

## SAMUEL HARRISON GILSON

Pioneer, Soldier, Prospector and Patriot—the discoverer of one of  
Nature's most valuable minerals—

GILSONITE 99.5% PURE ASPHALT

# THE STORY OF GILSONITE ASPHALT



Copyright 1931 by  
American Asphalt Paint Co.  
Chicago

All rights reserved.



This Book or parts thereof must not  
be reproduced in any form with-  
out permission of the Publisher

THE cover painting is a lifelike portrait of a man whose discovery of this mineral, provided by Nature and utilized by man as a protection against corrosion and decay, *saved* for the world more money than many Generals have expended in waging war for the world.

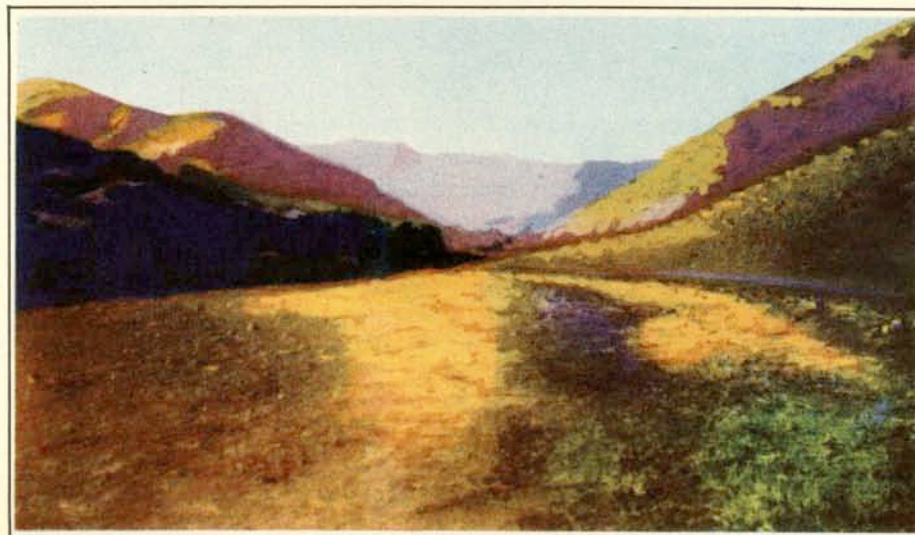
Mr. Gilson was born on May 28th, 1836, and died on December 2nd, 1913, rounding out an adventurous, useful career of more than 77 years.

Mr. Gilson early displayed his penchant for prospecting, and 1858 found him in the gold fields in California; he, too, being one of the first to go to the famous Comstock silver lode in Nevada. In 1868 he settled in Salt Lake City, which was to become his permanent home. Salt Lake City at that time was but a cluster of huts. Mr. Gilson was present at the laying of the cornerstone of the great Mormon Temple and was present when the last spike was driven in the Union Pacific Railroad, linking together for the first time, the east and west coasts of our country.

### HOW GILSONITE ASPHALT WAS FOUND

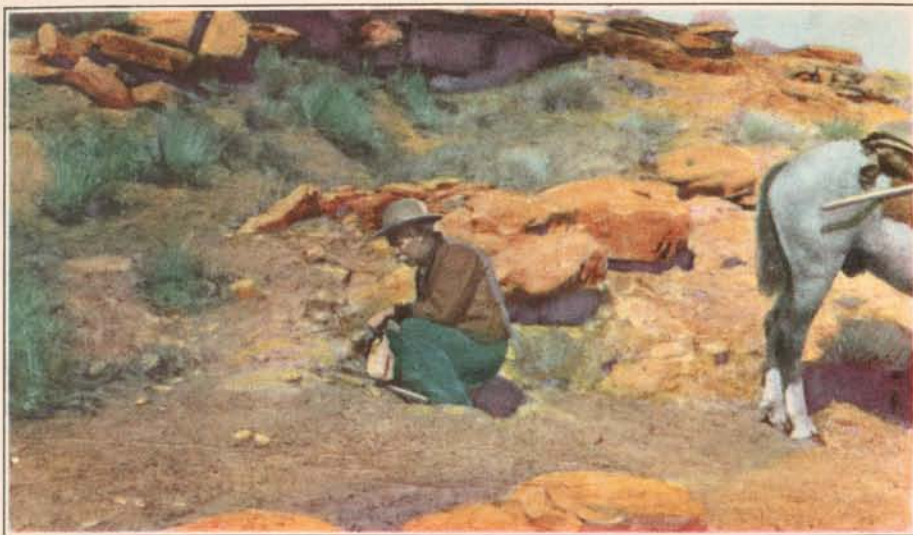
In 1885 he discovered the famous mineral which afterward was to bear his name—GILSONITE ASPHALT—the most perfect and lasting waterproofing in Nature. The discovery was made on the Uintah Indian Reservation in Utah and came about through an ant hill. These interesting little insects had brought up small particles of Gilsonite and deposited them on the surface of the ant mound, where they aroused the curiosity of the prospector. The ants are red in color and large in size. This particular region held many not-friendly Ute Indians, and there were numerous killings over the discovery of this asphalt ore.

Mr. Gilson's career was colorful, indeed, he having at various times served in the capacity of Pony Express Rider, Indian Scout, Deputy Marshal and Indian Interpreter. It is said of him that he possessed a host of friends, commanding the respect of everyone because of his cool bravery, his warm heart and a fine per-



*Across the Desert Toward the Mines*





*The Discovery of Gilsonite Asphalt*

sonality. Altogether he was a high example of that type of rugged character which won the West from barbarism and solitude and gained a foothold for civilization. Mr. Gilson was an upstanding man of 6 feet 4 inches, weighing 280 pounds at the time of his death.

In unearthing Gilsonite Asphalt, Mr. Gilson gave to the world one of the purest minerals ever found, this hydrocarbon maintaining a constant average of purity ranging between 99.5% and 99.9%!

Asphalt is found in various forms and it is one of the most wonderful products of Nature. Gilsonite Asphalt is the most remarkable of them all, possessing all the merits of other types of asphalt, and surpasses them all in purity, uniformity, stability and durability.

### WHAT ASPHALT IS

Most asphalts are obtained by the distillation of crude oil such as is found in Mexico, Texas, California, Oklahoma, etc. This crude oil is distilled at high temperatures, and after the lighter oils in the form of gasoline, kerosene, lubricating and other oils are removed, the residue is asphalt—oil asphalt; man-made asphalt. This asphalt is strictly of an artificial nature, produced by man in a few hours' time from crude oils whose bases run from non-asphaltic to asphaltic in nature. They contain varying amounts of paraffins, which are waxy, greasy substances with little or no protective value. Chemical analysis shows this asphalt to be largely petrolene, a constituent that soon evaporates.

### HOW OIL ASPHALT EVAPORATES

All oil asphalt contains a large percentage of this petrolene—70% to 80%—and this is subject to easy evaporation, particularly so when the asphalt is spread

out in a very thin film, as occurs in the case of paint. On a heated surface, or under exposure to the sun, this evaporation is accelerated and the life of the paint becomes a matter of months. The petrolene evaporates, leaves the asphaltene, or highly stabilized portion, in the form of a dust, which readily blows away, and the surface is no longer protected. Therefore, oil asphalt has but a limited value as a paint material and the use of paint made from it should always be restricted to temporary work.

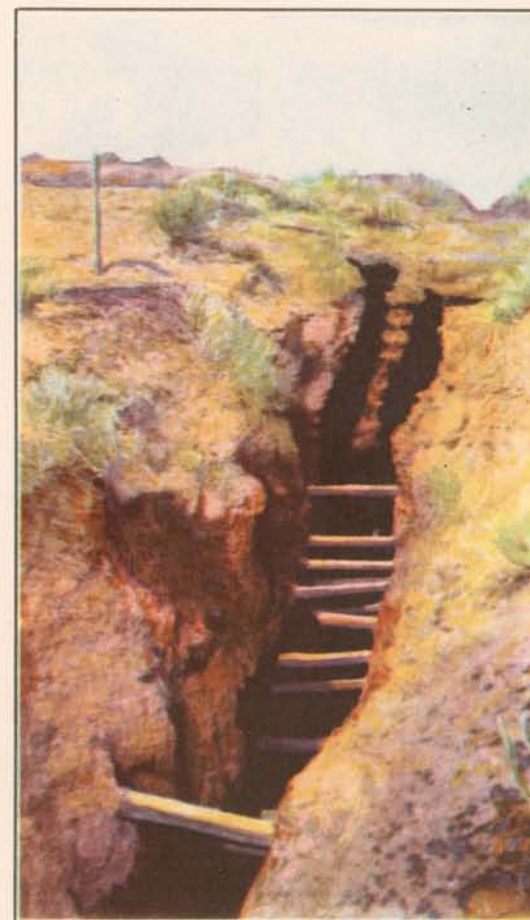
### OIL ASPHALT NOT GOOD IN PAINT

Oil asphalt performs a valuable service when used in mass, as in asphalt pavements, asphaltic cements, roofing cements, etc., because then the petrolene takes longer to evaporate; but when used in paint and spread out in a thin film of 1/150 of an inch thickness, as paint is spread, it is an absolutely temporary proposition.

### WHERE AND HOW GILSONITE ASPHALT IS MINED

Gilsonite Asphalt is an entirely different product. It is a hard, brittle, highly lustrous mineral when mined, entirely unlike oil asphalt, which is soft. Gilsonite is a natural asphalt which was formed at a very early geological era thousands and thousands of years ago. This material flowed into vertical veins caused by upheavals in the crust of the earth, where it received subsequent heat and pressure over long periods, converting it into hard, very stable and uniform asphalt. Practically all of this rare product is found in the Uinta Basin in eastern Utah. It was discovered about 45 years ago by Mr. Gilson, from whom, as we have pointed out, it derives its name.

Its formation is in veins, varying in width from a mere thread to eighteen feet; their length from a few thousand feet to fifteen or more miles; their depth approximately two thousand feet. Gilsonite Asphalt is a true hydrocarbon, mined in the form of ore, picked, screened, and sacked in the mine, hoisted to the surface, trucked to box cars and then transported 2400 miles to our factory at Lincoln,



*The Original Vein of Gilsonite Asphalt*



N. J., or to our mid-west plant at Kankakee, Illinois, where it becomes the base of the world-wide famous VALDURA ASPHALT PAINT.

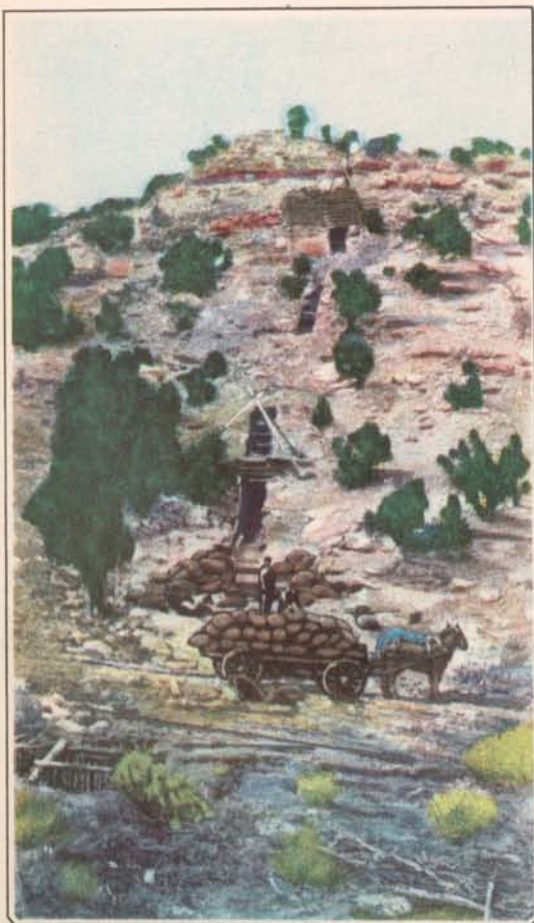
### 99.5% to 100% PURITY

Gilsonite Asphalt is almost 100% pure just as it comes from the mines. It never is less than 99.5% pure; which means that it is entirely free from foreign matter and so provides an asphalt of the greatest durability. In appearance it is like coal, but has a much finer luster, smoother fracture, and when heated it melts instead of burning. It further differs from coal in that when heated it can be stretched out in a long thread, very similar to rubber. It has popularly been referred to as mineral rubber, possessing many of the wonderfully flexible features of rubber, but with far greater life.

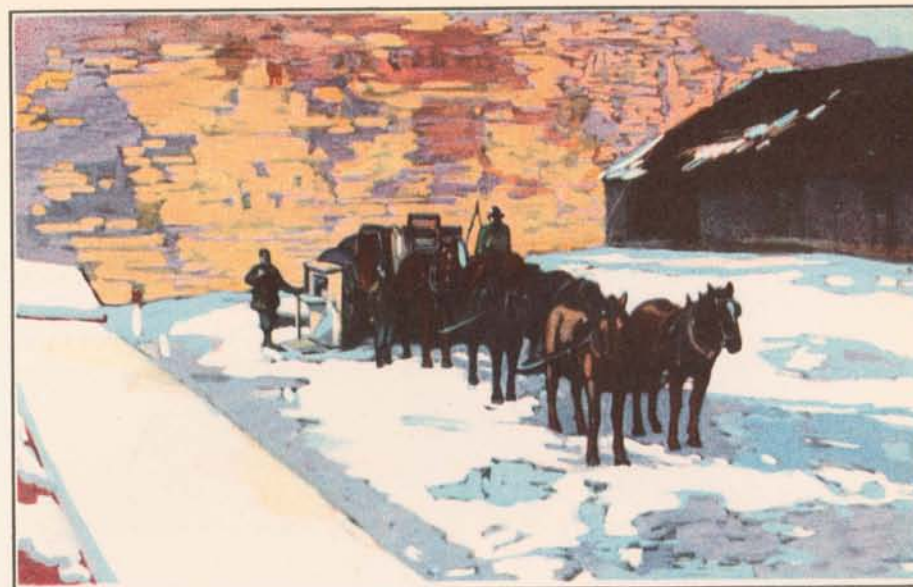
### STRONGLY ACID AND ALKALI RESISTING

In addition to its great chemical purity, Gilsonite Asphalt is the most perfect

waterproofing, and also one of the most effective acid and alkali resists known. It is composed largely of a series of highly complex and saturated hydrocarbons. Hydrocarbons of this nature have been saturated to the limit of their capacity to absorb other elements. Any process of displacement is extremely slow, which makes them highly resistant and non-combining with acids and alkalis. Its great durability in paints and similar materials is recognized throughout the world. Herbert Abraham in his extensive book on asphalts, says: "Gilsonite is one of the most valuable asphalts for manufacturing paints and varnishes." And fortunately Nature has been generous in providing an estimated 32,000,000 tons of this rare asphalt in this region in Utah. Mining operations are difficult and the country is primitive and wild, but man overcomes all obstacles and so the marvelous virtues of this mineral are available to us all.



Long Range View of a Gilsonite Vein.



Mining Operations Are Difficult in Winter

### THE INDESTRUCTIBILITY OF GILSONITE

Gilsonite Asphalt is one of the very few materials that resists decomposition or destruction in almost unlimited extent. It is not affected by atmospheric oxidation, nor by alkalis or the ordinary acids. In fact, it can only be destroyed by the most powerful oxidizing agents such as fire, hot sulphuric acids, or a mixture of sulphuric and chromic acids, or fuming nitric acid. Apparently, it is the most resistant of any material used in the paint industry, as the ordinary pigments and oils are readily attacked by atmospheric oxidation, and by ordinary acids, as well as by alkalis.

In composition Gilsonite Asphalt is different from oil asphalts, containing a far larger percentage of asphaltene, the indestructible and stabilized content, and the other hydrocarbons, while petrogenic in nature are more complex and at ordinary and even higher temperature the evaporation is practically nothing. Oil asphalts contain large amounts of petroleums and paraffins, which quickly evaporate and are short-lived. Gilsonite contains practically no paraffins.

### A HIGH MELT POINT

The average oil asphalt has a melt point about 130 degrees F., while Gilsonite Asphalt has a melt point over twice as high, or about 325 degrees F., and this means much in the finished product and partially explains why the true Gilsonite Asphalt paint withstands high temperatures without flow. This high melt point compels special compounding processes, and this company has evolved a process through years of research and practical experience very much superior to that employed by others, and which aids us in producing the high type of paint we do produce. We employ pure linseed oil and other durable paint materials in com-



bination with Gilsonite Asphalt in the manufacture of VALDURA ASPHALT PAINT. These do not evaporate like the petrolene in oil asphalt, which is one of the secrets of VALDURA'S wonderful durability, and why it is different from every other asphalt paint made.

### AN ODD PHENOMENON

The linseed oil in VALDURA has a much greater life than linseed oil used in ordinary paints. It has been heat treated and it is highly fortified by the many excellent preservative and long-life qualities of Gilsonite in the process of compounding. In VALDURA it serves as a binder for the asphaltene, or indestructible and stabilized portion, resulting in a combination possessed by no other asphalt paint.

### PROVING VALDURA'S SUPERIORITY

As most users of asphalt paint know, you cannot mix linseed oil with the ordinary type of asphalt paint. The vegetable oil of the flaxseed and the mineral oil of the asphalt prevent drying of the paint, which makes it worthless for use. In the case of VALDURA, linseed oil can readily be added to it; so can drier, and the paint will dry perfectly, thus affording proof of our statement that VALDURA is a distinctive product, entirely unlike its competitors.

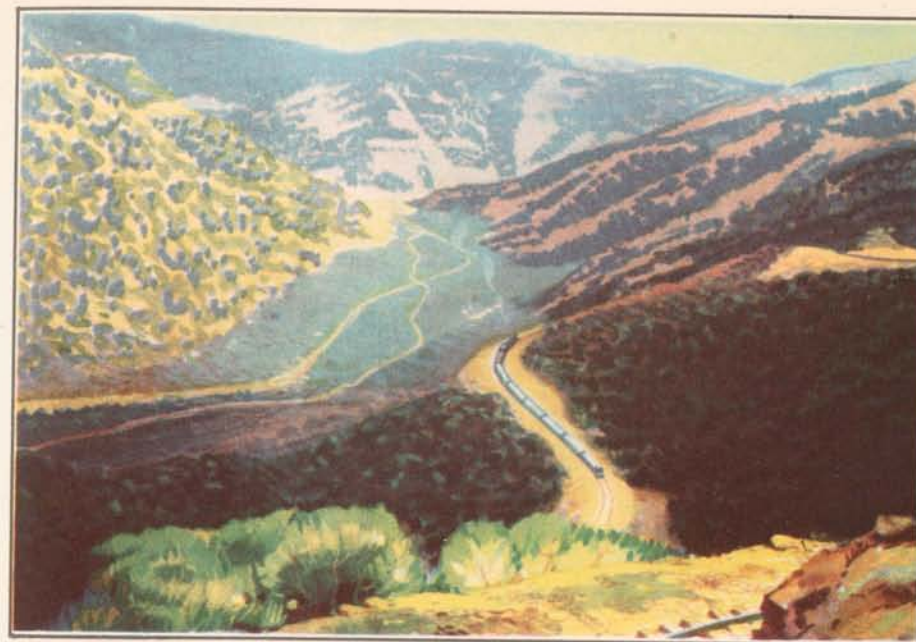
### MAN'S UTILIZATION OF GILSONITE

Hundreds of valuable uses have been found for Gilsonite Asphalt, but probably no industry has made more valuable use of its wonderful properties than this company; building upon it as a foundation we succeeded in evolving a distinctive formula, resulting in an asphalt paint so superior in service that no competing paint can be mentioned in its class.



*Cactus Blossoms Relieve the Desert Bleakness in the Spring*

EIGHT



*Through the Mountain Vastness the Railroad Winds*

LESS THAN 1% OF GILSONITE ASPHALT USED  
AGAINST 99% OF ALL OTHER KINDS!

As indicating the comparative consumption of Gilsonite Select Asphalt, such as is used in VALDURA, and all other kinds of asphalt, we refer to the United



*Bags of Gilsonite Asphalt Fresh from the Mines*

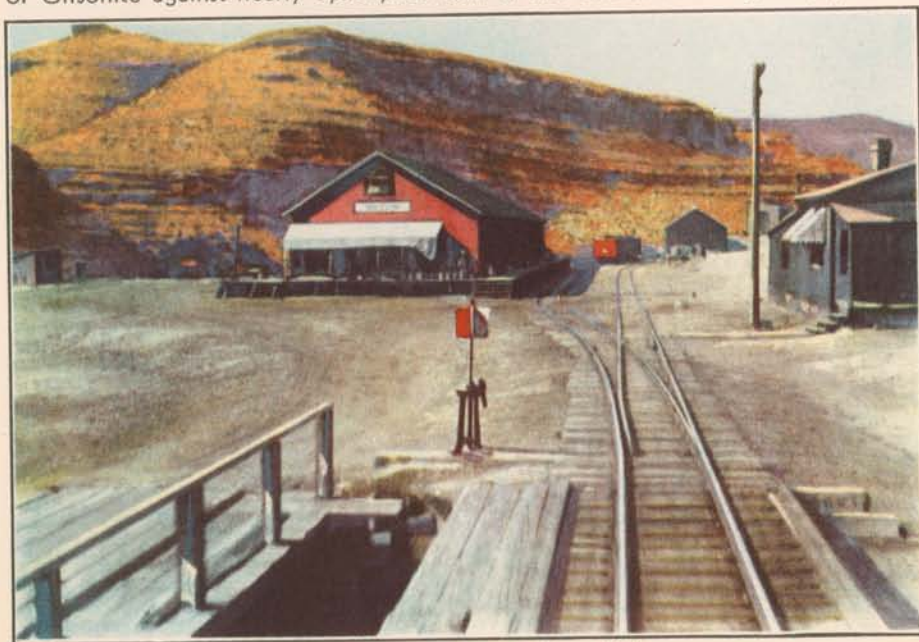
NINE





*Special Engines to Take the Sharp Grades*

States Geological Survey Report of 1928 (latest report available), from which it will be noted that there were only 47,000 tons of Gilsonite Asphalt mined and sold during the year, against nearly 4,000,000 tons of oil asphalt and about 954,460 tons of all others, including Trinidad and Venezuelan; or 47,000 tons of Gilsonite against nearly 5,000,000 tons of the others! And a goodly portion



*Where the Railroad Starts at Watson, Utah*

of the Gilsonite is exported each year, because the world is obliged to come to America for it, just as it must go to Africa for fine diamonds. It is well to note, also, that there are two kinds of Gilsonite Asphalt, the finer quality, such as we use in VALDURA, known as Gilsonite Selects, and the other, known as Gilsonite Seconds, and only a part of each year's production are Selects. (It is estimated that **only one-half** the Gilsonite mined is graded as Selects.)

The U. S. Bureau of Mines says: "The higher grades of Gilsonite are made into varnish, paint, electrical insulation, and inks for rotogravure sections of newspapers. The intermediate grade is used for such articles as telephone mouthpieces, switch handles, and knobs and buttons of various kinds. The poorer grade is used to saturate felt in the manufacture of roofing and floor coverings."

The average price of Gilsonite Select Asphalt is about \$55.00 per ton and that of oil asphalt about \$12.00 per ton, and here we doubtless place our finger on the reason for the vast difference in consumption.

### GILSONITE COSTS OVER 350% MORE!

This great price discrepancy, surely would not be present if oil asphalts were even half so good as Gilsonite Asphalt, and if you buy asphalt paint costing less than VALDURA does, you may be almost certain you are buying paint made of this cheap oil asphalt, or, what is worse, from worthless coal tar.

### TAR PAINTS OFFER POOR PROTECTION

Classifying even below these oil asphalt paints there are coal tar paints, but it is our opinion that their deficiencies are now so well known that it is needless



*Lump of Gilsonite Asphalt—All the Beauty of a "Black Diamond"*





*Cowboy Vein—The Largest Vein of Gilsonite Asphalt So Far Discovered*

for us to further dwell upon them. They are cheap paints, made for cheap work, and serve no further purpose.

### SHORTCOMINGS OF TRINIDAD ASPHALT

In all of our research, Trinidad asphalt has proved a most unsatisfactory paint material. Unlike Gilsonite, which is nearly 100% pure bitumen, Trinidad asphalt, **even after being refined**, averages only 57% in purity, the balance being largely mineral matter, which precipitates and cakes on the bottom of containers, with

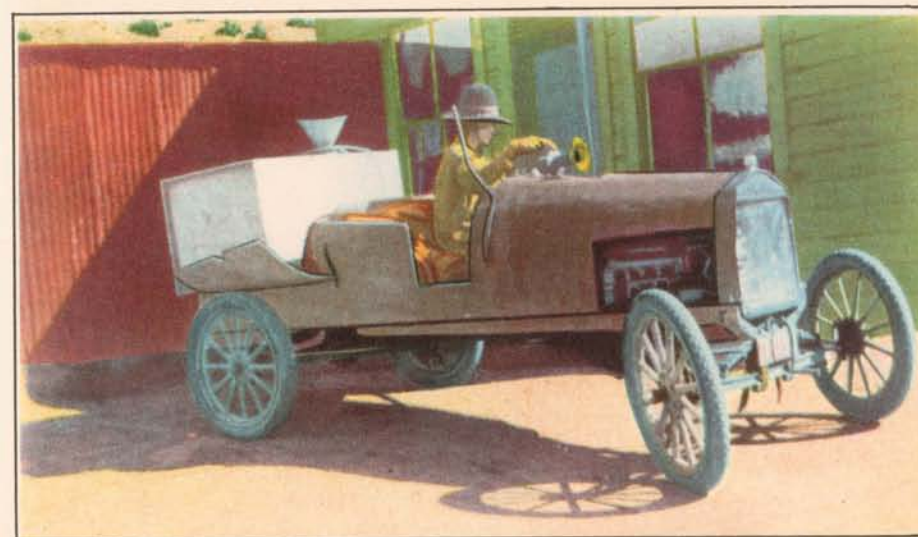
considerable loss to the buyer. Crude Trinidad asphalt contains a large percentage of water, which must be removed before the asphalt can be used, and even after being refined it is affected by moisture contact. There are many other types of natural asphalt that can be rejected for paint material on the same basis as Trinidad; namely impurity and unsuitability. When prepared in paint form, Trinidad fades out to a dull gray color, entirely unlike the brilliant, glossy black so characteristic of genuine Gilsonite paints.

### ASPHALT EMULSIONS

Another form of asphalt actively urged upon the public during the past few years is what is termed "Asphalt Emulsion," this being a mechanical combination of soft petroleum or oil asphalt, clay and water. This preparation has some virtues, but not as a paint. Its principal advantage is that it is very cheap in cost. Asphalt and water are enemies and they cannot be made to combine except under some such subterfuge as is employed in making asphalt emulsion. As the asphalt will not accept the water, a highly absorbent clay is added, which will receive the water long enough to keep the preparation in liquid form. Then when it is spread out upon a surface the water promptly evaporates, leaving a combination of muddy asphalt, which is open to quick attack by the elements.

Practically all asphaltic preparations in which oil is employed as the solvent leave an elastic or flexible, rubberlike film on the surface they are applied to, but in the case of these water emulsions the contrary results. The emulsifying of the asphalt greatly increases its melt point and takes the life out of it, frequently resulting in cracking, thus materially lessening the protective properties which the coating should by all means provide.

These emulsions contain as high as 50% water, so are extremely risky to ship or use when the temperature is below freezing, and once they freeze they are



*"Water-Wagon" of the Region*



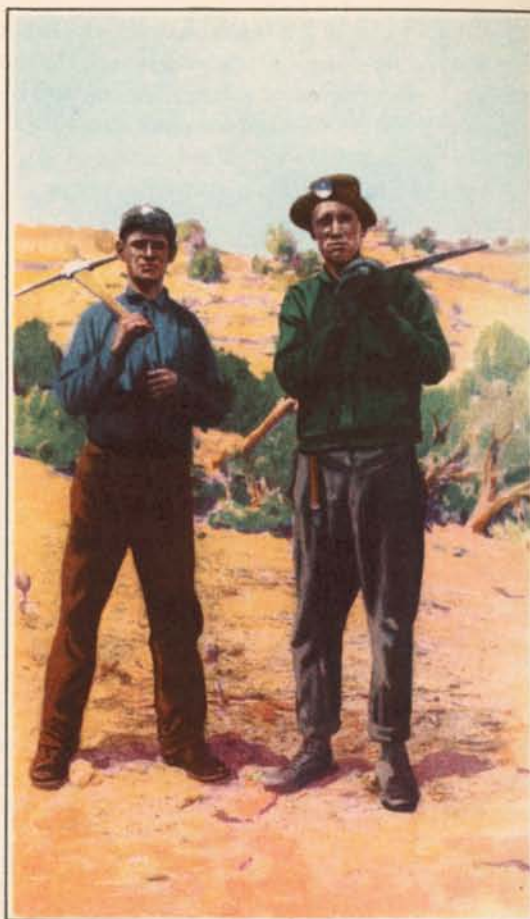
worthless; they cannot be brought back. Another objection is that they come of buttery consistency and cannot be successfully applied with a brush. In order to obtain any protection at all, it is necessary to apply asphalt emulsions very, very heavy, or thick, and this need quickly offsets the saving in first cost.

As mentioned, they serve several useful purposes, among them the dampproofing of wet surfaces, for making floor repairs, protecting cement, etc., but we scarcely need mention that any preparation containing water is hardly suitable for a metal surface where the big purpose is to defend it from rust!

### SUMMING UP

And so, as we survey the entire realm of asphalts, we are inevitably forced to the conclusion that genuine Gilsonite Asphalt occupies an unchallenged pinnacle position. Because—

- (1) It is never less than 99.5% pure asphalt.
- (2) It is free from paraffins, which are "waxy" and "greasy" and short-lived.
- (3) It has been stabilized by nature with heat and pressure.
- (4) It is uniform in composition.
- (5) It has high luster.
- (6) It does not evaporate even at relatively high temperatures.
- (7) It is waterproof.
- (8) It is acid and alkali-resisting.
- (9) It is little affected by the sun's rays.



Types of Gilsonite Miners

- (10) The ancients used asphalt very similar to Gilsonite for embalming their dead. Great numbers of these mummies are in excellent state of preservation today, so it has stood the test of time.

### 35 YEARS EXPERIENCE

The manufacture of VALDURA ASPHALT PAINT is backed by 35 years of successful experience. There is nothing experimental about it. ***We know what it will do by what it has done.*** We know there is no more dependable waterproofing and preservative paint made; no other so economical; no other that will withstand acid and alkali attack so stubbornly. These contentions have been proved again and again by actual tests and practical use. VALDURA has a wide range of usefulness; it is equally valuable for indoor or outdoor use; it will give perfect service where most other paints fail.

### VALDURA ALWAYS MAKES GOOD!

VALDURA ASPHALT PAINT is the highest grade asphalt paint made, and it makes a ready and strong appeal to quality buyers. It is the only really successful colored asphalt paint produced, and you have your choice of glossy Black and durable shades of Red, Brown and Green. ***VALDURA shuts out the moisture*** and so you have real protection!

VALDURA is good paint, made by responsible manufacturers, who at all times stand back of it.



Desert Wild Flowers



# THE TEST OF TESTS

Here is the Aqua Regia test -- a gold ring is placed in one jar and a piece of Gilsonite 99.5% pure asphalt in another



Aqua Regia -- a combination of concentrated nitric and hydrochloric acids, is then poured over each. The acid dissolves the gold while the Gilsonite remains unharmed !

VALDURA ASPHALT PAINT is made with genuine Gilsonite asphalt.

Produced exclusively by

**AMERICAN ASPHALT PAINT CO.**

Principal Offices: 844 Rush Street, Chicago

**Branch Offices:**

New York City  
San Francisco

**Factories:**

Lincoln, N. J.  
Kankakee, Ill.

**Warehouses:**

Oakland, Cal  
Houston, Tex

America's foremost producers of dependable asphaltic paints and coatings.