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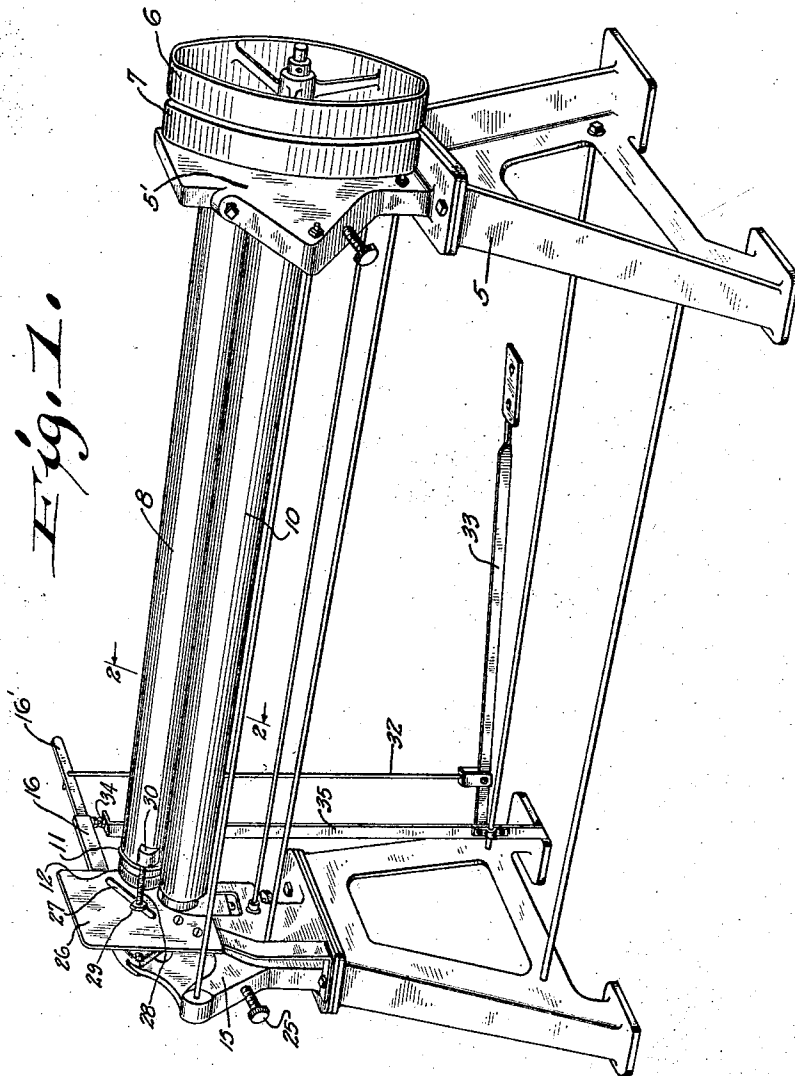
C. H. WAGNER

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TINNER'S ROLL

Filed Nov. 5, 1925

2 Sheets-Sheet 1



INVENTOR.

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BY

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ATTORNEYS

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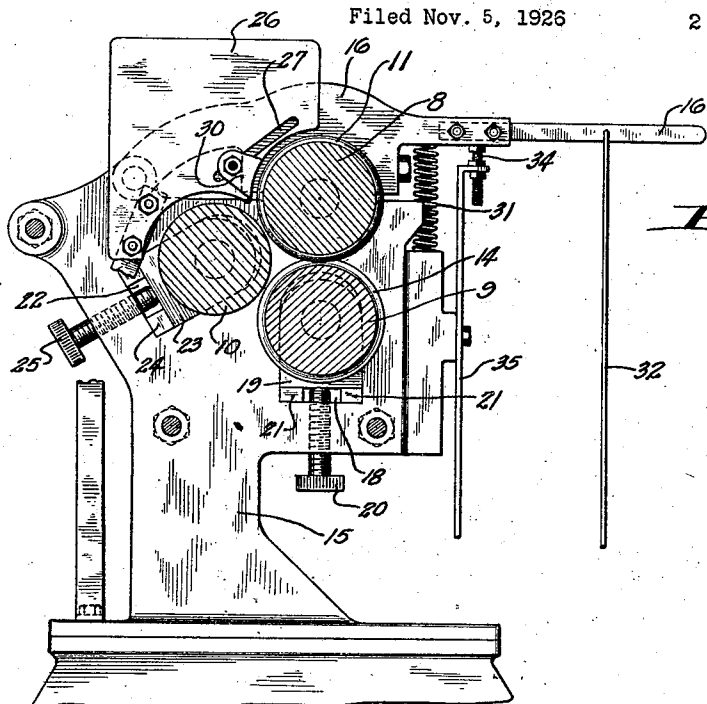
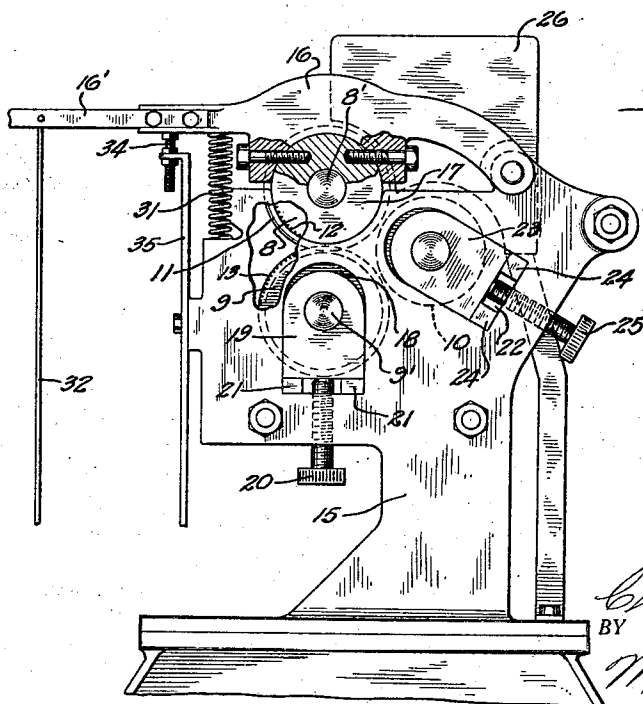
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UNITED STATES PATENT OFFICE.

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FURNACE COMPANY, OF MILWAUKEE, WISCONSIN, A CORPORATION OF WISCON-
SIN.

TINNER'S ROLL.

Application filed November 5, 1926. Serial No. 146,479.

This invention relates to improvements in tinner's rolls.

Heretofore, in preparing sheets of tin for pipes it has been necessary to roll the tin in one machine and then change it to another machine for beading and crimping.

It is, therefore, the primary object of the present invention to provide a unitary machine for rolling, crimping, and beading sheets of tin in one operation.

A further object of the invention is to provide a machine of the class described having means for adjustably controlling the radius of the roll given to the sheet of metal.

A further object of the invention is to provide a machine of the class described having an adjustment by means of which the depth of the crimp and bead can be regulated.

A further object of the invention is to provide a tinner's roll in which the rolls may be manually adjusted so as to regulate their distance from each other.

A further object of the invention is to provide a tinner's roll which is of very simple construction, is easily operated, is strong and durable, and is well adapted for the purposes set forth.

With the above and other objects in view the invention consists of the improved tinner's roll, and its parts and combinations as set forth in the claims and all equivalents thereof.

In the accompanying drawing in which the same reference characters indicate the same parts in all of the views:

Fig. 1 is a perspective view of the improved tinner's roll;

Fig. 2 is a cross-sectional view taken on line 2—2 of Fig. 1 and on a larger scale; and

Fig. 3 is an enlarged fragmentary end view of the machine, part being broken away and shown in section.

Referring now more particularly to the drawings it will appear that the numeral 5 indicates the frame of the machine at one end of which are mounted a pair of power pulleys 6 and 7. Said pulleys are adapted to be connected with a source of power by means of belts (not shown).

The frame 5 supports at its upper portion three longitudinally extending rolls, including a pair of front rolls 8 and 9, one above the other, and a rear roll 10 which is an idler and its axis is rearwardly of and between that of the front rolls. The end portions of the rolls, at the right in Fig. 1, are journaled in the portion 5' of the frame and the front rolls 8 and 9 are connected with the pulleys 6 and 7 by any suitable means, as gears (not shown) and said rolls are driven thereby.

The upper front roll 8 is provided at its one end portion with an annular rib 11 and thereadjacent crimping teeth or ribs 12 are formed. The lower front roll 9 is also provided with corresponding, cooperating crimping teeth or ribs 13 and an annular groove 14.

The end portion of the frame, at the left in Fig. 1 is formed with an upstanding portion 15 to which is pivoted an arm 16. The medial portion of said arm has secured thereto a depending disc 17 in which is journaled the adjacent end portion of the shaft 8' of the upper front roll 8.

The frame portion 15 is also formed with an opening 18 in which a bearing member 19, of less size than the opening 18, is positioned. The shaft 9' of the roll 9 has its end portion journaled in said bearing member 19 and the bearing member is adjustable vertically within the opening 18 by means of a set screw 20 and blocks 21. By this means, the end portion of the roller may be vertically adjusted to vary the space between it and the upper roll 8 to accommodate sheets of tin of varying thicknesses.

A similar arrangement, including an opening 22, a bearing member 23, blocks 24, and a set screw 25 are provided for the end portion of the shaft 10' of the roll 10, whereby the distance between said roll and the front rolls may be adjusted.

Mounted on the frame portion 15 is a plate 26 provided with an angularly extending slot 27. A shank 28 is extended through said slot and the head of the shank engages the plate on one side, while an adjustable, clamping nut 29 engages the other side of the plate. By loosening the nut, the shank may be

moved to a desired position with respect to the slot. The free end portion of the shank fixedly carries a head 30 having a curved surface.

5 The pivotally mounted arm 16 is normally held in a raised position by means of a coiled spring 31 bearing against it and the upper roll 8 is thereby held out of contact with the lower front roll 9. The free end portion of
10 the arm 16 carries an extension 16' which is connected by means of a vertical rod 32 to a foot lever 33 pivoted to the frame of the machine. Thus, when the foot lever is depressed, the arm will be pulled downwardly
15 against the tension of the spring 31 to lower the roll 8 with respect to the roll 9. An adjustment is added which consists of a set screw 34 depending from a portion of the arm 16 to contact with the shouldered portion
20 of a strip 35 to limit the movement of the arm. By turning the screw the amount of possible movement may be slightly varied.

In operation, the rolls 8 and 9 are caused to rotate by means heretofore described and
25 a sheet of tin is fed therebetween. In passing between the rolls one end portion of the sheet is beaded by means of the rib 11 and the groove 14 of the rolls and it is also simultaneously crimped by means of the ribs
30 12 and 13. By means of the adjustments previously explained the depth of the bead and crimp may be adjusted. The sheet also passes between the idler roll 10 and the upper roll 8 and against the curved surface of
35 the head 30 of the shank 28. This action curves the sheet of metal or rolls it and the radius of the curve may be adjusted by moving the shank 28 within the slot 27 of the plate 26. The forward edge of the rolled
40 sheet may be manually grasped so as to guide the sheet free of the machine over the roll 8.

From the foregoing description it will be seen that the improved tinner's roll is of
45 very simple and novel construction, and is well adapted for the purposes set forth.

What I claim as my invention is:

1. A tinner's roll, comprising a frame, a pair of elongated rolls revolubly mounted
50 therein, said rolls being formed at one end portion with a cooperating beading rib and groove and crimping teeth, an angularly adjustably mounted sheet rolling member, and an elongated guiding roll adjacent the
55 first-mentioned rolls and the rolling member.

2. A tinner's roll, comprising a frame, a pair of cooperating beading and crimping rolls mounted therein, a plate projecting
60 from one end of the frame, a sheet rolling member adjustably mounted in the plate and extending therefrom, and an elongated guiding roll, adjacent the first-mentioned rolls and the rolling member.

3. A tinner's roll, comprising a frame, a

pair of elongated cooperating beading and
65 clamping rolls mounted therein, a plate carried by one end of the frame, a shank having a curved and enlarged inner end portion, said shank being angularly adjustably
70 mounted in said plate and extending laterally therefrom, and an elongated guiding roll adjacent the first-mentioned rolls and the shank.

4. A tinner's roll, comprising a frame, an
75 elongated upper beading and crimping roll mounted longitudinally in the frame, an elongated lower beading and crimping roll mounted longitudinally in the frame, said rolls being adjustable with respect to each other, an adjustably mounted sheet rolling
80 member, and an elongated guide roll adjacent the first-mentioned rolls and mounted longitudinally in the frame.

5. A tinner's roll, comprising a frame, a pair of elongated cooperating beading and
85 crimping rolls mounted therein, a plate carried by one end of the frame and having an angularly extending slot therein, a shank having a curved and enlarged inner end portion, the shank being extended through
90 said slot and being adjustably clamped to said plate, and an elongated guiding roll adjacent the first mentioned rolls and the shank.

6. A tinner's roll, comprising a frame, a pair of elongated beading and crimping
95 rolls, a sheet rolling member carried by the frame adjacent said rolls, and an elongated guiding roll, all of said rolls being journaled at one end portion in said frame and the
100 other end portions of said rolls being adjustably revolubly mounted in said frame.

7. A tinner's roll, comprising a frame, an elongated upper beading and crimping roll
105 mounted longitudinally in the frame, an elongated lower beading and crimping roll mounted longitudinally in the frame, an arm pivotally secured to the frame and formed with a bearing portion, one end portion of
110 said upper roll being journaled in said bearing portion, an adjustably mounted sheet rolling member, and an elongated guide roll adjacent said first-mentioned rolls.

8. A machine of the class described, comprising a frame, a pair of revolubly mounted
115 driven rolls extending longitudinally of the frame, one end portion of said rolls being provided with cooperating crimping teeth, one roll also having a rib and the other having a groove, an arm pivotally secured to
120 said frame and having a bearing portion, the work end portion of the upper of said rolls being journaled in said bearing portion, a plate extending from the frame adjacent said arm and having an angularly
125 extending slot, a shank having a curved and enlarged inner end portion, the shank being extended through said slot and being adjust-

ably clamped to said plate, and an elongated guide roll revolubly mounted in the frame adjacent the first-mentioned rolls and the shank.

5 9. A tinner's roll, comprising a frame, a pair of cooperating beading and crimping rolls mounted therein, a sheet rolling mem-

ber adjustably mounted in the frame and extending therefrom, and an elongated guiding roll adjacent the first-mentioned rolls and the rolling member. 10

In testimony whereof, I affix my signature.

CHARLES H. WAGNER.