumental work.

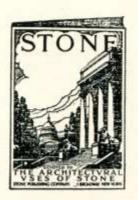
Tillyfourie Granite—A medium-grained bluish-gray stone. Used for building and monuments.

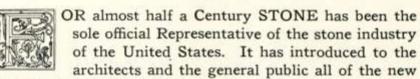
Tom's Forest Granite—A medium-grained bluish-gray stone. Used for building and monuments.

Tyrebeggar Granite—The trade name for a fine-grained light pink stone and extensively used for decorative work and building.

## Sweden-

Bon Accord Red—The trade name given in England to a medium to coarse-grained granite, brilliant crimson in color quarried at Uthammar, Sweden. Used for monuments and polished work.





structural and decorative stones and is called upon constantly for information concerning them. This little volume is but one contribution of this magazine to the industry. Each month it presents articles discussing the technical and practical questions that confront producers, contractors and architects, and describes and illustrates notable works in stone. As a natural corollary, it has opposed and shown-up the preposterous claims of the materials that have sought to take the place of honest, natural stone products. STONE has never wavered in this consistent course, and it is this that has given it its standing and its influence.

