

# ON A ROCK FOUNDATION



He builds on rock who owns his home and pays no rent to landlords. How is it with you, are you a rent payer or a house owner? If the former, it will pay you to try to save a little and purchase a home. It does not take long when you once start, and I can help you wonderfully to get a home of your own free and clear. If interested come in and let me put some mutually beneficial propositions before you.

**JOSEPH MOSS,**  
THE REAL ESTATE MAN Office 516 E St.

## EXPERIMENT WITH TAR ON ROADS A SUCCESS

Highways Thus Treated Stand Wear and Tear, Are Dustless and Beneficial to Public.

Experiments in tar and oil for road improvement at Jackson, Tenn., are described in a bulletin issued by the United States department of agriculture.

During the spring and summer of 1906, says the bulletin, the office of public roads co-operated with Sam C. Lancaster, city engineer of Jackson and chief engineer of the Madison county good roads commission, in making a series of careful experiments to determine the value of coal tar for the improvement of macadam streets and roads. Tests were also made of the utility of crude Texas oil and several grades of its residue when applied to earth and macadam roads.

The macadam streets in the business center of Jackson were built originally of the hard siliceous rock known as



TARRING A ROAD AT JACKSON, TENN.

novaculite. About May 1, 1905, after fifteen years of wear, repair of these streets became necessary. The old surface was first swept clean with a horse sweeper so as to expose the solid pavement beneath. This was done because tar will not penetrate a road surface which is covered with dust and loose material. Next, the surface was loosened by means of spikes placed in the wheels of a ten ton steam roller, the street reshaped and new material added where needed. The road was then sprinkled, rolled, bonded and finished to form a hard, compact, even surface and allowed to dry thoroughly before either tar or oil was applied, for neither substance can penetrate a moist road surface. The best results are obtained when the work is done in hot, dry weather, and accordingly the tar was first applied in August. It may be well to add that the novaculite used in the construction of the roads is an almost nonabsorbent rock.

The tar used was a byproduct from the manufacture of coke and was practically free from moisture. It was brought to a temperature which generally reached 210 degrees F., but when placed on the road it was reduced to a temperature from 180 degrees to 190 degrees F. The hottest tar produced the best results. It was spread with

bores. Laborers, with street cleaners' brooms of bamboo fiber, followed the tank and swept the surplus tar ahead. They spread it as evenly and quickly as possible and in a layer only thick enough to cover the surface. One side of the street was finished at a time and barricades placed to keep off the traffic until the tar had had time to soak into the surface. The time allowed for this process was varied from a few hours to several days. From the results obtained it can be stated that under a hot sun, with the road surface thoroughly compact, clean and dry and with the tar heated almost to the boiling point and applied as described above, the road will absorb practically all of it in eight or ten hours. A light coat of clean sand, screenings or the clean particles swept from the surface of the road may then be spread as evenly as possible and rolled in with a steam roller.

After more than seven months, including the winter season of 1905-06, the tarred streets and roads are still in excellent condition. They are hard, smooth and resemble asphalt, except that they show a more gritty surface. The tar forms a part of the surface proper and is in perfect bond with the macadam. Sections cut from the streets show that the tar has penetrated from one to two inches, and the fine black lines seen in the interstices between the individual stones show that the mechanical bond has been re-enforced by the penetration of the tar. The tar is a matrix into which the stones of the surface are set, forming a conglomerate of concrete. A second coating applied a year after the first would require much less tar than the first, as the interstices of the rock would then be filled with tar.

A tarred street is dustless in the same sense that an asphalt street is dustless, though a fine sandy powder wears off, as in the case of asphalt. It can be swept or washed clean. These streets have since been swept regularly and the city government is in favor of treating all of the streets with tar. The cleaning that would soon ruin an ordinary macadam road does not injure the tarred surface, as the stones are not torn up or disturbed. The tar itself has antiseptic properties; hence its use would be beneficial both as a germicide and as a means of securing cleanliness.

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## To Our Friends and Patrons

We take this means of expressing our gratitude for your liberal patronage, and of assuring you we will be pleased to meet old friends and new at the old stand during the coming year.

Wishing you every good thing and prosperity during 1907, we are, very respectfully,

**Smythe-Gamble Co.**

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Surest and Quickest Cure for all THROAT and LUNG TROUBLES, or MONEY BACK.

### Motorists to Improve Roads.

Road improvement with the motorists themselves as the chief contributors to the road building fund is under consideration in Great Britain. The London chamber of commerce has taken the initiative in a movement to establish a central governmental highway department. This department would have jurisdiction over the trunk highways. Automobile users in England already contribute nearly \$500,000 yearly in taxes, and it is desired by the chamber of commerce that this sum should be directly applied to the use of the highway department.

### Argument For Good Roads.

It is estimated that the summer travel of Maine annually brings into the state between \$15,000,000 and \$18,000,000, and it is argued that it could be increased by the addition of several millions more if improved roads were universal.

### New Cure for Epilepsy.

J. B. Waterman, of Watertown, O., Rural free delivery, writes: "My daughter, afflicted for years with epilepsy, was cured by Dr. King's New Life Pills. She has not had an attack for over two years." Best body cleanser and life giving tonic pills on earth. 25c at all drug stores.

### Cures Old Sores

Westmoreland, Kans., May 5, 1903. "Ballard Snow Liniment Co. Your Snow Liniment cured an old sore on the side of my chin that was supposed to be a cancer. The sore was stubborn and would not yield to treatment until I tried Snow Liniment, which did the work in short order. My sister, Mrs. Sophia J. Carson, Allensville Missin Co., Pa., has a sore and misprints that it is a cancer. Please send her a 50c bottle." For sale by National Drug Co. and Rotermund.

### What's

worth doing is worth doing well. If you wish to be cured of Rheumatism use Ballard's Snow Liniment and you will be "well cured." A positive cure for Sprains, Neuralgia, Bruises, Contracted Muscles and all the ills that flesh is heir to. A. G. M. Williams, Navasota, Texas, writes: "I have used Snow Liniment for sprained ankle and it gave the best of satisfaction. I always keep it in the house." For sale by National Drug Co., and Rotermund.

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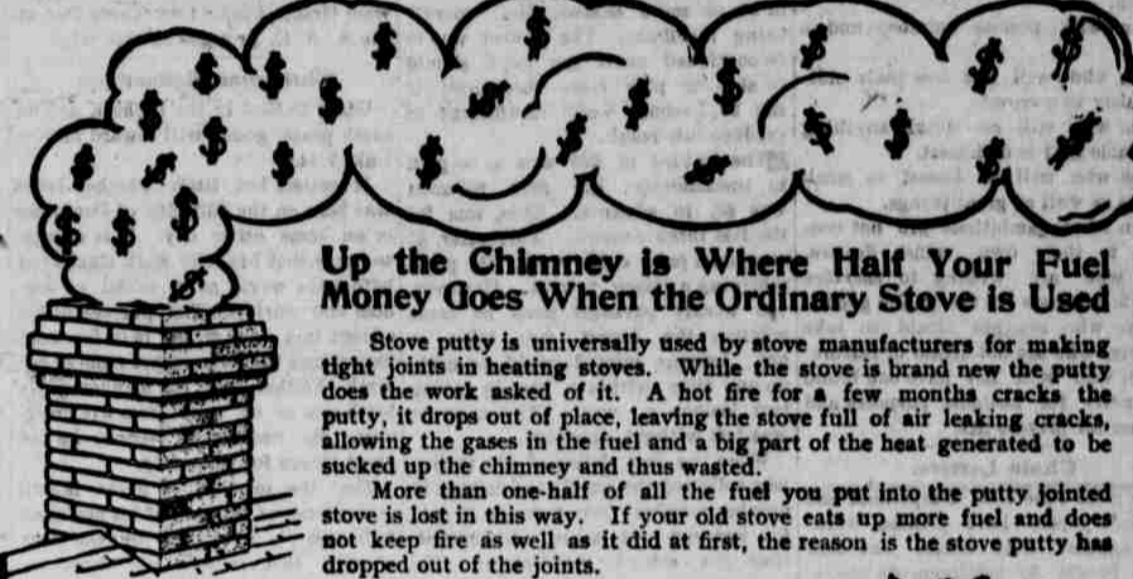
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# THE PUTTY QUESTION



Up the Chimney is Where Half Your Fuel Money Goes When the Ordinary Stove is Used

Stove putty is universally used by stove manufacturers for making tight joints in heating stoves. While the stove is brand new the putty does the work asked of it. A hot fire for a few months cracks the putty, it drops out of place, leaving the stove full of air leaking cracks, allowing the gases in the fuel and a big part of the heat generated to be sucked up the chimney and thus wasted. More than one-half of all the fuel you put into the putty jointed stove is lost in this way. If your old stove eats up more fuel and does not keep fire as well as it did at first, the reason is the stove putty has dropped out of the joints.

## Cole's Original Hot Blast

Coal Stoves and Air Tight Wood Stoves Save all Fuel and Heat Wasted by Other Heating Stoves.



CUT No. 2. Shows air leaking putty joint construction of other stoves.



Cut No. 1 Shows Cole's Hot Blast burning Soft Coal

No stove putty is used in the construction of these economical stoves; it is not necessary, owing to the patented construction which makes the stove practically jointless. Cole's Hot Blast Coal Stoves and Air-Tight Wood Stoves are the only heating stoves in the world which are guaranteed to remain always air-tight. On account of the absolutely air-tight construction of these patented Stoves, all gases in the fuel are held back until they are consumed and both gases and heat which escape up the chimney with other stoves are thus saved to your profit and comfort—soft coal is half gas. As a result of this saving the fire is never out and the rooms are heated for two or three hours in the morning with the fuel put in these wonderfully economical Stoves the night before.

### Scientific Construction

Note the straight steel jacket encasing the heavy cast iron fire box inside, and the guaranteed smoke-proof feed door placed at the front of the top in Cole's Hot Blast Stove, shown by cut No. 1, doing away with air-leaking putty joints at top and bottom of fire pot and around the door frame on other stoves as shown by cut No. 2.

The water-tight steel bottom and patented compound hinge for ash door, also the patented steel collar for joining the ash door frame to the heavy steel body so that it cannot be loosened by action of the fiercest heat, while of only technical interest, are special features in both the Original Hot Blast Coal and Air-Tight Wood Stoves which combine to make them the most economical heating stoves in the world. We are Exclusive Agents—avoid imitations.

Save \$50.00 to \$200.00 You cannot afford to say to yourself, "My old stove or an imitation stove at a little less price will have to do this winter." Other style stoves and all imitations of Cole's Original Hot Blast and Air-Tight Stoves are made with stove putty joints, and when you stop to think that \$1.00 saved on the first cost of the stove means the loss of \$50 to \$200 in fuel during the life of the stove, you will readily see the advantage of buying the Original Hot Blast, and Air-Tight Stoves which hold fire just as well and are just as economical in fuel after years of use as the first day they are put up.

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