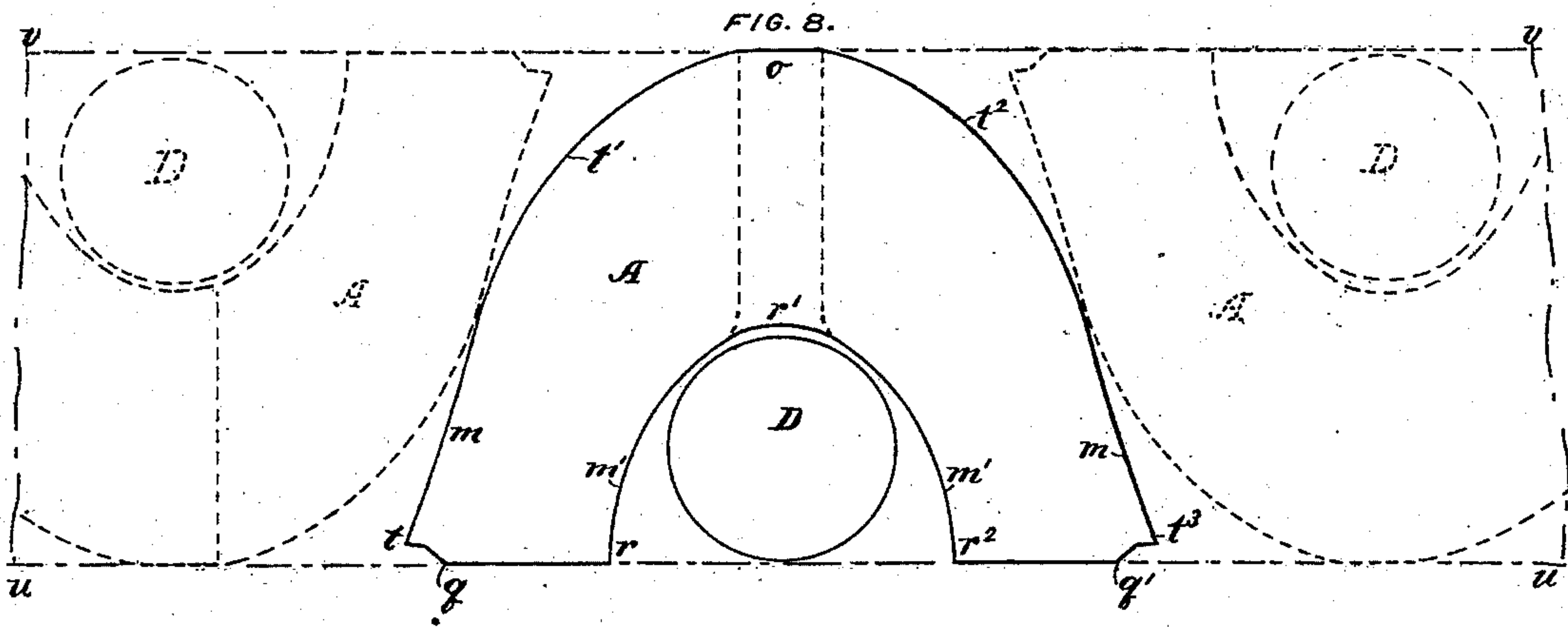
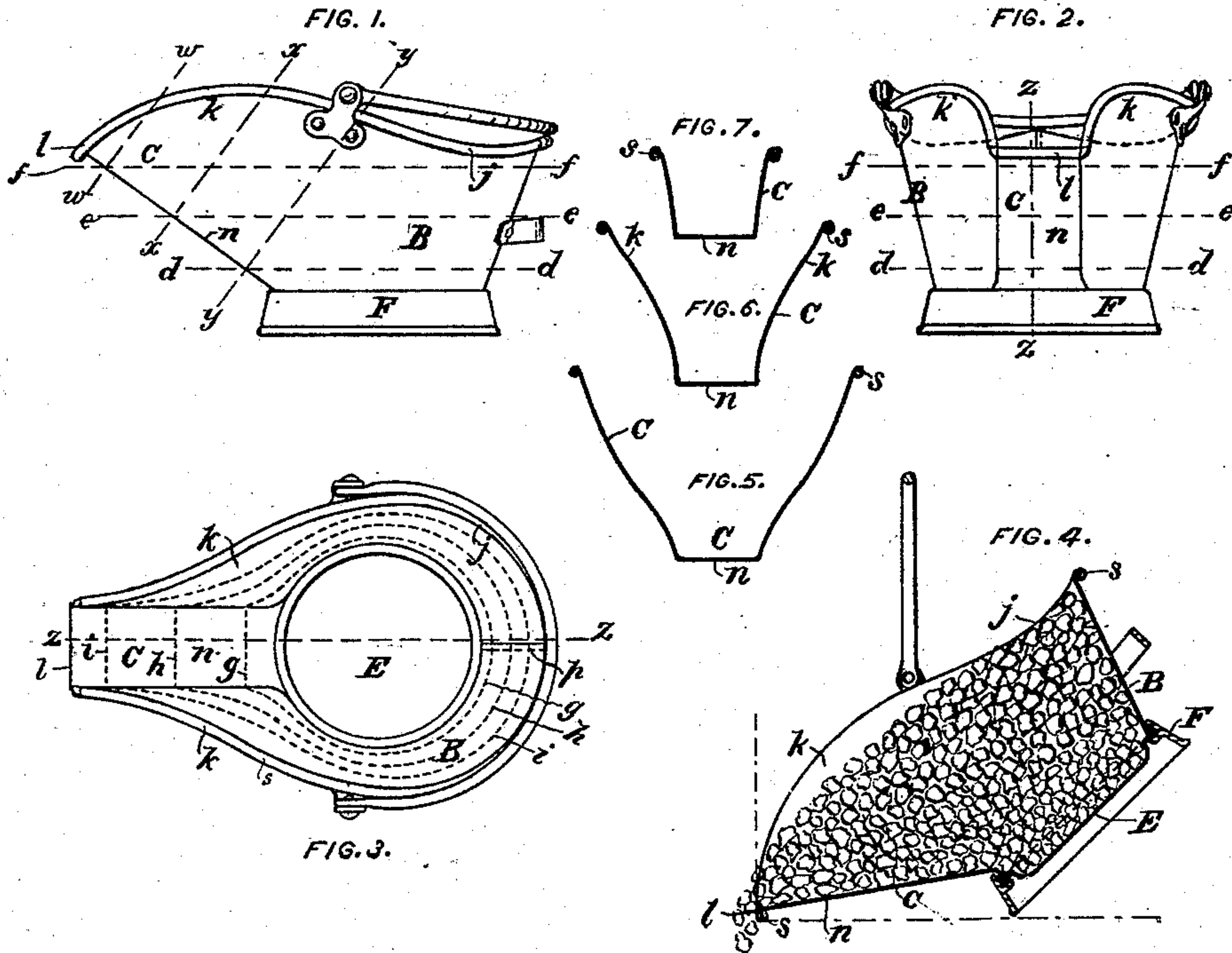


W. F. SALISBURY.
Coal Hod.

No. 232,618.

Patented Sept. 28, 1880.



WITNESSES:

Robert A. Richards
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UNITED STATES PATENT OFFICE.

WARREN F. SALISBURY, OF TROY, NEW YORK, ASSIGNOR TO THE TROY
STAMPING WORKS, OF SAME PLACE.

COAL-HOD.

SPECIFICATION forming part of Letters Patent No. 232,618, dated September 28, 1880.

Application filed April 7, 1876.

To all whom it may concern:

Be it known that I, WARREN F. SALISBURY, of the city of Troy, in the county of Rensselaer and State of New York, have invented a new and useful Improvement in the Manufacture of Coal-Hods, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation, Fig. 2 a front elevation, and Fig. 3 a plan, of a coal-hod made according to this invention. Fig. 4 is a longitudinal section of the same hod at the line $z z$ in Figs. 2 and 3, and nearly full of coal and inclined to the front. Fig. 5 is a section of the same hod at the line $y y$ in Fig. 1; Fig. 6, a section at the line $x x$, and Fig. 7 a section at the line $w w$. Fig. 8 represents, in full lines, a single blank of sheet metal from which the whole body and spout of the same hod were formed and another blank from which the bottom of the hod was made, and that figure also illustrates by broken lines the manner in which a series of equal numbers of those two blanks can be economically cut from a sheet of proper width.

A, Fig. 8, is the single blank of sheet metal from which the body B and spout C of the hod are formed, and D is the sheet-metal blank from which the bottom E of the hod is made. The blank A has its two rear ends, $q r$ and $r^2 q'$, straight and in line, or nearly so, with each other, and its outer side, $t t' t^2 t^3$, of the convex shape shown in Fig. 8, and its semi-oval concave inner side, $r r' r^2$, so deeply recessed as to give room between it and a straight line joining the two inner corners, $r r^2$, of the ends for the circular blank D, as clearly shown in Fig. 8.

The broken and full lines in Fig. 8 show how several of the blanks A and an equal number of the bottom blanks, D, can be easily cut in alternately-reversed positions, and with only very little scrap or waste, from a sheet whose edges are indicated by the broken lines $v v$ and $u u$.

In forming the body and spout B C of the hod from the blank A the outer side, $t t' t^2 t^3$, is bent over to receive a strengthening-wire, s , and then rolled tightly down around the latter, and it will be observed that that side of

the blank has no angles, and is of such shape that it can be thus wired very quickly and cheaply by the uninterrupted action from one end of the blank to the other of the rollers usually employed in wiring sheet-metal ware. The wired blank is then bent into the general form of the body and spout of the hod, and its rear ends, $q r$ and $r^2 q'$, are double-seamed together at p , and the inner side, $r r' r^2$, of the blank is conformed and secured to the bottom E and rim-base F in the ordinary or any suitable manner. The blank A is notched at its outer corners, $t q t^3 q'$, so that when the blank is wired along its outer side and its ends are seamed together there is only one thickness of the sheet metal around the wire at the junction.

By constructing the blank A with its rear ends, $q r$ and $r^2 q'$, about in line with each other, and the curved inner side, $r r' r^2$, recessed deep enough for the bottom blank, D, and the forward part, $o r'$, very much wider than the rear portions, $m m' m m'$, and the intervening parts of gradually-decreasing width and convex on the outer sides, $t' t^2$, all substantially as shown in Fig. 8, equal numbers of the blanks A and D can be cut from a sheet of suitable width with but very little scrap, as shown by Fig. 8.

Another important result of this particular construction of the blank A is that when the blank A is wired along its outer side, and has its ends $q r r^2 q'$ seamed together, and is secured to the bottom E and base F, as described, and is bent into the shape represented by Figs. 1, 2, 3, and 4, in which the lines g , h , and i , Fig. 3, represent horizontal sections of the body and spout at the lines $d d$, $e e$, and $f f$, Figs. 1 and 2, the straight, flat, front side, n , of the spout C is then more nearly horizontal than vertical, and is inclined less than forty-five degrees to the plane of the base F of the hod, as shown by Figs. 1 and 4, so as to cause the coal to pour out over the lip l by only a small inclination of the hod, as indicated in Fig. 4, while the gradually rising and descending and upwardly and rearwardly flaring wings $k k$ prevent the coal from the rear upper parts, j , from falling off over the sides of the hod in pouring the coal out of the spout.

I am aware that the body and spout of a coal-hod have been heretofore commonly formed from a single sheet-metal blank having its ends straight and seamed together at the back in making the hod; but in all such cases the ends of the blank, as cut from the sheet metal, were greatly inclined to each other, and were not nearly in line, and the inner concave side of the blank was not curved deep enough to allow a blank for the bottom of the hod to be cut from the recess, and the blank did not have its inner and outer edges in the particular curved parabolic shapes and relative positions and distances apart that are hereinbefore described, and shown in Fig. 8 of the accompanying drawings, and which are necessary for the production from a single blank of a hod body and spout having the particular useful shape and relative size, position, and degree of inclination of the spout and other parts hereinbefore specified, and represented by the other figures in the same drawings.

It is essential to this invention that the surface inclosed by and between the curved or parabolic lower edge, $r\ r' r^2$, Fig. 8, of the body-blank A and the straight line $r^2 r$, which connects the ends thereof, shall be of greater area than, and of as great length and width as, the bottom blank, D, so that the latter can be cut entire from the otherwise waste-piece bounded by the lines $r\ r' r^2$ and $r^2 r$, as shown in Fig. 8, and I believe that this important practical result was never accomplished before my present invention.

It is furthermore essential to this invention that the blank A shall be shaped and proportioned as hereinbefore specified, so that while the whole body and spout can be made there-

from in the particular useful form above described, several of the blanks A and an equal number of the bottom blanks, B, can be cut in alternate opposite directions from a sheet of metal of substantially the same width as the length of the blank A, as shown in Fig. 8, whereby coal-hods of the useful improved form shown in the accompanying drawings can be manufactured from sheets of metal of suitable width with less waste-scrap and at a cheaper rate than the coal-hods heretofore made of like size from sheet-metal blanks of the shapes and proportions heretofore used in making coal-hods.

What I claim as my invention is—

A coal-hod having the straight flat bottom n of its spout inclined at an angle of less than forty-five degrees to the plane of the base of the hod, and having the body, spout, and bottom all of the particular shape described and shown, and formed from the two sheet-metal blanks A and D, as described, the blank A having its inner edge, $r\ r' r^2$, of parabolic shape, its back edges, $q\ r$ and $q' r^2$, straight and in the same straight line, and its outer edge, $t\ t' t^2 t^3$, paraboliform and arranged in respect to the inner edge as shown, and the blank D being circular and of a diameter less than and nearly as great as the depth of the curve of the inner edge of the blank A, as set forth.

In testimony whereof I hereunto set my hand, in the presence of two subscribing witnesses, this 4th day of April, 1876.

WARREN F. SALISBURY.

Witnesses:

ROBERT A. RICHARDS,
J. J. TILLINGHAST.