

O. W. Stow.

Flanging Machine.

N^o 70,917.

Patented Nov. 12, 1867.

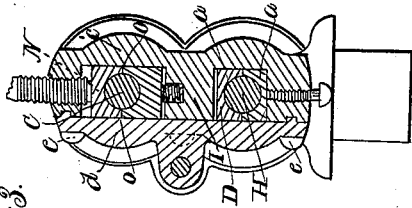


Fig. 3.

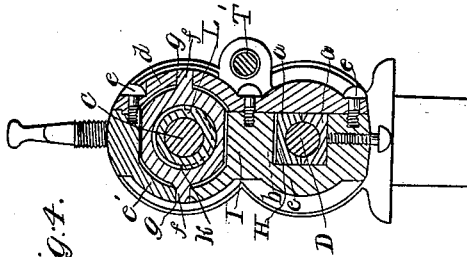


Fig. 4.



Fig. 5.

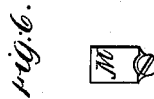


Fig. 6.

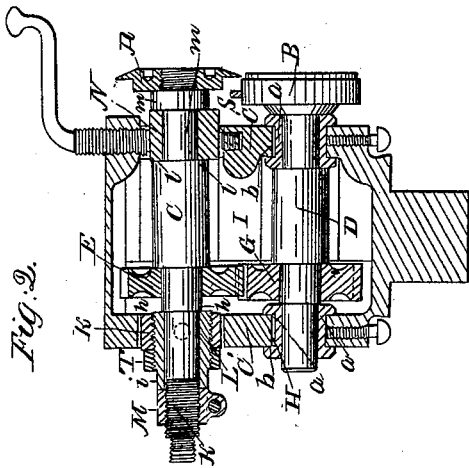


Fig. 2.

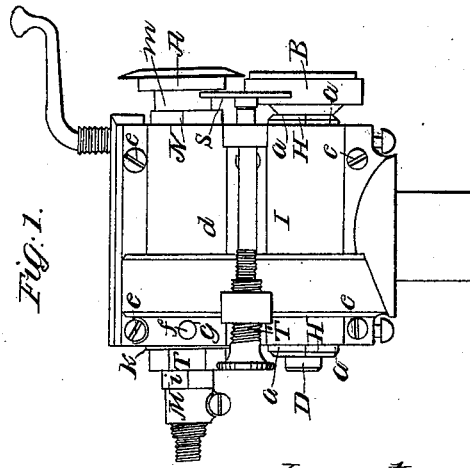


Fig. 1.

Witnesses:
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Inventor:
Orson W. Stow.
by his attorney.
R. W. Eddy.

United States Patent Office.

ORSON W. STOW, OF PLANTSVILLE, CONNECTICUT.

Letters Patent No. 70,917, dated November 12, 1867.

IMPROVED MACHINE FOR FLANGING AND WIRING METALLIC PLATES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL PERSONS TO WHOM THESE PRESENTS SHALL COME:

Be it known that I, ORSON W. STOW, of Plantsville, in the county of Hartford, and State of Connecticut, have made a new and useful invention, having reference to Machinery for Flanging and Wiring Tinned or Metallic Plate; and I do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 denotes a side elevation,

Figure 2 a vertical and longitudinal section, and

Figures 3 and 4 transverse and vertical sections of a machine embodying my invention.

The two transverse sections are taken through the two sets of boxes of the machine, one section being through the front pair, and the other through the rear pair of them.

The machine exhibited in the drawings is what is termed a "tinman's flanging machine." My improvement is equally applicable to other machines of like character, viz, such as are employed for "setting down" flanges, or for what is termed "wiring" plate or articles.

On August 30, 1859, a patent was granted to Charles H. Raymond, of Southington, Connecticut, for an improvement in such machines. In the machine of the said Raymond, the rocker-bearing or shaft is supported by an adjustable stand, separate from, and applied to the main frame by means which admit of such stand being moved, so as to move the shaft of the upper roller in direction of its axis, and for the purpose of adjusting the flanges of the rollers at any desirable distance apart horizontally. The adjustable stand had no screw or equivalent device for effecting its movement, which had to be accomplished by pressing it in either direction by hand, or by blows given on it by a tool, in consequence of which it becomes a difficult matter to produce a very nice adjustment of the flange of the upper roller, relatively to that of the lower one. Furthermore, owing to wear of the shoulders of the journals of the upper shaft after a while, whereby the shaft is rendered liable to more or less endwise play, a nice adjustment of the two roller-flanges is liable to more or less derangement. All difficulties of such a nature are avoided by my invention, or that part of it having reference to the application of the rocker or shaft to the driving or upper roller-shaft, and the endwise adjustment of the latter.

In my machine the rocker-shaft does not move with the driving or roller-shaft while the latter is being adjusted endwise, but remains stationary in its bearings in the frame of the machine, and has screwed into it a tubular adjusting-screw box or bearing, which not only supports the driving-shaft, as a bearing should, but is applied so as to be capable of being revolved freely on the driving-shaft and against a shoulder thereon, and between the shoulder and a clamp-nut screwed upon the shaft. The said adjusting-screw bearing has a set-nut, which screws upon it and against the rocker-shaft, so as to hold the adjusting-screw bearing in its proper place relatively to the rocker-shaft. By means of the adjusting-screw bearing I am enabled to effect the endwise movements of the shaft in either direction with great nicety. The clamp-nut prevents endwise play of the shaft, resulting from wear of the shoulders of it and the bearing.

I am aware that, for giving an endwise motion to the shaft of the upper roller of a wiring machine, it is not new to employ a movable collar, to turn on the shaft and carry a screw to enter a groove formed obliquely in the shaft, such being as shown in the patent of A. W. Whitney, granted in 1847. My invention, however, differs materially from this, as I employ a rotary-screw bearing for the shaft to revolve in, such being screwed directly into the rocker-shaft. And I also employ therewith a set-nut, and a shoulder and screw-clamp, as above mentioned, and hereinafter more particularly explained.

My improvement is productive of new and useful effects or advantages. The driving-shaft, during an endwise movement of it, does not move through its front box, as is the case with the machine of Raymond, but it moves with the shaft, it being so applied to the frame as to be capable of endwise motion therein with the driving-shaft; and, furthermore, it can play freely in the arc of a circle, instead of being moved vertically, or in a straight line on guides.

By this improved application of the box to its shaft and the frame, such box is not liable to become unevenly worn, as it is when applied to guides, which cause it, while being moved upward or downward, to move in a strictly vertical path.

In the drawings, A and B are the two flanging-rollers, made in the ordinary manner, they being fixed to

two shafts C D. A spur-gear, E, on one shaft, engages with another such gear, G, fixed on the other shaft. The lower shaft D is supported in boxes H H, each being formed in two equal parts *a a*, and placed within one of two recesses *b b*, made in the main part *c'* of the frame I. This frame is constructed in two portions *c' d*, one of which, viz, the part *d*, answers as a cap to the other, it being fastened thereto by screws *e e e e*. The frame completely encases most of the operative mechanism, so as to protect it from dust, as well as the dress or parts of an operative from contact with it.

The rocker-bearing or shaft is shown at K. Its journals *f f* rest in corresponding bearings *g' g*, formed in the two parts *c' d* of the frame I. It encompasses the shaft C, and has a female screw formed through it, to receive the adjusting bearing L, in which the shaft C rests and revolves. The adjusting bearing L abuts against a shoulder, *h*, formed on the shaft C, and has a prismatic head, *i*, for receiving a wrench, for effecting rotary motion of it.

The clamp-nut M, shown in fig. 2, and also in end and side views in Figures 5 and 6, screws against the bearing L, and upon a screw, *k*, cut on the shaft C.

The set-nut of the adjusting-screw bearing L is represented at T as screwed upon such bearing and against the rocker-shaft K.

The front box of the shaft C is represented at N, its opposite sides being flat and parallel. It embraces the shaft between and against shoulders *l m*, and rests on a helical spring, *n*, which serves to raise it while the depression-screw is in the act of being unscrewed or elevated. The box simply rests against side bearings *o o* formed in the case, and is free to turn in an arc with the shaft.

The guide generally employed with the rollers is shown at S, it being provided with adjusting-screw T'.

I make no claim to either of the machines of the said Raymond and Whitney, nor do I claim any parts of either as my invention; but, having described my machine, what I claim therein as my invention is as follows:

I claim the combination, as well as the arrangement, of the adjusting-screw bearing L with the rocker-shaft K and the roller-shaft C, its shoulder *h* and clamp-nut M, or their equivalents.

I also claim the combination and arrangement of the set-nut T, the rocker-shaft K, and the adjusting bearing L, applied to the shaft and the case or frame of the machine, substantially as specified.

I also claim the application of the front box of the shaft C to such shaft and the case or frame I, so as to be capable of being moved in one arc with the shaft, and endwise with such shaft, as described.

I also claim the case or frame I, as made and applied to the rocker-shaft journals and the bearings of the two shafts, and so as to encase the gears, substantially as described and represented.

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Witnesses:

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