(No Model.)

A. T. MATTHEWS.

STOVE KNOB BOTTOM.

No. 354,607. Patented Dec. 21, 1886.

Fig. 1.

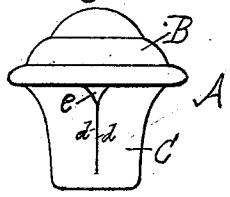


Fig. 2.

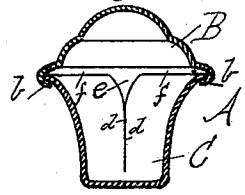


Fig. 3.

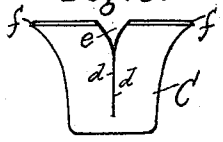


Fig. 4.

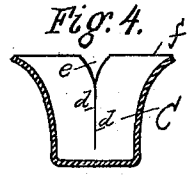


Fig. 5.

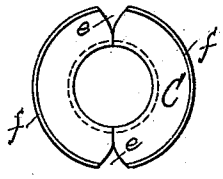


Fig. 6.

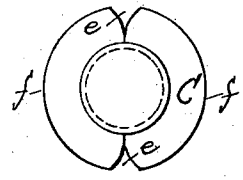


Fig. 7.

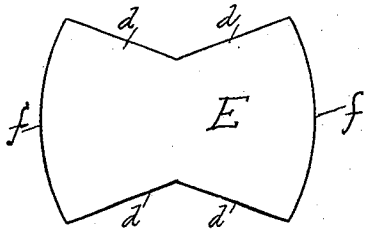


Fig. 8.

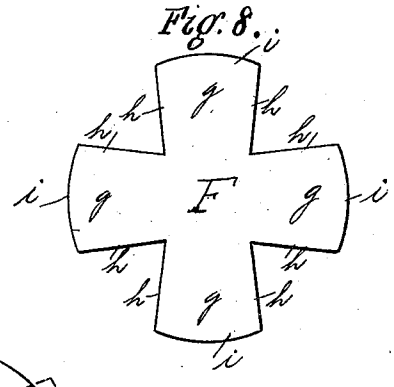
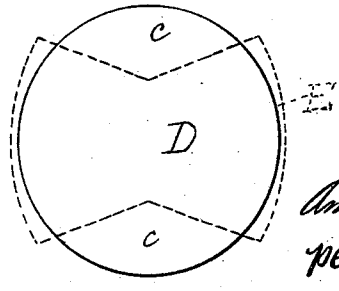


Fig. 9.



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UNITED STATES PATENT OFFICE.

AMBROSE T. MATTHEWS, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO THE WORCESTER FERRULE COMPANY, OF SAME PLACE.

STOVE-KNOB BOTTOM.

SPECIFICATION forming part of Letters Patent No. 354,607, dated December 21, 1886.

Application filed May 7, 1886. Serial No. 201,414. (No model.)

To all whom it may concern.

Be it known that I, AMBROSE T. MATTHEWS, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Stove-Knob Bottoms or Backs; and I do hereby declare that the following is a full, clear, and exact description thereof, which, in connection with the drawings making a part of this specification, will enable others skilled in the art to which my invention belongs to make and use the same.

My invention relates to stove-door knobs, or knobs for other purposes, made out of sheet metal, and molded by suitable dies into the shape desired; and my invention consists in certain novel features of construction of the bottom section or back of the knob, as will hereinafter be fully described, and the nature thereof indicated by the claims. The top section or front of the knob, to be combined with my improved bottom section or back in any usual and well-known way, may be made in the usual manner and of any desired shape, as my invention relates only to the bottom section or back of the knob.

I am well aware that it is not new to make the bottom section or back of metal knobs for stoves and other purposes out of a single piece of sheet metal, punched out or molded into the desired shape by means of suitable dies. This is old and well known; but heretofore the sheet metal used has always been cut into a disk or circular blank for the purpose of molding it into the desired circular shape at its edge, to correspond with the circular shape of the edge of the top section or front of the knob with which it is connected; but my improved bottom section or back for knobs is formed out of a piece of metal or metal blank of non-circular shape or form, as will be hereinafter fully described.

Referring to the drawings, Figure 1 represents in elevation a knob with my improved bottom section. Fig. 2 is a central vertical section of the knob shown in Fig. 1. Fig. 3 is a side view of my improved bottom section of a knob. Fig. 4 is a central vertical section through the same. Figs. 5 and 6 are top and bottom views, respectively. Fig. 7 represents the metal blank from which the bottom section of the knob shown in the drawings is molded, showing the shape of the same. Fig. 8 is a modified form of the metal blank shown in Fig. 7, to be hereinafter described; and Fig. 9 represents a circular metal blank, to be hereinafter referred to. The dotted lines represent the blank shown in Fig. 7.

In the accompanying drawings, the part marked A is a metal knob for stove-doors and for other purposes. It is made of the top and bottom sections, B and C, which are molded into the shape shown out of blanks of sheet-metal by means of suitable dies and punches, in the usual and well-known manner. The sections B and C are united together by overlapping their edges in the usual manner, as shown in Fig. 2.

The top section, B, may be formed out of a circular blank in the usual and well-known manner, my present invention relating only to the bottom section, C.

The bottom section, C, has heretofore, prior to my present invention, been formed or molded out of a metal blank of circular shape, such as shown in Fig. 9, and it has been deemed necessary to use a circular blank, D, from which to form or punch out, by means of suitable dies, the bottom or back section of the knob corresponding to the section C, in order that its top edge, *f*, would be of circular form to correspond with the circular form of the lower edge, *b*, of the top section, B, so that the sections B and C could be joined together at their edges and form a tight joint.

The bottom section, C, of my invention, (shown in the drawings,) instead of being formed out of a blank of sheet metal of circular shape, as shown in Fig. 9, is formed out of a blank of metal, E, of the shape shown in Fig. 7.

The blank E is of the same thickness as the blank D, but contains only about two-thirds of the amount of metal, for the portions *c c* must be cut out of the blank D to form the blank E. The blank E is shaped or molded into the section C by means of suitable dies and punches, it requiring only two operations and two sets of dies to transform the blank E into the bottom section, C.

In the operation of forming the section C from the blank E the edges *d d* of the blank E

are brought together and abut against each other, except at their outer ends, where they do not meet, but leave the two openings *e*, which furnish a ready means for the insertion of a wire or tool to support the completed knob in the process of nickelplating it.

The edges *f f* project out in a circular form to form the circular top of the bottom section, C, which meets and is connected with the circular bottom of the top section, B.

When a circular blank, D, is used for the bottom section of a knob, it requires four operations and four sets of dies to form out of said circular blank D a section corresponding to the section C, which, as above stated, requires only two operations and two sets of dies to form the same out of the blank E.

In Fig. 8 I have shown a modification or modified form of the blank E, the blank F having four projecting parts, *g*, extending out in opposite directions. The manner of forming the bottom section, C, out of the blank F is substantially the same as above described, in connection with the blank E, for in molding the blank F to form the section C the edges *h h* will meet and abut, the same as the edges *d d* of blank E, and the edges *i i* will project out in circular form to form the circular top of the section, the same as the edges *f f* of blank E; but there will be four openings corresponding to the openings *e*, instead of two, as in the case of the section C, made out of the blank E, as above described.

The value of my invention will be readily appreciated by those skilled in the art. By using blanks E, from which to form the bottom sections of knobs, instead of circular blanks heretofore used, a great saving of material is brought about, for the blanks E can be cut out of a strip of sheet metal with much less waste than the circular blanks D, and there is much less metal in a blank E than in a blank D. There is no waste in trimming off the top edges of the section C after the same is formed out of the blank E, as there is when it is formed out of circular blank D.

It requires but two operations and two sets of dies to form the section C out of the blank E, while four operations and four sets of dies are required to form a corresponding section out of the circular blank D, so that there is a great saving of the cost of production of the completed knobs having bottom sections of my improved construction.

I prefer to use for my improved bottom sections of knobs blanks of the shape of the blank E above described; but a blank F may be used, or a blank with three projections instead of four, with very good results.

I have shown in the drawings my invention in connection with a stove-door knob of well-known design; but it will be understood that my invention may be used equally well in connection with metal knobs of any other design or pattern, and I do not limit myself to the design or pattern of the knob A illustrated in the drawings.

Having thus described my improvements in stove-knob bottoms or backs, what I claim therein as new and of my invention, and desire to secure by Letters Patent, is—

1. The improvement in the construction of the bottom or back sections of metal knobs for stoves and other purposes, which consists in cutting out a non-circular blank, as E, and then forming said blank by means of suitable dies and punches into the section C, with the edges *d d* butting against each other, substantially as set forth.

2. A non-circular blank, as E, from which to form the bottom or back section of metal knobs for stoves and other purposes, substantially as shown and described.

3. The section C, having the openings *e* and formed out of blank E, substantially as set forth.

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Witnesses:
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JOHN C. DEWEY.