

A New Hot Blast Air Furnace.

Globe Silver Belt.

An improvement recently placed on the water jacket furnaces of The Old Dominion Copper Co. at Globe, consists of an arrangement for heating the blast before it enters the furnace, and as it has been so eminently successful in its work it will be here described in detail, first giving the construction, and afterward showing what effect it has had on the working of the furnaces and in what ways has it accomplished a saving in time and a reduction in running expenses.

The improvement is of the simplest kind, consisting of a wind jacket completely surrounding the crucible of the furnace, and being in connection with the blast supply pipe and also with the regular wind box. In operation the blast coming from the supply pipe enters the wind jacket in the usual cool condition, slightly higher than the surrounding atmosphere, and passes completely around the crucible, here coming in contact throughout its passage with the hottest portion of the furnace. After making the circuit of the crucible it flows into the regular wind box, thence to the tuyeres in the regular fashion.

In making this passage it serves several purposes:

1st. It heats the blast to a high degree by taking up the heat which has formerly been lost to such a large extent by radiation, now taking it back into the furnace to perform useful work by reducing coke consumption.

2d. It keeps the crucible from getting abnormally hot, thereby saving wear and tear caused by great variations of temperature, and saving the time which was formerly lost in cooling it down when it got in this highly heated condition.

3d. Making it very much cooler and more comfortable for those working in the vicinity of the furnace.

When one of these new wind jackets was first placed in operation a comparative test was run with a furnace precisely similar without the wind jacket, both being 42-inch furnaces of the ordinary type. The test was very successful and showed that the jacket effected a saving of five pounds of coke in every charge of 600 pounds of ore. In this furnace the temperature of the blast was raised fifty-five degrees, as determined by many readings taken just before entering and leaving the jacket.

Shortly afterward a wind jacket was placed around the crucible of a second furnace, and by slightly modifying the design it was made even more successful than the first, as in this case the temperature of the blast was raised 83.5 degrees in passing through the jacket, and the furnace is now running with one pound less coke per charge than the first, or six pounds less with the jacket than without. As stated above there is increased economy by saving the time which was formerly lost cooling down the crucible whenever it became abnormally hot, thereby allowing more ore to be smelted at the same cost for labor and fixed charges.

The Old Dominion Copper Co. is now using two of these jackets, one of which has now been in two months, and, so well has it suited, one is going on the third furnace.

This useful appliance is the invention of Messrs. Louis B. Walker and John Murphy of Globe, who have applied for letters patent.

The delegates to the statehood convention were right royally entertained at Phoenix.

THANKSGIVING PROCLAMATION.

TO THE PEOPLE OF ARIZONA, GREETING:

In accordance with the Proclamation of the President of the United States, and in keeping with established custom, I, Charles M. Bruce, Acting Governor of the Territory of Arizona, do hereby designate and set apart Thursday, the Thirtieth day of the present month, as a day of

GENERAL THANKSGIVING throughout the Territory.

Joyfully recognizing the many blessings we possess as a Territory and as a Nation, it is appropriate that we set aside this day to offer up praise and thanksgiving to God for the merciful protection He has seen fit to grant us, and to invoke in a contrite spirit a continuance of His Divine favor.

Therefore let us see to it that we celebrate an occasion so replete with patriotic memories and joyous associations, in a manner befitting its lofty character and our own humble sense of gratitude to the Supreme Will.

In Witness Whereof I have hereunto set my hand and caused the Great Seal of the Territory to be affixed.

Done at Phoenix, the Capital, this Sixth day of November, Eighteen Hundred and Ninety-three.

CHAS. M. BRUCE,

Attest: Acting Governor.

F. B. DEVEREAUX,

Acting Secretary of Arizona.

The purity of gold is estimated by an Abyssinian weight called a carat—Arabian quarat, a beanfruit of the carob tree, says an authority—which is subdivided into four parts called grains. The term carat when applied to gold and silver is not a weight unit, but that mode of expressing the purity or fineness of the metal in 24ths. Thus 18 carat gold is metal in which eighteen parts out of twenty-four (or three-fourths) are pure gold. This method of estimating fineness is traceable from the mare of Europe having been divided into twenty-four—real carats or actual weight units. The present method is to estimate fineness in thousands, that is gold that has 250 parts alloy corresponds to 18 carat gold, three-fourths of the metal in each case being pure gold. American gold coins are 21.19 carats.—[Ores and Metals.

Monday of last week Mr. Sullivan of Wilcox, took into town a huge wildcat he had captured. The varmint had been depopulating chicken roosts and committing other depredations below the town, and the neighborhood it had infested had suffered considerable loss by its marauding.

Manuel Vaca, representing Richard Gird, the California millionaire, last week purchased at the Empire rancho in Pima county, 500 head of three and four-year-old steers, which will go to Chino, California, where they will be wintered on the pulp from Mr. Gird's extensive beet sugar factory.

One of the superintendents of the Carr & Haggin cattle interests has been inspecting the Barbaconari range in Cochise county, with a view to its purchase and stocking it with cattle. All the cattle now on the range will be shipped by the first of December.

A temporary arrangement has been made by which the Yuma Pumping Irrigation Co.'s pump will be run by the rancho owners who irrigate from it. After the sale of the property it is presumed it will be run by the purchasers.

Notice:

On and after October 1st all credit for goods will be refused except on good security. All owing are requested to settle their accounts.

A. GROVER,

ARIZONA, September 29, 1893.

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Solid Oak suite, 3 pieces, do do do	35.
Solid White Oak set, 3 pcs do do do	45.
Cherry set, 3 pieces, do do do	50.
Solid Oak set, 40x18 Chevel Dresser,	55.
And so on, up to \$100:00	



We invite your trade. We carry a large and well assorted stock and our prices are as low as consistent with the quality of goods.

Carpets at 25c, 50c, 75c, 80c, 90c and \$1.00 per yard.

Brussels at \$1.00, \$1.25, \$1.35 and \$1.50 per yard.

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TUCSON, ARIZONA.

MISCELLANEOUS.

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