Fuel Famine

Are you worried? Use a "MONARCH RANGE" and save 50 per cent of your fuel supply.

THE RANGE THAT SAVES

A range is something like a horse—

You pay so much for a horse—its feed and keep amount to so much a year. And you get so much work from it and it lives so long.

You pay so much for a range—its fuel and repairs cost you so much. And you get so much cooking from it—and it lasts you so long.

The most expensive item about either a horse or a range is not, usually, the first cost—it's the yearly feed and fuel bill.

It isn't the cheapest horse that costs, say, $25, eats its head off in a year and then goes sick and dies.

Any more than it is the cheapest range that costs, say, $25 and burns up fuel like sixty and then goes all to pieces.

No, sir, the horse that's worth the most is the one that will drive easiest—that doesn't soon tire out—that has no bad tricks—that can be relied on—that has a small yearly feed bill—is healthiest and lives longest.

And the best range is the one that will stand the hardest usage—will use the least fuel—that can be perfectly controlled—that will last the longest.

In short, the best horse or the best range is that which will do the most work at the least cost.

Now, what is a range?

It is simply a cooking contrivance consisting of a top and an oven—heated by a fire in a fire box.

Just as a locomotive is best that can convert the most Energy from the coal it uses into Work with the least loss,

So is a range best which can convert the most Heat of the Coal it uses into Cooking Power with the least loss.

Years ago they had no ranges.

They cooked over an open grate or fire.

It was a good thing that fuel was cheap in those days because this fire had to heat the outside air as well as the dish it was intended to cook.

Yet to a certain extent these same conditions hold good today.

For there are many ranges that are so constructed that they can't convert all the Heat of the coal they use into Cooking Power—they lose a lot—not because they are as open as the old fashioned open grate but because they are letting in the outside cold air into the range through nearly every joint and seam—through imperfectly closed openings at the oven door—the draft door—the ash pan door—etc.

They lose heat in a range just as you lose heat in a bath if you turn on the cold water as well as the hot water tap.

Hence there's a waste in fuel—

It may not seem much—you maybe won't notice it at first—

But by-and-by you will notice that things don't cook so well in your oven or on top of your range as they did at first—

You have to keep turning dishes in the oven—and you have to put such a fierce fire on that you get the top and front of your range red hot—in order to have things cook properly.

WASTE OF FUEL

We have on record well authenticated cases which show that the "loose jointed" ranges will waste about $24.00 worth of fuel in a year.

That's a Conservative or average record.

At the very least, in sections where fuel is most cheap it is safe to say this waste would amount to $12, anyway.

Remember that's waste and not the entire fuel bill—

That $24 waste must be figured into the cost of the stove—

If you pay $40 for such a range it means that the first year it costs you $64.

But the "trouble" doesn't stop at just waste and unsatisfactory cooking. The material in these ranges may either play out—or so deteriorate that you waste not $24 but $48 or more per year.

In other words, your range may play out altogether in from two to five years—for that's the history of this kind of range.

Now certain ranges are not Fuel Wasters and Short Livers just because we or anybody else say they are.

The fault lies in the material they're made from and in the way they are put together.

The materials that produce the most of these leaky ranges are usually the sheet steel and Grey Iron—the most common material used in making stoves.

Iron—the Commercial Metal is made from the element Iron and contains other elements such as graphite, silicon and carbon.

The amount of carbon an iron contains and the way it is worked determine its character and the uses to which it can be applied.

The more carbon an iron contains, the more brittle or easily breakable will it be and the more readily will it be affected by heat.

Grey Iron contains a high percentage of Carbon—

You can't hammer Grey Iron—it would break.

And that's where the trouble comes in in the ordinary sheet steel and Grey Iron Ranges.

For in these stoves, Joints have either to be bolted with a thread bolt and screwed together or else riveted.

Then these joints are plastered with stove putty to make them air-tight. Just run the blade of your knife some time into the joint of the oven where the stove body and oven come together—you can dig the putty out—

Once you put that range in use—the alternate heating and cooling causes the metal to expand and contract.

The nut on the thread bolt soon works loose—the seams open between the rivets—the stove putty drys up—and sometimes drops out. This takes place in every joint in the stove whether bolted or riveted.

There you have your "air leaks" in every joint to waste fuel—to cook unsatisfactorily—to worry you. To get worse every day until you can no longer use the stove.

MALLEABLE IRON RANGE

But Sheet Steel used in combination with Malleable Iron can be made into a perfect range, if the range be properly constructed. This stove is known as the Malleable Iron Range.

Malleable Iron is about the only metal that can stand the extremes of heat and cold without undergoing any serious amount of contraction and expansion—and Malleable Iron, unlike Grey Iron, can be hammered with great force without being broken—

MALLEABLE IRON

For the most pronounced difference between Malleable and Grey Iron lies in the percentage of Carbon each contains.

Grey Iron contains a high percentage of Carbon.

Malleable Iron in its finished state is practically free from Carbon.

It has a close, dense, compact texture.

It is tough. It can be worked under the hammer cold.

It is unbreakable. It will stand the fiercest heat.

When heated red hot you can throw water on it without affecting it in the least.

If made into furnace Grate Bars Malleable Iron will stand the hot blast of an air blast furnace for two weeks.

Grey Iron bars would not last out more than two days.

Annealing Pots made of Malleable Iron can stand the tremendous heat to which they are subjected for from nine to fifteen heats.

Grey Iron pots would not last more than three heats.

For these reasons, Malleable Iron is peculiarly fitted for those parts of a range which have to resist the strains of heating and cooling—such as the top—anchor plates and covers—and the range frames.

And Malleable Iron is especially fitted for those parts of a range that must be riveted air-tight—for it supplies an absolutely rigid and non-impressionable base to which the other material of the range, i. e., the sheet steel, can be riveted tightly and solidly.

Hence, if properly constructed—all the joints and seams and all the openings in a Malleable Iron range, such as the oven door, the fire door—the draft door—the ash pan door—the back flue, etc., can be made practically air tight.

But not all Malleable Iron Ranges are air-tight and controllable, however.

Maybe because their makers do not see the tremendous importance of making their stoves air tight.

Maybe because it costs too much.

At any rate, there are many Malleable Iron ranges that look like pretty good stoves—but they will suck in the cold air from the outside through a defective shutting ash box—an open shaker hole—a loose damper—or an ill-fitting loose construction somewhere.

These kinds of Malleable Iron Ranges are very little, if any better than an ordinary oldfashioned Steel Range with Grey Iron top for they waste fuel just as badly.

In the Monarch Malleable Iron Range alone is this splendid material—Malleable Iron—largely used—with the best quality sheet steel—i. e., Wellsville Polished Steel to make a perfect range.

There are no "Air Leaks" in the Monarch. It is practically "air tight"—Body—Fire Box—everywhere.

The Monarch saves fuel—it keeps in perfect condition for years with reasonable use.

CONSTRUCTION

Now, here's the way we make a Monarch tight—to stay tight—

Here's the way we prevent "air leaks" that waste your fuel—spoil your temper—spoil your bakings— and cost you lots of money.

Here's the way we make a range that you can control perfectly—have your fire as hot as you want in 5 minutes or banked down in an equal time

Here's the way we make a range that, with reasonable care, will cook as well as fifteen years from now as it does today—

First, Madam Housekeeper, we want to ask you what was one of the things you most dreaded about your ordinary sheet steel range—

Keeping it clean, wasn't it?

Unless you gave it a hard, back breaking rub every day—your range looked dirty, unkempt and repulsive—

Made your whole kitchen look untidy, didn't it?

You couldn't bring your friends into your kitchen unless that range was cleaned every day.

Then when you did clean it the black lead was pretty sure to get on your pots and pans and increase your work keeping them clean—

Well, you won't have any such trouble with the Monarch.

For the top—i. e., anchor plate and covers—is of Malleable Iron, polished bright as a well-worn steel rail. After the first use, the anchor plates and covers turn a deep blue color. The top of the Monarch requires only a little rubbing with a cloth once a day to keep it clean and bright. There's no back-breaking polishing and rubbing with the Monarch as you have to do in ordinary ranges.

The housewife can show the Monarch to her friend at any time with pride and pleasure. It makes her kitchen look clean and inviting.

Then the top of a Monarch is lighter in weight than an ordinary grey iron top.

A lighter and more close grained metal will transmit heat more quickly and with less loss than a thicker metal.

Now, fully four-fifths of the household cooking is done on the top of a range.

Therefore, a top that will heat more quickly and conduct more heat with loss loss will save fuel —see the point?

And it will do more—it will save your stove's fire box: lengthen the life of your stove.

These are some of the points of superiority of the Monarch's Malleable top—over others.

Still another is its strength.

You can strike two of the covers together but they won't break—Strike two Grey Iron Covers together and you'll have to buy a new

The Frames in the Monarch are of Malleable Iron—

The top frame that binds the body of the stove together and each of the frames around the Oven Door—the Ash Door—the Pouch Feed —the Warming Closet opening—and at the back of the Oven, etc.,

form an absolutely rigid base to which the steel can be riveted—a base unaffected by the extremes of temperature and all these Malleable Frames are riveted tight and solid to the Body, making a practically air-tight construction everywhere.

Now, this is the way the frames are riveted around the Body openings—

A flange of this frame projects inward to cover the Steel of the Body —that's how we do it.

That's why we don't need to use an ounce of Stove Putty in a year in Monarchs.

That's why there are no thread bolts or steel riveted to steel to work loose and open up joints all over the range.

THE RANGE BODY

The body of the Monarch is made of 16-gauge Wellsville Polished Steel—the best and handsomest steel manufactured.

This Body remains for years, with a little care, a handsome deep blue color.

Other makers charge extra for a Wellsville Polished Steel Body—this is a tacit admission that it is better than any other material for Stove Bodies.

A Wellsville Polished Steel Body is far superior to a painted body —a painted body has to be repainted—it always looks gummed—it turns brown—accumulates lint and dust and can never be repainted successfully.

THE ASBESTOS LINING

The Body of the Monarch is lined with Asbestos riveted to a sheet of steel.

This steel is in turn attached to the body—and the Asbestos is exposed to the superheated air in the flue passing over and around the Oven.

The Asbestos reflects the heat into the Oven where it is needed.

In ordinary ranges where the Asbestos is for the most part covered with steel—the steel absorbs the heat, taking it away from the oven.

The Asbestos lining in the Monarch can be readily removed if it should ever be necessary to do so.

And since it is not riveted to the right side of the Range Body it does not mark up the Range Body but leaves it smooth and attractive—

It must not be supposed from this that all the heat in the Monarch is contained in the range—that the Monarch will not heat the kitchen if so required.

Far from it. The Monarch Top will heat even better than the tops of other ranges—

And if you want a fine warm floor just open the warming closet door—

You will have more heat than you could get from a base burner.

THE FIREBOX

Does it take about an hour to get up a cooking fire in your range?

And when you are through with it does it take about an hour to slow down again?

That's the trouble nearly every one experiences who has an ordinary range.

And it's caused by a leaky fire box—one that you can't control.

You see in ordinary sheet steel ranges with Grey Iron Tops and in most Malleable Iron Ranges there are many places where the outside air gets into the Fire Box.

Maybe through the long draft damper that is regulated by a slide at the left side of the range—

This damper is usually merely a cast plate bolted to the steel body —(it can't be riveted because it would break)—

The bolts work loose through this expansion and contraction of the metal and an opening is formed between the frame of the draft plate and the steel in the Body for air to get in—even when the damper is shut.

Then, air gets in through the opening allowed for the grate bar to come through for shaking and dumping—through the bolted and putted Ash Box opening or front damper—or the Ash Pan opening or where the Ash Pan pulls out Door and all—for this kind of Ash Pan invariably slides up on the Ashes when being returned and leaves a "gap" in the opening to let in air.

When you can't shut your Fire Box off perfectly and tightly, you are using Fuel when you don't want it—therefore you're wasting money.

With a Monarch you can have a fire whenever you want it—

It responds almost as quickly as the fire in a gas stove.

And when you're through with it, you can bank it down in very nearly the same time that it takes to turn out a Gas Fire.

For you have perfect control of your fire in the Monarch fire box—because it is practically air-tight—

No air can get in anywhere—for the Feed Door, the Ash Door and the Duplex Draft opening are all riveted tight and solid to a Malleable Iron Frame—

And the opening for the Grate Bar is closed with an Indicator which tells whether the Wood or Coal Side of the Grate is in use.

Did you ever try to burn wood on a Coal Grate?

You weren't very successful, were you?

For, usually, the wood grate has smaller holes in it than the coal—Therefore it won't burn coal readily.

In an ordinary range you couldn't tell, however, which you were using—wood or coal grate.

But in the Monarch you can tell every time by the Indicator—outside on the Range Body next the grate shaft for shaking and dumping.

DUPLEX DRAFT

You know the difficulties of the Ordinary range draft—

It is either at one end of the Fire Box and makes and uneven fire—hot towards the draft side—cold towards the back of the stove.

Or it is across the left side of the stove and leaks air, as we have said.

There's no uneven fire in the Monarch—no "air leaks"—

Simply an absolutely uniform fire from one end of the Fire Box to the other—and that's due to the Duplex Draft.

The Duplex Draft is a draft at the front and back of the Fire Box.

You pull a handle and both front and back drafts open simultaneously—then you shut them up in the same way.

The big advantage of the Duplex Draft is the fact that it sends an even flow of heat the entire width of the stove to envelop the Oven.

THE OVEN

Does your oven cook more quickly on one side than on another—do you have to keep turning your roasts around so's to have them browned uniformly?

Is your oven slow—do you have to put on a roaring fire to have your Food cooked at all?

Do you know what's the matter?

Either a leaky oven with nearly every joint letting in cold air—or else the trouble's caused by the onesided flow of hot air from the Fire box from the one-sided damper.

Now, we know how this one-sided heat is caused.

You see, the ordinary range oven is fastened to the Body by simply turning over or flanging the Steel and riveting it to the Body.

This joint then has its "liberal allowance" of Stove Putty—to hide the crack underneath.

After a few heatings and coolings the Stove Putty shrivels up and there is Mr. Crack letting in the cold air to beat the band.

You can place four potatoes of equal size in each corner of the Monarch Oven and one in the center and at the end of a certain time they will be cooked uniformly.

Your roasts and bakings will be deliciously and uniformly browned.

You won't have to keep turning dishes and pans in the Monarch oven to have your food cooked uniformly.

And you can do it on a minimum amount of fuel.

Because the Monarch oven is the only oven that has a perfectly uniform envelope of heat—due to the Duplex Draft.

And it is the only oven that does not leak air.

For the Monarch oven is riveted tight and solid to Malleable Iron frames both back and front.

The sides and top of the oven are 16-gauge patent leveled cold rolled steel.

And the bottom will neither warp nor buckle and cook your puddings crooked, for it is made of 12-gauge steel (about three times as heavy as the material in same place in an ordinary range), reinforced by the Flue strip which is flanged and riveted to the oven bottom and the Flue bottom.

The top of the oven is braced with a Malleable Arch—this in turn supports the Anchor plates on the top.

You can place a wash boiler with 80 or 90 pounds of water on the Anchor Plates when they're hot and you won't spring them the fraction of a quarter of an inch.

The Monarch oven is absolutely rigid—two men can stand on the oven door—that will give you an idea of the splendid construction of the Monarch.

When you open the Monarch oven door your kitchen won't fill with smoke or cooking odors.

For the Monarch oven is ventilated.

THE NICKEL WORK

The Nickeling in ordinary ranges is mighty bothersome to keep clean.

It is so elaborate—has so many places to collect lint and dust that a housewife has to spend much of her time trying to clean it.

For if this nickeling isn't properly cleaned it makes the whole range look dirty.

Then another thing about ordinary nickeling—

It nearly always looks flat—its color has no depth to it.

In the Monarch that's all different.

In the first place the nickelings are all high surface.

Simply a rub will keep them clean—there are no places to collect lint and dust.

Then it's a much better and deeper color—for we do our nickeling better than is done on any other range.

It's a mighty handsome Range take it all in all.

All in good taste—

An ornament to any woman's kitchen.

The protecting bar is made of special steel—don't be afraid of it—you can lift the stove with it.

The foregoing is a complete analysis of every part of the Monarch Malleable Iron Range.

It tells you why the Monarch is better than any other range made, in every individual part and in the complete range.

It shows why the Monarch will cook better—will give better satisfaction and will last longer than any other range.

THE ONLY AIR TIGHT RANGE

And above all—since the Monarch is practically air-tight to stay air-tight, therefore perfectly controllable—this analysis shows why the Monarch saves fuel—the largest expense item in connection with a range.

Now, although the Monarch is vastly superior to every other stove—Malleable—Grey Iron—Sheet Steel, etc.

Although our range operatives are all specialists in their line of Monarch Construction, commanding good wages.

Although every bit of work is submitted to the closest possible inspection.

And although every ounce of Malleable material in the Monarch is tested by a drop hammer before being accepted for Monarchs—all items of cost that very few other range manufacturers have to pay—

Yet the first cost of the Monarch, that as we have seen saves Fuel and therefore Money, is very little more than that of the ordinary stove which loses or wastes on an average $24.00 a year in fuel.

Thus, you see, if your income is moderate you can't afford to buy any other range than the Monarch.

Unless you have no regard for money and can afford to waste it you should secure a Monarch at your earliest opportunity.