

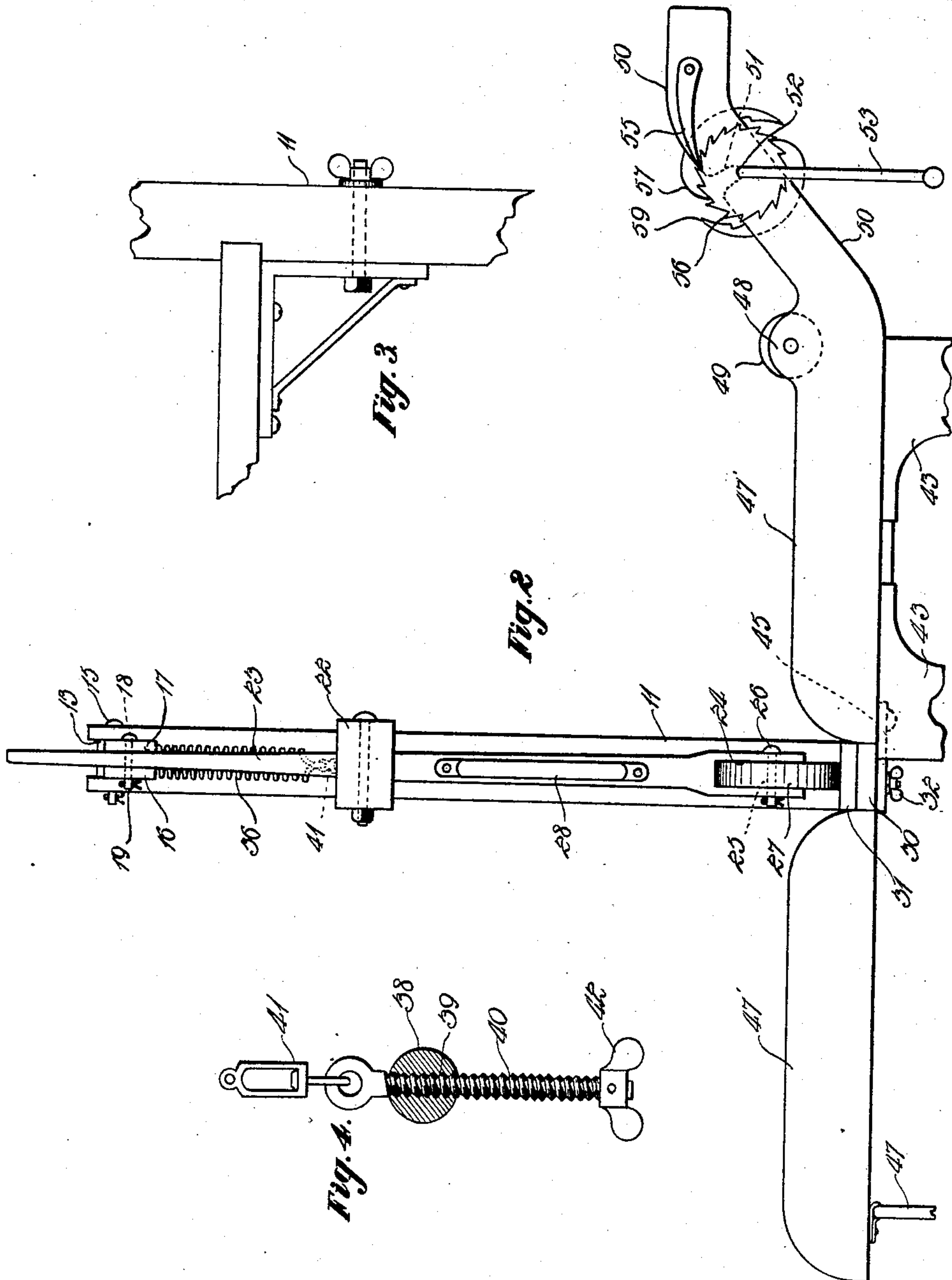


969,249.

P. E. DEATON.  
ROLLING AND SEAMING MACHINE.  
APPLICATION FILED SEPT. 17, 1909.

Patented Sept. 6, 1910.

3 SHEETS—SHEET 2.



Witnesses  
C. C. Chandler  
L. N. Gullis

Inventor  
Percy E. Deaton.

334 *Chandler*

Attorneys

P. E. DEATON.  
ROLLING AND SEAMING MACHINE.  
APPLICATION FILED SEPT. 17, 1909.

969,249.

Patented Sept. 6, 1910.

3 SHEETS—SHEET 3.

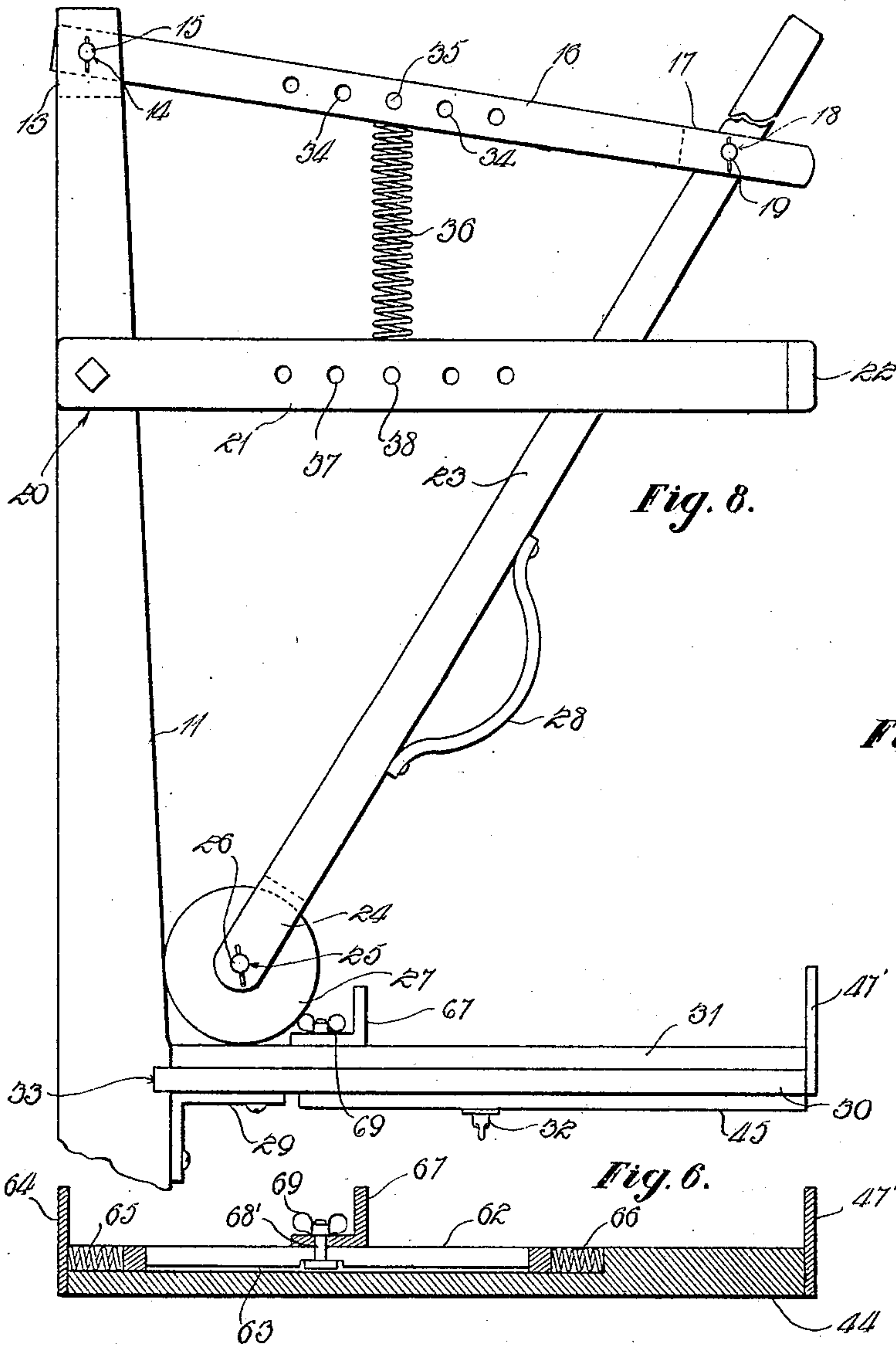


Fig. 8.

Fig. 7.

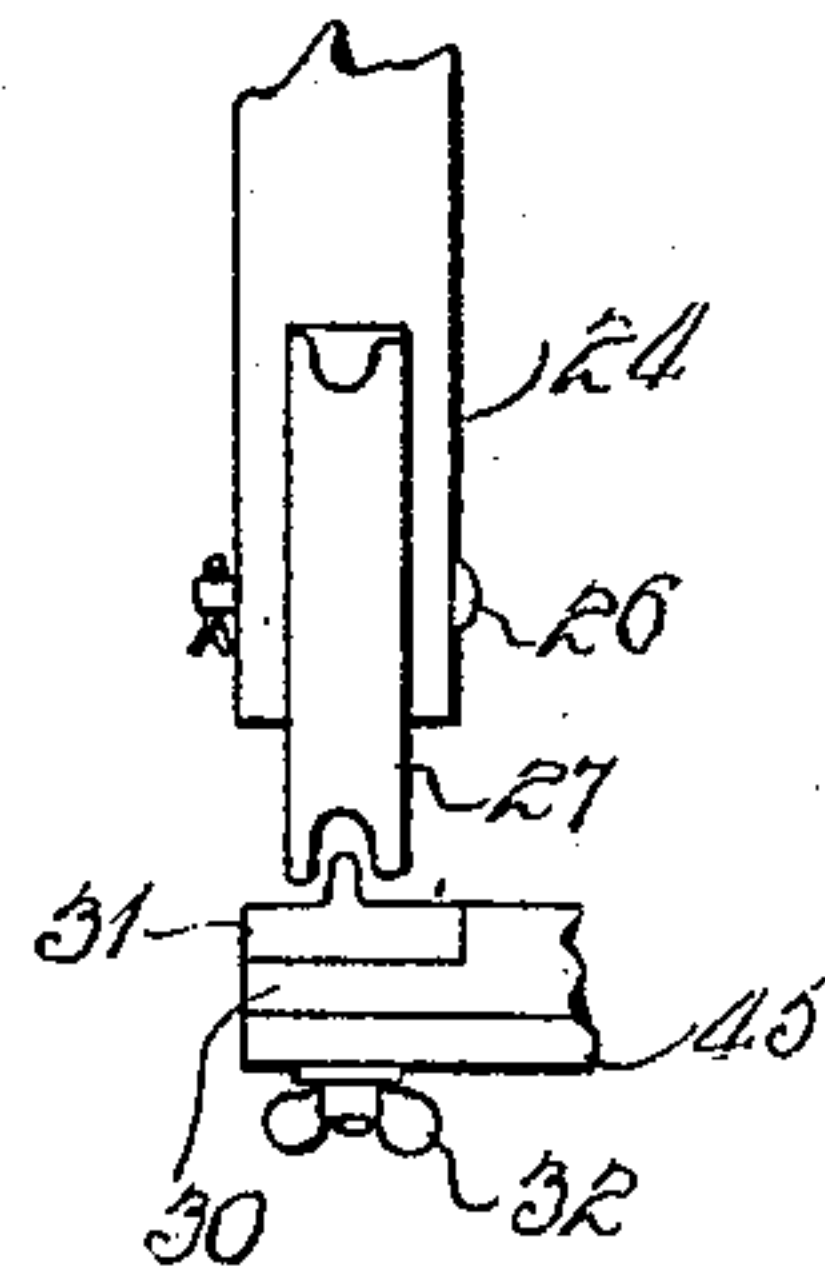
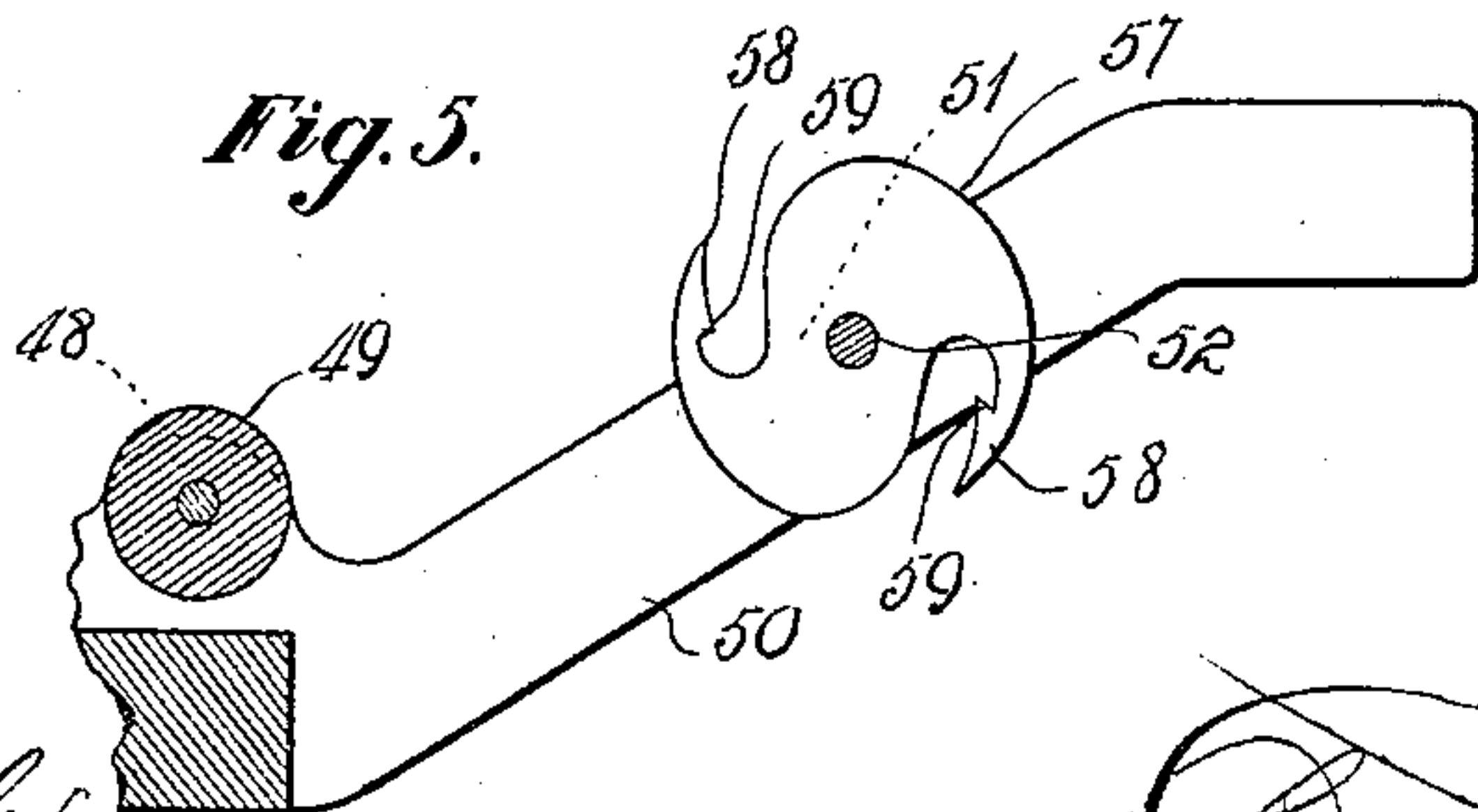


Fig. 6.

Fig. 5.



Witnesses  
C. C. Chandler

L. N. Gillis

Inventor  
Percy E. Deaton.

By

*C. C. Chandler*

Attorneys



# UNITED STATES PATENT OFFICE.

PERCY E. DEATON, OF MOORESVILLE, NORTH CAROLINA, ASSIGNOR OF ONE-HALF TO  
A. W. COLSON, OF MOORESVILLE, NORTH CAROLINA.

## ROLLING AND SEAMING MACHINE.

969,249.

Specification of Letters Patent.

Patented Sept. 6, 1910.

Application filed September 17, 1909. Serial No. 518,263.

*To all whom it may concern:*

Be it known that I, PERCY E. DEATON, a citizen of the United States, residing at Mooresville, in the county of Iredell, State of North Carolina, have invented certain new and useful Improvements in Rolling and Seaming Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to sheet iron workers' tools and has special reference to a device for rolling flat metal seams such as are common in roofing, the device being also adapted for rolling beads in flat metal.

One object of the invention is to provide a tool which will do away with the old method of flattening seams by beating or pounding them down.

Another object of the invention is to provide a machine which will be adapted for rolling beads and the like in flat metal, the rolling being accomplished in such manner as to prevent improper distortion and warping of the plate.

It is a well known fact that in the beading machines commonly used in this art the metal to be beaded is fed between a pair of beading rolls and that this rolling of the metal causes distortion lengthwise of the bead.

In order to obviate this a third object of the invention is to provide a machine with a roll for beading or flattening which will coact with a rectilinear die plate.

A fourth object of the invention is to provide means whereby the machine may be adjusted for plate of varying thickness and stiffness so that the operation may be attended with only such expenditure of energy as is just sufficient to accomplish the purpose.

A fifth object of the invention is to provide a working table for a machine of this description which will lie level with the die plate so that the plates of metal operated upon will be supported throughout their extent thus preventing bends and kinks.

A sixth object of the invention is to provide a table of this character with means for holding the sheet of metal to be operated upon in proper position for such operation.

A seventh object of the invention is to provide a machine of this character with means for rolling the metal up into a compact roll

so that it may be readily transported, the rolling means being removable from the roll when the operation is completed.

With the above and other objects in view the invention consists in general of a flat die plate supported to coöperate with a die roll, a work table, plate holding mechanism on the work table, sheet rolling mechanism, and means to maintain pressure between the die plate and roll.

The invention further consists in certain novel details of construction and combinations of parts hereinafter fully described, illustrated in the accompanying drawings, and specifically set forth in the claims.

In the accompanying drawings, like characters of reference indicate like parts in the several views, and:—Figure 1 is a top plan view of the invention showing the operating table in position. Fig. 2 is an elevation thereof from the operating side. Fig. 3 is a partial elevation from the side opposite the operator, the view showing the manner of holding the table to the standard. Fig. 4 is a detail view showing the means of adjusting the pressure spring for the die roll. Fig. 5 is a partial section through the winding mechanism and its guide roll. Fig. 6 is a sectional detail through the clamp block and its springs, the clamp block shown being that on the fixed portion of the table. Fig. 7 is a detail section showing the standard equipped for beading, the view showing only a portion of said standard. Fig. 8 is a partial elevation from one side of the machine.

Upon a base 10 is formed a standard 11 and the base 10 is provided with suitable holes 12 for the reception of holding-down bolts. This standard 11 extends upward and is provided at its upper end with a fork 13, the sides of the fork having perforations 14 therethrough to receive a pivot bolt 15. In this forked end and upon the pivot bolt 15 is pivoted an arm 16 the opposite end of which is forked as at 17 and this fork is likewise provided with opposed openings 18 for the reception of a pivot bolt 19.

Below the arm 16 the standard 11 is rabbeted on each side as indicated at 20 and in these rabbeted portions are secured guide arms 21 which have their outer ends connected by means of a cross piece 22. Pivoted to the member 16 on the bolt 19 is a



lever 23 which passes between the guide arms 21 and is held from lateral movement thereby. Upon the lower end of this lever is formed a fork 24 the sides of which are provided with opposed openings 25 for the reception of a journal pin or bolt 26. Within the forked end of the lever and freely rotatable on the journal bolt 26 is a die roll 27 the face of which is of any preferred shape as may be necessary to accomplish the object specifically desired in the operation to be performed on a sheet of metal. For instance, the roll may have a flat face as indicated in Fig. 2 where it is to be used for flattening a seam, or it may have a concaved face as shown in Fig. 7, this being the arrangement where it is to be used for beading. Upon the member 23 is a handle grip 28 so positioned as to be within ready reach of an operator standing at the front of the machine. Supported on a bracket 29 attached to the standard 11 is a bar 30 whereon rests a die block 31, the die block being removably held on the bar by means of suitable thumb screws 32. This die block has its upper face shaped to cooperate with the die roll 27 and it is intended that a variety of these blocks and rolls shall be used with each of the machines in order that various operations on metal plates may be performed. This bar 30 is further supported on the standard 11 by being gained into the standard as indicated at 33.

In order to give sufficient pressure between the roll 27 and the die block 31 the bar 16 is provided with a series of bolt holes 34 wherethrough passes an eye bolt 35 to the lower end of which is attached a spring 36. The arms 21 are likewise provided with a series of bolt openings 37 adapted to receive a bolt 38 having a threaded opening 39 therein wherethrough passes an eye bolt 40, the eye being uppermost. Attached to this eye is a swivel 41 to which the lower end of the spring 36 is attached and upon the bolt 40 is pinned or otherwise removably secured a butterfly nut 42 to form a means for rotating the bolt 40 and moving the same up or down through the threaded opening. By means of the eye bolt 40 the tension of the spring 36 may be varied while by shifting the eye bolts to various positions on the arms 16 and 21 the leverage of the spring may likewise be varied.

The operating table is supported on legs 43 and consists of a platform 44 fixedly mounted on these legs. From one edge of this platform projects a strip 45 arranged to lie beneath the arm 30 and assist in supporting that arm. Hinged to this projecting edge is a leaf 46 which is provided with a folding leg 47 arranged to support the free edge of the leaf 46. The platform 44, member 45 and leaf 46 are so arranged that when the table is in position and the leaf

raised the upper surfaces of the leaf and table will lie in the same plane and be flush with the body of the die block 31. Work placed on the table will thus lie flat on the die block and will be prevented from kinking or bending. On the front or operating edge of the table and leaf are suitable ledges 47' against which the work bears during the time it is being operated upon.

In order to provide for rolling up the work after the operation is finished suitable ears 48 are secured to the edges of the table adjacent the operator and opposite thereto, these ears being positioned adjacent the lateral edge of the table opposite the leaf. Supported in these ears is a roller 49 and from the ears 48 extend arms 50 provided with notches 51 for the reception of a shaft 52 having a crank 53 on one end thereof. On what may be termed the rear arm 50 is pivoted a retaining latch 54 which is adapted to engage over the shaft 52 and prevent accidental disengagement of the same from its notch. On the front arm 50 is a pawl 55 adapted to cooperate with a ratchet 56 securely held upon the shaft 52. Spaced upon the shaft 52 are certain winding disks. Each of these disks is S-shaped in form and has a substantially circular exterior contour, the ends of the S being provided with interior barbs. The bodies of these disks are indicated at 57 while the ends are shown at 58 and the barbs at 59.

In order to provide for holding the work against the ledges 47' as well as to permit varying widths of work being received the table and leaf are both provided with dove tailed slots 60 wherein move blocks 61 each provided with a longitudinal slot 62 and these slots have rabbeted under portions 63. Stop plates 64 serve to close the ends of these slots and springs 65 are held between these stop plates and the blocks 61. Other springs 66 are held between these blocks and the inner ends of the slots 60. By this means the blocks are kept centrally positioned in the slots while at the same time they are permitted a small amount of movement such as is necessary on account of the different widths of sheets as they come in stock, the variation being perhaps one-fourth of an inch. Mounted on the blocks 61 are guide members 67 each of which is beveled at one end as indicated at 68 to permit the ready entry of sheets between the guide members and the ledges 47'. These guide members are adjustably held on the blocks 61 by means of bolts 68' which pass through the slots 62 and the guide members, said bolts being provided each with a suitable locking nut 69.

To one edge of the leaf 46 is preferably secured a folder of the ordinary type but as this is of common type and no part of the invention it is not deemed necessary to show



this folder in the present drawings. The table and its leaf are provided with suitable spaced index lines 70 arranged to indicate the distance between the ledges 47' and the respective lines.

In the operation of the device let it be assumed that it is desired to fold down a seam such as is used in securing two sheets of roofing tin to each other. The folds are made on the folder or in any other preferred manner and the sheets placed together so that the folded portions engage. The guides 67 are set, by means of the index lines 70, to the width of the sheet which is being used and the sheets are fed in over the leaf 46 to the table 44. As these sheets pass in any irregularities in their widths are accommodated by the yielding of the guides 67. When the seam has been positioned over the die blocks the handle member 28 is grasped and the die roll 27 worked backward and forward over the seam until the same is properly flattened down on the plates and the seam thus finished. The work is now fed forward till a second seam is reached and this operation is repeated as often as may be necessary. As the finished work passes over the table 44 it passes beneath the roller 49 and is engaged by the barbs on the winding members. The crank is then rotated and the material wound on the winding members, this action causing the remainder of the material to be drawn over the table and its leaf. The ratchet and pawl serve to hold the roll from unwinding. When all of the material has been wound the shaft 52 is removed and by rapping the straight end on the floor the finished roll is disengaged. It is obvious that when single sheets are beaded it will not be necessary to employ the rolling mechanism.

There has thus been provided a simple and efficient device of the kind described and for the purpose specified.

Having thus described the invention, what is claimed as new, is:—

1. In a device of the kind described, a standard, an arm pivoted thereto, means normally urging said arm downward, a lever pivoted to said arm, a die roll mounted on said lever, and a die plate supported beneath and coacting with said roll.

2. In a device of the kind described, a standard, an arm pivoted thereto, a guide rigidly fixed to said standard below said arm, a tension spring connecting said arm and guide, a lever pivotally mounted on said arm and held to move along said guide, a die roll mounted on said lever, and a die plate supported beneath and coacting with said die roll.

3. In a device of the kind described, a standard, an arm pivoted thereto, a pair of spaced guide arms rigidly fixed to said

standard, a tension spring connecting said pivoted arm and guide arms, means to vary the tension of said spring, a lever pivotally mounted on the pivoted arm and passing between said guide arms, a die roll mounted on said lever, and a die plate supported beneath and coacting with said die roll.

4. In a device of the kind described, a standard, an arm pivoted thereto, a pair of spaced guide arms rigidly fixed to said standard, a tension spring connecting said pivoted arm and guide arms, means to vary the tension of said spring, a lever pivotally mounted on the pivoted arm and passing between said guide arms, a die roll mounted on said lever, a die plate supported beneath and coacting with said die roll, and a work supporting table held adjacent to and level with said die plate.

5. In a device of the kind described, a standard, an arm pivoted thereto, means normally urging said arm downward, a lever pivoted to said arm, a die roll mounted on said lever, a die plate supported beneath and coacting with said roll, and a work supporting table held adjacent to and level with said die plate.

6. In a device of the kind described, a standard, an arm pivoted thereto, a guide rigidly fixed to said standard below said arm, a tension spring connecting said arm and guide, a lever pivotally mounted on said arm and held to move along said guide, a die roll mounted on said lever, a die plate supported beneath and coacting with said die roll, and a work supporting table held adjacent to and level with said die plate.

7. In a device of the kind described, a standard, an arm pivoted thereto, a pair of spaced guide arms rigidly fixed to said standard, a tension spring connecting said pivoted arm and guide arms, means to vary the tension of said spring, a lever pivotally mounted on the pivoted arm and passing between said guide arms, a die roll mounted on said lever, a die plate supported beneath and coacting with said die roll, a work supporting table held adjacent to and level with said die plate, work guiding elements mounted on said table, and adjusting means for said elements to accommodate the elements to varying widths of work.

8. In a device of the kind described, a standard, an arm pivoted thereto, means normally urging said arm downward, a lever pivoted to said arm, a die roll mounted on said lever, a die plate supported beneath and coacting with said roll, a work supporting table held adjacent to and level with said die plate, work guiding elements mounted on said table, and adjusting means for said elements to accommodate the elements to varying widths of work.

9. In a device of the kind described, a standard, an arm pivoted thereto, a guide

rigidly fixed to said standard below said  
arm, a tension spring connecting said arm  
and guide, a lever pivotally mounted on said  
arm and held to move along said guide, a  
5 die roll mounted on said lever, a die plate  
supported beneath and coacting with said  
die roll, a work supporting table held ad-  
jacent to and level with said die plate, work  
guiding elements mounted on said table, and

adjusting means for said elements to accom- 10  
modate the elements to varying widths of  
work.

In testimony whereof, I affix my signa-  
ture, in presence of two witnesses.

PERCY E. DEATON.

Witnesses:

M. T. MILLER,

GEO. H. CHANDLEE.