

Miscellaneous Record, No. 23, Madison County, Iowa

making said assignment the said A. B. Shriver retained one

Notary Public
in and For Madison County, Iowa

Ulon H. Marrs
To

#5109

Filed for record the 23 day of
September A.D. 1940 at 2:00 o'clock
P.M.

Fee \$.80 ✓

Pearl E. Shetterly, Recorder

The Public

RECORD OF INVENTION

Ulon H. Marrs

print name of inventor here

Date September 23-1940

I send you a sketch (or model) and description of my invention, which I call a Sectional
Hearth Support-for use with Stokers and ask that you advise me whether or not in your opinion,
the same is proper subject matter for patent.

This invention was conceived by me on the 31st day of Aug. 1940 and since then has not been
abandoned.

Yours ver. truly,

Full Name Ulon H. Marrs
(including full first name and middle initial
Address 716 West Green Winterset Iowa

TO WHOM IT MAY CONCERN:

Be it known that Ulon H. Marrs a Citizen of U.S.A. has this 23rd day of
September 1940, disclosed to me the invention illustrated and described on this sheet and I
fully understand the construction, purpose and function thereof.

Witness Shirley A. Webster

I hereby agree to assign a No interest in my patent application on the invention dis-
closed herein to None in consideration for his financial assistance.
partner

U.H. Marrs.
Inventor

Page three of search application. Mailed to offices of Clarence A. O'Brien
DESCRIPTION OF INVENTION

Make a sketch of your invention on the opposite page. Then write a full description of it
in your own words, referring to the parts by numbers which you have placed on your sketch. Tell
how it works and state its advantages. Use the space below for this description. If this paper
is not sufficient, use any other that you may have and attach to this paper.

This is a diagram of one section and when such sections are laid horizontal with the retort
of a stoker they form a complete support for the refractory material which forms a hearth. The
hearth can be of any material now in use. This particular size section could be increased or
decreased to fit an installation in a warm air furnace from a 26 inch standard fire bowl down to
an 18 inch standard fire bowl and the same would apply to a round hot water boiler or steam
boiler. If the sections are made of 22 gauge standard sheet iron or heavier, it is probable
no other support would be necessary by reason of the flange or fin turned to a vertical posi-
tion it adds sufficient strength to support the refractory material. By increasing the size of
the sections larger installations would be taken care of in a like manner. This particular sec-
tion is designed for a round retort and round firebowl but by trimming properly the sections
could be used with oval or rectangular installations of retorts in warm air furnaces or boilers
or any place where refractory material is used to form a hearth and clinker space.

By using this type of hearth supports it would eliminate several hours in labor on an installation and all the rock, brick, sand and cement which are now
filling the ash pit thus reducing the installation cost for both labor and material. Also if
service was necessary on any of the part of the stoker which is inserted into the ash pit of
furnace, boiler, or etc; it is readily accessible thus reducing service costs to the consumer.

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By leaving the ash pit open in a furnace or boiler the heat that does travel down from the hearth is not wasted in several hundred pounds of rock, sand etc; but is dispenced out into the basement or or room where the heating plant is installed. When using this type of installation in a gravity warm air furnace there would not be a hot spot or heated area in front of the return-air pipes or shoes thus helping to speed up circulation of air through the system and would add to the economical operation of the heating plant.

METHOD OF INSTALLATION

#1 flanges can be turned up or down depending on how deep or thick a hearth is required. On most stokers now on the market they are using a sectional retort and the sections are clamped together and held in place by a band which is split in one or two places and held together with bolts. By loosening the band the sections of the refractory support (#1 flange) can be inserted between the it and the retort sections, when they are all in place the band can be tightened which anchors inside of refractory support. On most installations the refractory support will extend upward at an angle till they touch the fire bowl which forms the outside support for the refractiry base. Since the top of the retort is placed at grate level in warm air furnace fire bowls or boilers or in some cases below grate level the sectional ^{re-}fractory support will always extend upward at an angle from the retort to the fire bowl or boiler wall so that it would be practically impossible for the refractory base metal to be pushed downward out of place if properly installed.

#3 end is laid on top of #2 flange of each section forming a lap joint which is both tight and adds to strength. #4 flange to be up when in place. On retorts that have no retaining band- a band can be supplied to perform the same support as described. A section as described is being forwarded to your office under separate cover.

An installation as described was completed on September 3rd 1940 and is working perfectly.

Note: plat or diagram of invention filed in vault under affidavits; Recorder

COMPARED