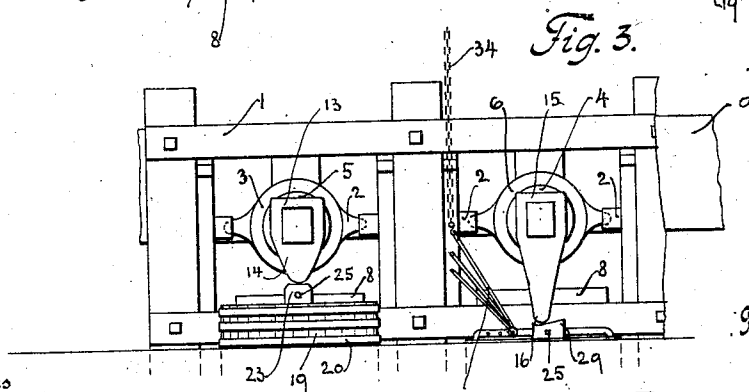
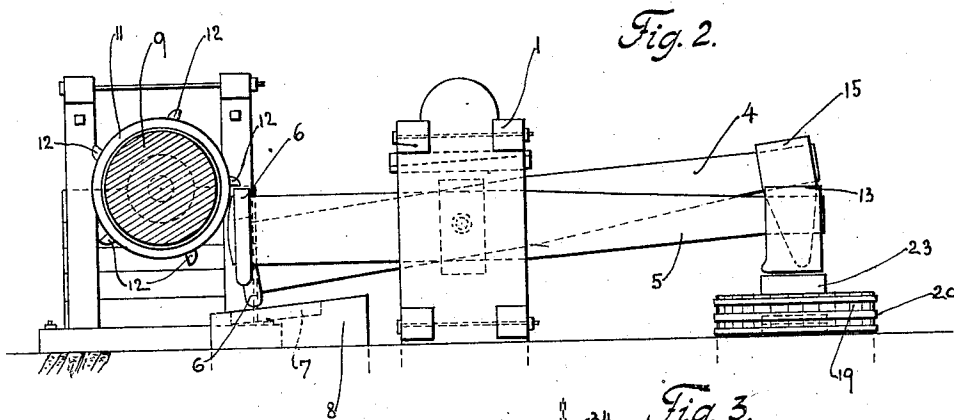
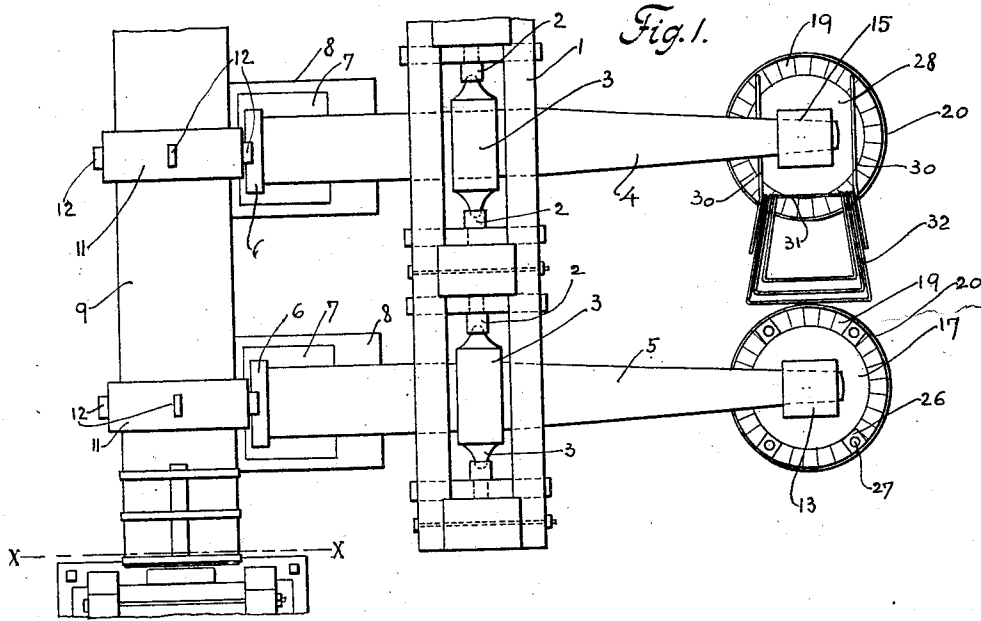


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MACHINE FOR MANUFACTURING METALLIC RECEPTACLES.
APPLICATION FILED MAR. 6, 1909.

933,575.

Patented Sept. 7, 1909.
2 SHEETS—SHEET 1.



Witnesses
Frank Primmer

K. H. Butler

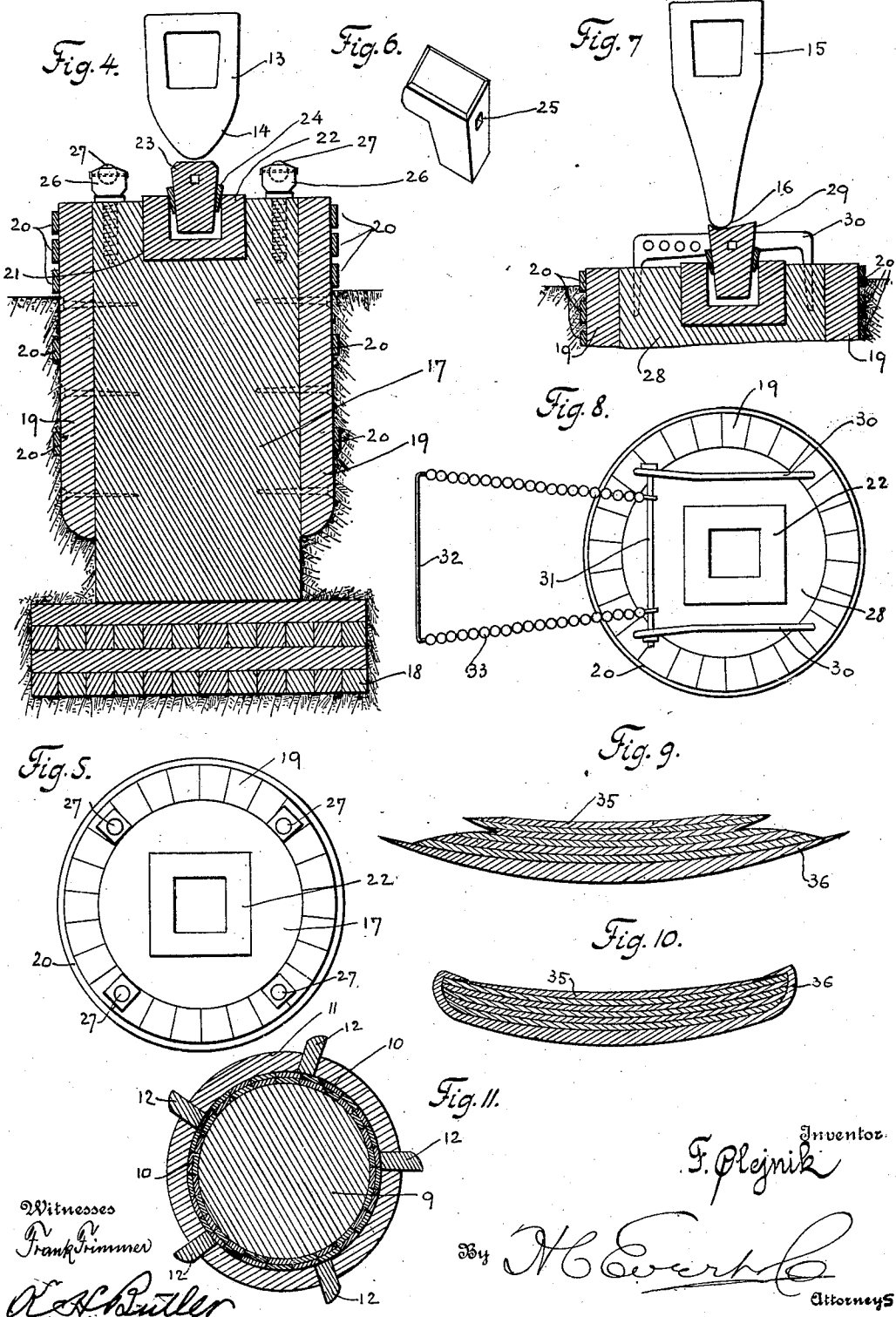
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UNITED STATES PATENT OFFICE.

FRANZ OLEJNIK, OF RANKIN, PENNSYLVANIA.

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933,575.

Specification of Letters Patent.

Patented Sept. 7, 1909.

Application filed March 6, 1909. Serial No. 481,730.

To all whom it may concern:

Be it known that I, FRANZ OLEJNIK, a citizen of the United States of America, residing at Rankin, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Machines for Manufacturing Metallic Receptacles, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to machines for the manufacture of metallic receptacles, and more particularly to a forging machine for shaping copper, aluminum and malleable metals into small and large receptacles, as brewers' "coppers", boilers for distilleries, candy and soap factories, kitchen utensils, and refining receptacles.

The invention has for its primary object to provide a simple and durable forging machine for economically and expeditiously producing large and small receptacles.

In the manufacture of copper and aluminum articles, sheet-copper, and sheet-aluminum are exclusively used and shaped into receptacles by pressing, "spinning" and soldering. This is especially true in the construction of large sized receptacles, for instance, brewers' "coppers" the construction of which is connected with great difficulty, as the necessary rounding and swelling of the interior bottom of such coppers can be accomplished only by the application of the so called falling-balls. The balls drop by no means in a uniform way, and for this reason, the copper-plate is weakened in many places, so that the durability of a "copper" thus constructed, is always doubtful. Furthermore, the copper-plate bottom must be soldered to the remaining part of the copper, and these soldered parts do not insure durability.

In the manufacture of small sized receptacles, they are produced by means of patterns, and it is impossible for a consumer to obtain any desired size or shape without incurring the expense of extra patterns. Further, the receptacles produced by patterns are weak, just at the bends, which should be the strongest parts of a receptacle. To remove this defect, it would necessitate the use of stronger and heavier sheets than the size and nature of a receptacle required, which would result in excess, both in weight and manufacturing cost of the article.

The present invention, which is an im-

provement on the machine shown in my Patent #496,439, granted May 2, 1893, aims to provide a novel machine for shaping and producing receptacles from malleable metal, without the use of patterns and pressing machines.

My machine has been designed for making receptacles directly out of black-copper, copper-sheets, shruff-copper, and aluminum, in solid pieces, without the use of solder or the assistance of a pressing machine.

In producing a receptacle, the material on the heating surfaces and on the bent parts thereof can be of a heavier kind than the material on the less important parts, without incurring the danger of the receptacle or article losing its stability. In the same manner, a conical shaped article can be produced in one piece.

My improved machine will be hereinafter considered in detail and then specifically claimed, and reference will now be had to the drawings, forming part of this application, wherein there is illustrated the preferred embodiments of my invention, but it is to be understood that the structural details thereof can be varied or changed without departing from the spirit or scope of the invention.

In the drawings, Figure 1 is a plan of a machine constructed in accordance with my invention, Fig. 2 is a side elevation of the same partly in section, Fig. 3 is a front elevation of the machine, Fig. 4 is a vertical sectional view of the anvil and the foundation thereof, Fig. 5 is a plan of the same, Fig. 6 is a perspective view of a detached anvil, Fig. 7 is a vertical sectional view of the enlarged anvil forming part of the machine, Fig. 8 is a plan of the foundation of said anvil illustrating one of the adjustable antifriction supports, Fig. 9 is a longitudinal sectional view of plates from which the receptacles are formed, Fig. 10 is a similar view of the plates after having been partially operated by my machine, and Fig. 11 is a cross sectional view of one of the hammer actuating members.

The reference numeral 1 designates a housing having bearings 2 for hubs 3, said hubs supporting hammer arms 4 and 5. The rear ends of the arms 4 and 5 are provided with metallic collars 6 adapted to impinge and rebound from metallic blocks 7 set in suitable foundations 8 located beneath the rear ends of the hammer arms 4 and 5.

9 designates a driven shaft located parallel with the housings 1, and upon said shaft are mounted two hammer actuating members, each member comprising longitudinal
5 liners 10 and a collar 11 in which is fitted a plurality of equally spaced and radially disposed striking protuberances 12, adapted to engage the collars 6 of the arms 4 and 5 and rock said arms, whereby the outer ends
10 thereof will deliver blows upon material placed beneath the outer ends of said arms.

13 designates a head carried by the hammer arm 5, said head having its lower end convexly curved, as at 14, while mounted
15 upon the outer end of the arm 4 is a head 15 provided with a pointed and slightly curved surface 16.

17 designates an anvil body located beneath the hammer head 13, said body being
20 supported upon a foundation 18, and reinforced by circumferentially arranged vertical bars 19 held in engagement with the body 17 by metal bands 20. The upper end of the body 17 is provided with a recess
25 21 having an anvil socket 22 in which is supported an anvil 23, said anvil being retained within the socket 22 by wedges 24. An opening 25 in the anvil 23 facilitates the removal of the anvil from the socket.

26 designates equally spaced housings mounted in the upper ends of the bars 19, said housings supporting antifriction bearings 27, to facilitate the manipulation of a
30 piece of work upon the anvil 23 beneath the hammer head 13.
35

The reference numeral 28 designates a similar foundation and anvil body beneath the hammer head 15, said anvil body supporting an anvil 29, and this anvil, together
40 with the anvil 23, is shaped to bend a piece of work when struck by the hammer-heads 13 and 15.

30 designates parallel brackets mounted in the anvil body 28, said brackets supporting
45 an adjustable rod 31. Pivottally mounted upon the rod 31 is a plurality of trapezoidal-shaped supports 32 provided with revoluble bearings 33, said supports facilitating the manipulation of a piece of work upon the
50 anvil 29 beneath the hammer-head 15.

34 designates a suitable housing chain or cable for holding the supports 32 at a desired inclination.

In manufacturing receptacles by my improved machine, a series of circular plates 35
55 and 36 are first coated with a thin paste of

wood-ashes and water, and then laid together and placed upon the anvil 23, beneath the hammer head 13. The machine is then placed in operation and as the hammer arm 5
60 is rocked, a series of blows are delivered upon the plates 35, so that their outer edges are accurately tapered, leaving the greater thickness in the center of said plates. The outer edge of the plate 36, which is of comparatively larger diameter than the plates 35 is
65 then bent upwardly and inwardly upon the plates 35, and the plates moved to the anvil 29, where they are subjected to a series of blows and hammered into the required shape. The flanged edge of the plate 36 is then cut
70 or trimmed off, and the various shaped receptacles taken apart, as the coating of wood-ashes prevents said plates from adhering to one another.
75

From the foregoing description it will be observed that I have devised positive and reliable means for manufacturing a multiplicity of receptacles at one time, and it is to be understood that during the whole operation,
80 the plates will be frequently heated to facilitate the operation of shaping said plates.

Having now described my invention, what I claim as new, is:—

1. In a machine for manufacturing metallic receptacles, an anvil comprising a body-portion, housings carried by the top of said
85 body-portion and provided with bearings, a socket mounted in the top of said body-portion, an anvil body depending within said
90 socket and having its projecting end surrounded by said bearings, and wedges for securing the anvil body in said socket.

2. In a machine for manufacturing metallic receptacles, an anvil comprising a
95 body-portion having a recess in its top, a socket mounted in said recess, an anvil body extending into said socket, wedges for securing the anvil body within said socket, an adjustable rod, means for supporting said rod
100 at the top of said body-portion, and a plurality of supports pivottally connected to said rod, and provided with revoluble bearings, said supports angularly disposed with respect to said body-portion.
105

In testimony whereof I affix my signature in the presence of two witnesses.

FRANZ OLEJNIK.

Witnesses:

A. H. RABSAG,
MAX H. SROLOVITZ.