

A Survey of Cast Iron Fireplaces in Germany

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I reported on the German tiled stove (*Kachelofen*) at last year's SHASE Meeting. This time, I would like to report on cast iron fireplaces, which were developed in Germany in the same way as tiled stoves.

In the cold seasons, cast-iron fireplaces were as central to family life as tiled stoves (*Kachelofen*). Therefore, cast-iron fireplaces were also considered as furnishings. Cast-iron fireplaces were decorated with beautiful patterns. The patterns became works of art.

Recently, the SDGs have been mentioned. Fuel prices are also rising. Trees grow by absorbing carbon dioxide, which causes global warming. Iron fireplaces fueled by wood are being recognized again. Iron fireplaces are being re-evaluated by people who are aware of environmental issues.

Introduction

One thing that separated humans (*homo sapiens*) from their apelike ancestors was their discovery of fire as a tool. Humans learned how to harness fire for cooking, heating, lighting, and for communicating over distances further than their voices could carry.

In Germany, iron manufacturing took place where iron ore was mined. The earliest examples of the presence of iron manufacturing in Germany are found in Siegerland, Eifel, Hessen, Harz, Southwest Germany, Pfalz, and Saarland. Humans initially used open fires to cook and keep warm. However, this method was too inefficient for heat. To use the heat effectively, it was thought to surround the fire with iron plates.



Fig-1 The combustion of naked flames was extremely inefficient for heat., Bomann Museum in Celle, Germany

In the areas where iron manufacturing took place, cast-iron fireplaces were manufactured for daily use.

In Hessen, Buderus was a small ironworks. The company was founded in 1731 and manufactured cast-iron fireplaces. Based on this, the company was organized as a corporation,

manufactured boilers and radiators, and developed into one of the leading heating equipment manufacturers in Germany.

The fireplace was the center of family life during the cold season. Family life took place around the fireplace.

Since fireplaces were also furnishings, they were decorated with various patterns.

Cast-iron fireplaces with excellent patterns were produced competitively at various foundries. Especially Hessen's Philipp Soldan, a foundryman from Hessen, produced some excellent pieces. Many of his works are on display in several museums and are based on motifs from several towns in Hessen. The craftsmen who studied under Soldan also left excellent works. Thus, cast-iron fireplace patterns became a work of art. There were many different fireplace patterns. Flowers, plants in general, animals, hunting scenes, Christian scenes, family emblems, town emblems, domestic scenes, and city scenes were all favorites. Horses were often the subject of animal patterns. Horses were the most popular domestic animal for humans as a means of transportation, warhorse, and meat. The horse flying over a city or a horse flying over a castle were often used. These are mainly exhibited in the Bomann Museum in Celle. During the German Empire, fireplaces with the emperor's free standing figures were also produced.

Cast iron fireplaces are classified by form and function as follows

1. Plate furnace (*Plattenofen*)

The cube consists of six faces. If the fireplace is mounted directly on the exterior wall, there will be five steel plates. Various patterns were attached to these plates. Here is an example where the horse mentioned above was attached as a pattern. Figures -2 to -4 show examples of horses used as

fireplace plate designs.



Fig.-2 Fireplace plate, horse over a city

right side plate of five plates furnace

Foundry in Elbingeröder Revier

Year of casting probably 1697 or 1698

Bomann Museum in Celle, Germany



Fig. -3 Fireplace plate horse with English crown

left side plate of a five plate Fireplace

Foundry probably Red Foundry

Year of casting after 1714

Bomann Museum in Celle, Germany



Fig-4 Fireplace plate horse above the castle in Wolfenbüttel

right side plate of a five plate stove

foundry probably Elbingeröder Revier

year of casting probably between 1686 and 1691

Bomann Museum in Celle, Germany

2. 6-Plate fireplace (*6-Plattenofen*)

It is a fireplace consisting of steel plates on six sides of a cube.

This fireplace was placed indoors, away from the exterior walls.

It had four legs to support the fireplace.



Fig.-5 6-plate fireplace

Deutsches Ofenmuseum in Burrweiler, Germany

3. Cannon stove (*Kanonofen*)

This stove, shaped like an old cannon, was made in large

numbers in the late 1700s and was heavier than the one in this

photo



Fig.-6 Cannon Stove, Goethe Museum in Frankfurt/M.

4. Round fireplace (*Rundofen*)

It is a cylindrical fireplace. This type of fireplace was

manufactured in large numbers because it was easy to

manufacture. This type of fireplace is still being manufactured

today. By changing the length of the upper cylinder, it was possible to vary the amount of heat radiation and convection.



Fig.-7 Old type cast iron round fireplace
Heating Museum Co. Buderus in Lollar

5. Heating & Cooking Oven (*Heiz-u. Kochofen*)

Before iron stoves were built in the 19th century, there had already been iron stoves for more than three centuries. For so long in the urban apartments, as in the farmhouse, it was customary to brick the stove and cover it with a large chimney. Before the advent of the iron cooking stove, the cooking stove, which combined heating and cooking, became widespread.



Fig.-8 Heating & Cooking Oven (*Heiz-u. Kochofen*)
Ofen Museum, in Homberg

6. Luxury Fireplace (*Prunk-Ofen*)

It was found that a smaller combustion chamber required less fuel to reach high temperatures than a large combustion chamber. The hot flue gases were led to the chimney by passing a large surface area - the so-called flue gas extensions, which were built as tops in a wide variety of designs. Regulating screws attached to the ash and stoking doors

ensured uniform combustion. This combination guaranteed high energy utilization, which was later increased by lining the combustion chamber with foam bricks.

In accordance with the style of the time, stoves were decorated with ornaments that could be found on furniture or even house facades. In turn, these ornate pieces of splendor could be afforded only by those who belonged to the upper class. The stove was not only one of the most important furnishings in the house, but also a status symbol.



Fig.-9 Luxury Fireplace (*Prunk-Ofen*)
Ofen Museum in Homberg

7. Combination Type of Tiled Stove and cast Iron Fireplace

This fireplace is expected to have soft heat radiation from the ceramic part.



Fig.-10 Combination Type of Tiled Stove and cast Iron Fireplace, Bomann Museum in Celle, Germany

8. Empire Founding Furnace (*Reichsgründungsofen*)

Wilhelm I became the first German emperor in 1871. A cast-iron fireplace with a standing image of the emperor was manufactured to raise the national prestige of the German Empire. The statue of Bismarck, who was instrumental in

founding the German Empire, was also used on occasion.



Fig. -11 Empire Founding Furnace (*Reichsgründungssofen*)
Ofen Museum in Homberg



Fig. -12 Fireplace with a standing statue of Wilhelm I , the first Emperor of the German Empire
Ofen Museum in Homberg

9. Stack and circulation furnace

Attempts were made to lengthen the flue with the goal of improving the efficiency of the fireplace's heat dissipation. Fireplaces were manufactured with stair-stepped fireplaces that allowed the exhaust smoke to exit the fireplace to the outside over time.



Fig.-13 Stack and circulation furnace
Bomann Museum in Celle Germany

10. Irish stuffing fireplace

Some used pictures painted on enamel to enhance its decorative qualities.



Fig. -14 Irish stuffing stove

Cast around 1900

Iron foundry Esch & Cie Mannheim

Multicolored enamel

An enamel picture shows the Spyer Cathedral

Deutsches Ofenmuseum in Burrweiler, Germany

Conclusion

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References

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