

USE OF THE GAS MASK IN COAL MINES IS TABOO

CASE AT COPPERPOPLIS, CALA. CITED AS FAILURE

United States Bureau of Mines At Work Developing One That May Prove to Be of Practical Use In Collieries—Army Type Is Not Recommended By the Most Practical Man.

By GEORGE S. RICE Chief Mining Engineer of the Bureau of Mines.

The successful use of the gas mask by the American army in France in combating the poisonous gases of German shells caused many army men to feel that the gas masks were proof against any kind of gas which might be encountered. The result has been that from time to time there have been reported in the press, deaths of former army men through using their masks to enter various kinds of gases—such as illuminating gas, gasoline vapor and the gaseous atmosphere produced by mine fires. Such a case has just been reported from a mine out in Copperopolis, Cal., where a former army man lost his life in descending a mine shaft filled with the fumes of a mine fire. Another man who, in attempting to remove him, merely used a dust respirator, lost his life also. While the American type of the army gas mask was developed by the bureau of mines for the department, and since the war a section of the bureau's investigative force has been developing industrial gas masks certain specific gases, the bureau has repeatedly called to the attention of the public the fact that such masks have serious limitations and in no case should a gas mask be used in underground workings for the reason that there may be an insufficient amount of oxygen to breathe (and the gas mask does not supply oxygen) or there may be present carbon monoxide, which the army mask will not remove, and there always is some carbon monoxide produced by a mine fire or by a coal mine explosion or by a blast of dynamite or other explosive.

It is true that the bureau has been developing a mask which may take care of a small percentage of carbon monoxide, that is, 1 per cent and under, but in mine fires and after explosions, there may be, and frequently is, a much larger percentage of carbon monoxide in the mine atmosphere. Masks such as these, for small percentages of carbon monoxide and associated gases are for use in connection with industrial surface plants, as for example, on the top of a blast furnace or around gas producers in the open air. Even when a test has shown only a small amount of carbon monoxide present in a mine, one can not tell, on account of the rapidly changing conditions caused by the fire, whether within a short distance there may not be high concentrations fatal to life. Finally, it cannot be stated too positively that a mask is not the slightest help when there is a deficiency of oxygen, and this deficiency is always present in the immediate vicinity of a mine fire, usually accompanied by the presence of both carbon dioxide and carbon monoxide. In many places in mines the presence of carbon monoxide is frequently accompanied by any warning and if a man enters a place in a mine which contains less than 8 or 10 per cent of oxygen he is likely to drop in his tracks without receiving the slightest premonition of his collapse.

Numerous instances have occurred where gas, such as fire damp (methane) has been gathered in a pocket in the roof and men entering the place have immediately lost consciousness. Where they have been dragged out immediately and revived, the impression of the victims has been that they have been knocked down. In the case of the Copperopolis mine, it is reported that a miner undertook to go down the shaft of a mine in which there was a fire, using the army mask which he had used overseas. It later proved that he was overcome and fell off the ladder into the sump. As he did not return two rescuers attempted to go down, wearing ordinary dust respirators which, of course, are valueless against gases. One of these men fell off the ladder into the sump. The other managed to get back into a skip and signal to haul, but when he reached the surface he was unconscious and had to be revived by artificial respiration. The two bodies were later recovered from the sump by rescue crews, wearing the bureau of mines breathing apparatus under the supervision of bureau of mines engineers.

This striking case presents an illustration of the absolute failure of the army gas mask and the success of the self-contained oxygen breathing apparatus in an irrespirable mine atmosphere.

UTAH BONDED DEBT.

Utah's total public bonded indebtedness was \$27,900,000 the first of January, 1920. This was increased somewhat in 1920 by the various emissions in the state. Some bonds were also paid during the year, so that the balance of bonded debt of the state will be about the same as the first of January, 1921.

Hang Up the Baby's Stocking



Hang up the baby's stocking,
Be sure you don't forget,
The dear little dimpled darling
Has never seen Christmas yet.
But I've told her all about it,
And she opened her big blue eyes,
And I'm sure she understood it—
She looked so funny and wise.

Dear! what a tiny stocking!
It doesn't take much to hold
Such little pink toes as baby's
Away from the frost and cold.
But, then, for the baby's Christmas
It will never do at all;
Why, Santa wouldn't be looking
For anything half so small.

I know what will do for the baby—
I've thought of the very best plan—
I'll borrow a stocking of grandma,
The longest that ever I can;
And you'll hang it by mine, dear mother,
Right here in the corner—so;
And write a letter to Santa,
And fasten it on the toe.

Write, "This is the baby's stocking
That hangs in the corner here.
You never have seen her, Santa,
For she only came last year.
But she's just the blessedest baby!
And, now, before you go,
Just cram her stocking with goodies—
From the top clean down to the toe."

WILL HAVE OWN REFINERY

Plans Adopted For Big Things Up At Soldier Summit.

According to plans adopted by the Utah Paraffine Oil and Wax company of which Lawrence Greene is president, William H. Wallace is the vice president and Orman W. Ewing is secretary and treasurer extensive development operations will be started as early as possible next spring on the company's holdings of more than a square of claims near Soldier Summit. It is stated to be the intention of the company to erect and operate its own distillation plant and refinery. Recent tests of samples of shale from some of the company's claims are said to have resulted in the distillation of 74.5 gallons of crude oil to the ton, from which was obtained gasoline, kerosene, heavy illuminating oil, fuel oil, lubricating oil, wax, ammonia sulphate and potassium of oxide, which, at present market prices for the various products, show a value of \$15.50 per ton of shale. The company has just issued a prospectus which contains much valuable information concerning shale deposits generally and especially of Utah, where the deposits are greater and richer than in any other state. In regard to the necessity of an increased oil supply it is declared:

"Oil and more oil is the cry throughout the civilized world, and the eyes of geologists are now focused on oil shale as the salvation of the industrial world. When oil was cheap and the supply equaled the demand, little attention was paid to shale lands, for the very good reason that it would not be handled on a profitable basis. The enormous amount of gasoline and oils used during the world war has not only exhausted practically all reserve stocks, but has created a demand far in excess of present production from the combined oil wells of the world. A significant warning is seen in the figures given by the government showing the production of oils in 1919 reached 300,255,511 barrels, an increase of some 25,000,000 barrels over the preceding year, but consumption reached an estimated figure of 450,000,000 barrels, or an excess over production of 70,000,000 barrels.

"With the increased use of both gasoline and oil in airplanes, automobiles, tractors, trucks, engines, oil burning steamers, manufacturing and oil roads it will be patent to everyone that something must be done and done quickly to avoid a disastrous oil famine which would mean commercial paralysis."

CHRISTMAS-TIDE

The Christmas-tide, the tide of merriment
And feast, and love, and peace—most gracious tide,
All hail! I greet and yearn to honor thee!
Now let the table groan "neath viands rich!
The smoking turkey with the truffles stuffed,
The steaming roast, all fragrant with the fumes
Of guinea; fish, fresh and fowl, and oysters
From all climes, full-ranged in rank prepared.
To tempt the third appetite and fill
The forward one . . .
So, spread the table with luxurious dainties,
And count it gather 'round the table
Nor omit their share, and let the victual wait,
Nor rob you, or show'st not, of your dinner.
And about your mirth, but do not let the words
O'erstep the little voice that stands de-
mure.
Ousture your heart and gently tapping
panda:
"A nap to soothe the shiverings of the feet!"
—Joseph Whitman, in Table Talk.

CHRISTMAS MOTHER GOOSE

What are little boys made of, made of?
What are little boys made of?
Engines and drums
And fat sugar plums—
And that's what boys are made of.
What are little girls made of, made of?
What are little girls made of?
Dishes and dolls
And red rubber balls—
And that's what girls are made of.

CHRISTMAS THOUGHTS

Chime soft and low, O Christmas bell!
We joy, we sing,
Will bring our gifts more precious far
Than frankincense or costly myrrh
To Christ our King.
Our consecrated lives we'll give;
With trusting, loving hearts we bend
To plead for grace and strength to live,
And honor Him, our precious friend.
—Selinger.

JESUS THE RECONSTRUCTOR.

BY IRAHAR.
The Lord hath anointed me to preach
good tidings unto the meek;
He hath sent me to bind up the broken-
hearted.
To proclaim liberty to the captives,
They shall build the old wastes,
They shall raise up the former desolations,
and they shall repair the waste cities.

No, we don't hear of any farmers offering to take on winter help in exchange for their keep. It might be cheaper to pay wages.

WHAT IS CHIROPRACTIC?

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PRICE, UTAH

NOTICE FOR PUBLICATION—DEPARTMENT OF THE INTERIOR, United States Land Office at Salt Lake City, Utah, November 24, 1920. Notice is hereby given that Malton N. Patton, heir of the estate of George Palundak, deceased, of Helper, Utah, who on May 14, 1915, made Homestead Entry No. 81449, for the SW 1/4, Sec. 23; NE 1/4, Sec. 24; NW 1/4, Sec. 24; SW 1/4, Sec. 24, Twp. 15 South, Range 3 East, Salt Lake meridian, has filed notice of intention to make three-year proof to establish claim to the land above described before the clerk of the district court at Price, Utah, on the 14th day of January, 1921. Claimant names as witnesses Milton Stess, Nick Balavroukakis, Joseph Balavroukakis and John Tomashuk, all of Price, Utah. OLYVE L. BLANKLEY, Register. First pub. Dec. 3, last Dec. 31, 1920.

People who fly high don't always have wings. For that good printing. The Sun.

HELPS to CLEANLINESS

WIZARD

Among Wizard Products you will find a host of conveniences for use in cleaning. Their uniformly high quality will recommend them to every housewife

WIZARD Dust Cloth

is a great improvement over ordinary dust cloths, which simply distribute dust instead of removing it. Wizard dust cloths are chemically treated; they collect and hold the dust; make dusting easy. Wizard Dust Cloths can be washed without destroying their chemical properties. They need no renewing. Wizard Dust Cloths are priced from 25c to 90c.



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A conveniently shaped Duster of the most sanitary type. Does not scatter dust. The chemical treatment collects and holds dust. Strongly made; duster of the best quality of yarn; washable without destroying chemical properties; will last indefinitely. Price, \$1.00, \$1.25 and \$1.50.

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can be had in two styles. The dust mop is chemically treated and absorbs dust without scattering it. The polish mop is treated with Wizard Polish. It cleans and polishes the floor at the same time. Wizard Mops are the convenient triangle shape which gives them access to every nook and corner. They have the adjustable elbow handle for ease in use. Wizard Mops are priced from \$1.50 to \$2.00.



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