

WERNET & KERSHAW.  
Stove Plate.

No. 100,699.

Patented March 8, 1870.

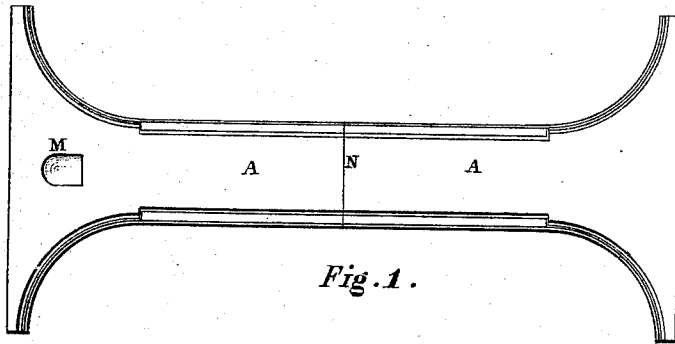


Fig. 1.

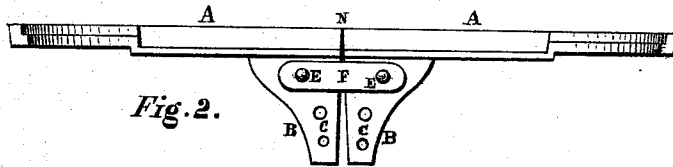


Fig. 2.

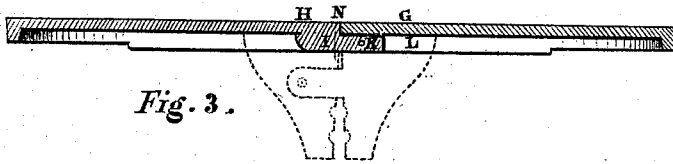


Fig. 3.

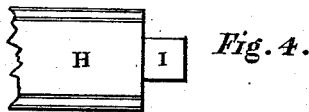


Fig. 4.

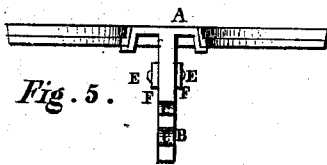


Fig. 5.

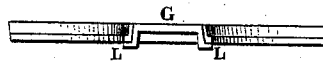


Fig. 6.

*Geo. W. Raff*  
*And. Choffin* } Witnesses.

*August Wernet*  
*John Kershaw* } Inventors.  
*by Geo. Abbott*  
*Deane & Co.* } Attorneys

# United States Patent Office.

AUGUST WERNET AND JOHN KERSHAW, OF CANTON, OHIO.

Letters Patent No. 100,699, dated March 8, 1870.

## IMPROVEMENT IN THE CONSTRUCTION OF STOVE-PLATES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, AUGUST WERNET and JOHN KERSHAW, of Canton, Stark county, Ohio, have invented certain new and useful Improvements in Stove-Plates; and we do hereby declare that the following is a full, clear, and exact description of our invention, reference being had to the accompanying drawings forming a part of this specification, and to the letters of reference marked thereon, of which drawings—

Figure 1 is a plan of our improved plate.

Figure 2 is a side view of the same.

Figure 3 is a longitudinal section, showing another mode of uniting parts.

Figure 4 is a plan of the tongued part of plate shown in fig. 3.

Figure 5 is an end view of one part of plate shown in figs. 1 and 2.

Figure 6 is an end view of one part of plate shown in fig. 3.

This invention has for its object the prevention of the cracking of the plates used on stove tops, which are usually made with a long narrow neck, and are very liable to sag down and crack under the effect of the intense heat to which they are subjected; and

It consists in making said plates in two parts, which parts are united to form the plate by being abutted against each other at their upper edges, and connected by a hinge-joint, having its pivot below the upper plane of the plate, so that the only effect of the heating and cooling of the plate is to cause a rising and falling of the same at the center, without producing any permanently injurious sagging or bending or breaking, thus effecting the desired result without lessening the efficiency or materially increasing the cost of the plate.

To enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

In the stove-plate shown in figs. 1, 2, and 5, A A are the two parts in which the plate is made, each being simply one-half of the ordinary plate.

On the adjoining ends and lower sides of these parts A are cast the lugs B, which may be made with holes C C, as shown in fig. 2, or with corrugated edges, as indicated in fig. 3, to allow of the passage of the flame and gases when the lugs project down in positions where they would interfere with the draught.

The two parts are united by the plates F F, which are secured to the lugs B B by the rivets E E, which pass through the plates F F and the holes in the lugs B.

The length of the plates F F between the pivots E E is such that when the upper edges of the parts A A abut against each other, as shown at N, in fig. 2, and the parts are at an ordinary temperature, the upper faces of the parts A A will be in the same plane.

The plates F F may be cast with one of the lugs

B, when a single rivet E will be sufficient to unite the two parts of the plate, as indicated by dotted lines in fig. 3.

Other modes of uniting the two parts of the plate may be used, as, for example, in the plate shown in figs. 3, 4, and 6.

The part H has the tongue I cast on its lower side, as shown in figs. 3 and 4, which tongue fits between the flanges L L of the part G, shown in fig. 6, where it is secured by the rivet K passing through the flanges L L and the tongue I, as shown in fig. 3, the upper adjacent edges of the parts G and N abutting against each other at N, as in the previous case.

The first construction is to be preferred, however, especially for the long plates, as it throws much less transverse strain on the parts, and is therefore much less liable to sag down when heated and subject to the strain due to the weight of the cooking utensils.

From the foregoing description of the construction of our improved plate, it is evident that when the plate is heated, the parts A A will expand along their length, and as they have an end support with a hinge connection below their abutting edges at the center, the effect of this heat will be to cause the plate to rise up at the center N; and in a similar manner the cooling of the plate will cause it to fall at the center, so that the mechanical power of the heat imparted to the plate is employed in producing a harmless motion of the plate at the center, instead of acting to produce an end movement of one end of the plate, which tended to increase the transverse strain on the plate, and hence aided in sagging the plate when subjected to a load, which is often seen in the old forms of long stove-plates made in one part.

The whole plate A A can be lifted by a handle inserted in the hole M in the ordinary manner, the lower ends of the lugs B B coming to a bearing when the plate is raised.

What we claim herein as new and of our invention, and desire to secure by Letters Patent, is—

1. A stove-plate consisting of two parts, abutting against each other at their upper edges, and united by a hinge connection having its pivot below the upper plane of the plate, substantially as and for the purpose specified.

2. The stove-plate A A, consisting of the halves A A, provided with the lugs B B, and united by the plates F F riveted or cast with one lug B, and connected by a hinge-rivet to the other lug B, substantially as and for the purpose specified.

As evidence of the foregoing, we have hereunto set our hands in the presence of two witnesses this 8th day of January, 1870.

AUGUST WERNET.  
JOHN KERSHAW.

Witnesses:

JOB ABBOTT,  
GEORGE BALL.