

HENRY HANNEN.

Improvement in Machines for Making Sheet-Lead.

No. 115,730.

Patented June 6, 1871.

Fig. 1.

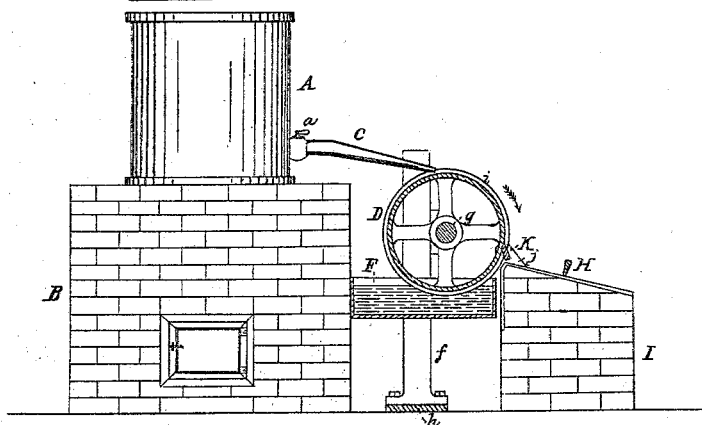


Fig. 2.

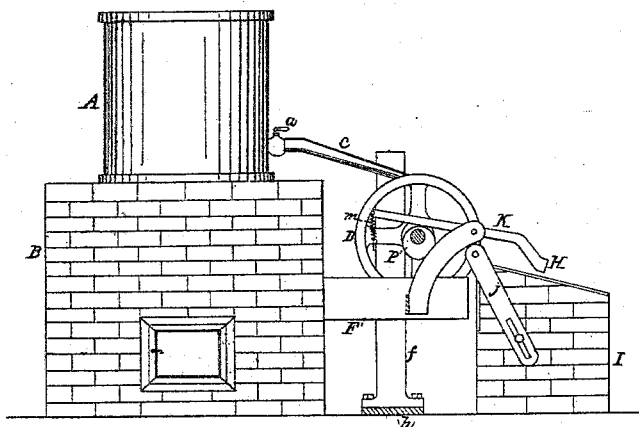


Fig. 3.

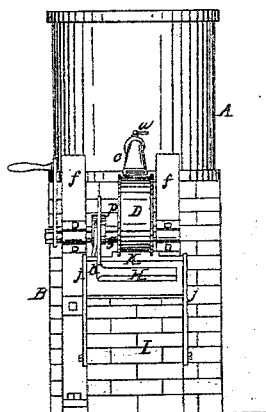


Fig. 4.

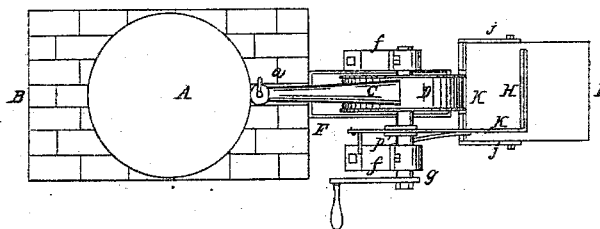
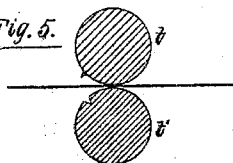


Fig. 5.



Witnesses.

*Wm. A. Tuttle*  
*John Parker*

*Henry Hannen*  
*by his atty*  
*Henry Stinson.*

# UNITED STATES PATENT OFFICE.

HENRY HANNEN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF, THOMAS WOODS, AND BENJAMIN F. PINE, OF SAME PLACE.

## IMPROVEMENT IN MACHINES FOR MAKING SHEET-LEAD.

Specification forming part of Letters Patent No. 115,730, dated June 6, 1871.

*To all whom it may concern:*

Be it known that I, HENRY HANNEN, of Philadelphia, Pennsylvania, have invented a Method of Forming and Cutting Thin Sheets of Lead; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention consists in the method, fully described hereafter, of obtaining thin sheets of lead, and of cutting the said sheets into lengths best adapted for conversion into white lead and for other useful purposes.

In order to enable others to make and use my invention, I will now proceed to describe a mode of carrying the same into effect, reference being had to the accompanying drawing which forms a part of this specification, and in which—

Figure 1 is a sectional view of apparatus used in carrying out my invention; Fig. 2, a side elevation of the same, partly in section; Fig. 3, an end view; Fig. 4, a plan view; and Fig. 5, a diagram, illustrating a modification of part of my invention.

The pot or vessel A, in which the lead is melted, is placed directly over the fire-place of a furnace, B, and has projecting from it a short pipe or spout, C, flattened at its outer end, and provided with a cock, *a*, and beneath and close to the flattened end of this spout is a wheel, D, whose spindle *g* is arranged to turn in uprights *f f*, secured to a base, *h*. The lower portion of the wheel D turns in water contained in a vessel, F, and the periphery of the wheel, which is of a width corresponding to that of the sheets to be formed, has on each side a raised rim or flange, *i*, Fig. 3. K is a blade, secured to adjustable arms *j j*, which project from a block, I, in such a manner that it can be maintained in close proximity to the periphery of the wheel at a point below the center of the same. A knife, H, which extends across the upper inclined surface of the block I, and by which the sheets of lead are cut, as will be hereafter described, is secured to one arm of a lever, *k*, which is hung to a rod, *l*, projecting from one of the uprights *f*. The opposite arm of the lever is acted on by

a spring, *m*, which tends to raise the knife H from the block, and is operated at regular intervals by an eccentric, *p*, of the spindle *g*, which depresses the knife.

In using the apparatus, a stream of molten lead, the supply of which is regulated by the cock *a*, is caused to flow from the flattened end of the pipe C onto the periphery of the wheel D, where it is retained by the flanges *i i*, which also serve to regulate the width of the sheets of lead thus formed. The wheel D turns in the direction of its arrow, and is prevented from becoming greatly heated by the water in which it is partly immersed, so that the sheet of molten lead spread upon its periphery is quickly cooled and is carried toward the blade K by the revolution of the wheel. If it be found, however, that, notwithstanding the partial immersion of the wheel in water, it becomes, after a time, too hot for use, two wheels may be placed side by side upon the spindle *g* and arranged to slide upon the same, so that instead of suspending the operation one wheel can always be in use while the other is cooling. The blade K, which is in close proximity to the surface of the wheel, strips the sheet of lead from the same and directs it onto the inclined upper surface of the block I, and in passing over the latter the lead is cut into short pieces of an even length by the knife H, which descends as its lever is operated by the eccentric *p*.

In place of the knife H, two rollers, *t t'*, driven by gearing connected with the spindle *g*, may be employed. In this case the sheet of lead from the wheel passes between these rollers, and is cut through at each revolution of the same, by a blade of the roller *t*, which enters a corresponding groove in the roller *t'*. (See Fig. 5.)

Sheet-lead thus formed can be used for a variety of purposes, but it is especially adapted, when cut into short lengths, as above described, for conversion into white lead.

I claim as my invention, and desire to secure by Letters Patent—

1. The combination of the said flanged wheel,

the melting-pot with its spout, and the stripping-blade K, substantially as and for the purpose specified.

2. The knife H, in combination with the wheel D, stripper K, reservoir A, and spout C, for the purpose specified.

In testimony whereof I have signed my name

to this specification in the presence of two subscribing witnesses.

HENRY HANNEN.

Witnesses:

E. H. BAILEY,  
C. B. PRICE.