2 Sheets—Sheet 1.

W. M. PARKER.

Metal Lath-Machine.

No. 202,956. Patented April 30, 1878.

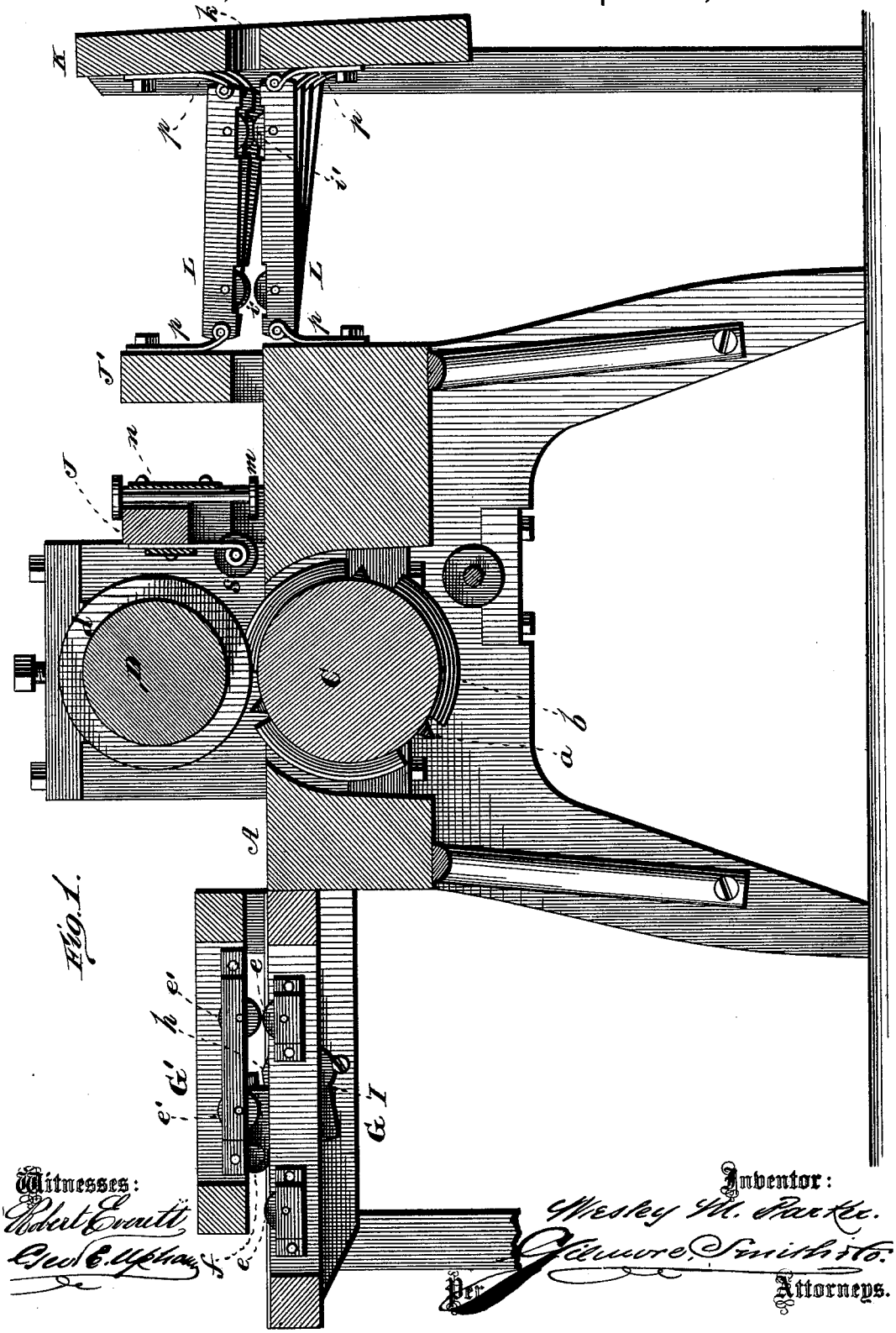

Fig. 1.

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2 Sheets—Sheet 2.

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Metal Lath-Machine.

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Fig. 2.

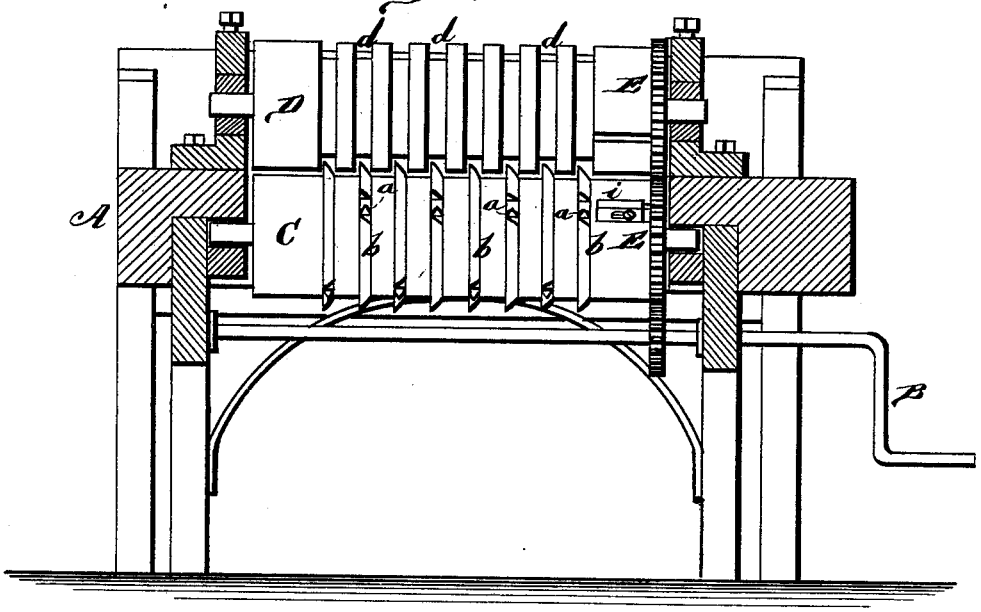


Fig. 3.

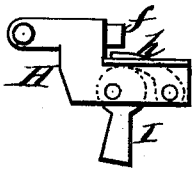


Fig. 4.

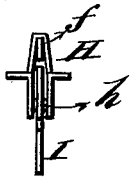
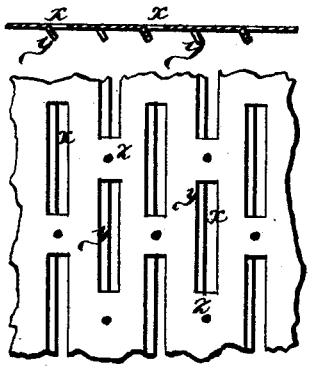


Fig. 5.



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UNITED STATES PATENT OFFICE.

WESLEY M. PARKER, OF RUSHVILLE, ILLINOIS.

IMPROVEMENT IN METAL-LATH MACHINES.

Specification forming part of Letters Patent No. **202,956**, dated April 30, 1878; application filed September 15, 1877.

To all whom it may concern:

Be it known that I, WESLEY M. PARKER, of Rushville, in the county of Schuyler and State of Illinois, have invented a new and valuable Improvement in Machines for Making Metal Laths; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal vertical section of my machine for making metal laths. Fig. 2 is a transverse vertical sectional view; and Figs. 3, 4, and 5 are details thereof.

The nature of my invention consists in the construction and arrangement of a machine for making metal laths of that class in which a sheet of metal is formed with a number of series of vertical alternating slots, the metal removed at each slot remaining fast along one side, and standing at an angle of about forty-five degrees, more or less, behind the slot, as will be hereinafter more fully set forth.

The annexed drawings, to which reference is made, fully illustrate my invention.

A represents the bed of my machine, supported upon suitable legs or end pieces. In the bed A is a rectangular opening of any suitable dimensions, below which is placed a horizontal roller, C, in such a manner that its upper surface will be level with the top surface of the bed. This roller has its journal-bearings in suitable boxes in the end pieces, and upon the end of one of the journals may be attached a crank for rotating the same; or the machine may be operated by any suitable power by attaching a belt-pulley to said roller-journal.

The roller C is provided with a series of circumferential grooves, in which are inserted segmental cutters *b b* and punches *a a*. Each cutter *b* has one vertical side and one sloping or inclined side, as shown, so as to cut an elongated slot in the sheet metal, and bend a lip out of the metal, to stand behind the slot at an angle of forty-five degrees, more or less. The distance between the cutters in the same groove and the distance between the cutting-edges of the cutters in adjacent grooves is to be exactly one-third the length of the cutter; or, in other words, the slots cut in the metal will be three times as long as the space between the slots in the same series and adjacent series. This proportion is very essential in properly forming the slots in the sheet to make them alternate in proper order. Midway between the cutters in the same groove is fastened a punch, *a*, for making the holes for the nails to fasten the metal sheet in place to receive the plastering.

Above the roller C is another roller, D, formed with a series of circumferential grooves, *d d*, corresponding with the cutters *b*. This roller D has its journal-bearings in suitable boxes placed in standards on the ends of the bed A, and the two rollers C and D are connected together by means of cog-wheels E E, so that the rotation of the lower roller C will impart the necessary motion to the upper roller D.

The sheet metal is fed into these rollers over a stationary horizontal frame, G, the metal resting upon rollers *e e*, mounted in said frame. To ears or lugs projecting upward from each side, at the inner end of the frame G, is hinged or pivoted a top frame, G′, also provided with a number of rollers, *e′ e′*, projecting beyond its lower surface.

The object of the upper frame G′ is to straighten the sheet metal before it reaches the rollers by bringing said frame down upon the metal when it is laid on the frame G. The frame G′ does not take out any bulges or bends there may be in the sheet metal, but simply straightens it for the time being, so that it will enter perfectly true between the rollers C D, and not have one side or corner enter before the other.

In the center of the stationary feed-frame G is a slide, H, having a lug, *f*, above the surface of the frame. In front of this lug, within the slide, is a hinged dog, *h*, which is operated from underneath by an eccentric-lever, I. The rear edge of the sheet metal is inserted under the lug *f*, and then held by forcing the dog *h* upward by means of the eccentric-lever I, to prevent the sheet metal from slipping.

The rollers *e e′* in the frames G G′ are simply to prevent the sheet metal dragging on the frames and thus reduce friction. The sheet-

metal is now fed by hand in between the rollers C and D, where the slots *x*, lips *y*, and nail-holes *z* are formed therein. At the same time cross-slits are cut at suitable intervals in one edge of the sheet metal by means of cutters *i i* fastened on the lower roller C at one end, while the upper roller D has corresponding grooves, as shown.

In front of the rollers C D, along the edge of the bed A, is a frame, J, through which the sheet metal passes after it leaves said rollers. In this frame are arranged a series of vertical shafts, *n*, carrying upon their lower ends rollers *m*, which are so adjusted as to take hold of and bend the lips *y* to the proper angle, substantially as shown.

After leaving these horizontal rollers *m m*, the metal sheet passes between two series of bars, L L, and out through a curved opening, *k*, in a board or frame, K, so that the sheet will emerge from the machine in a curved form, with the lips *y* projecting from the convex side of the sheet. The bars L L contain rollers *i' i'*, between which the sheet metal passes, so as not to touch the bars and create unnecessary friction. The bars L L are at their ends hinged to slotted plates *p p*, which are adjustably secured to the frames J' and K.

The object of adjusting these bars up and down is to give the metal sheet more or less curve, as required, according to the quality of metal used. The center bars need never be changed, but from the center toward both ends the bars are to be adjusted up or down, as required. As a consequence of this, the slot *k* in the center need only be wide enough for the passage of the metal sheet, but then gradually increase in width toward both ends, so as to allow of the passage of the sheet through it, whether more or less curved.

The object of thus curving the sheet is to prevent any bulging of the same, either inward or upward, when fastened in place. The center of the sheet is first nailed fast, and then the ends, which curve outward, are pressed back and nailed fast, making the sheet perfectly straight and even for plastering. On the side of the bar or frame J facing the main rollers C D is a series of small rollers, *s s*, for guiding the sheet into said bar or frame.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a machine for making metal laths, the roller C, provided with a series of segmental cutters, *b*, each cutter having one of its sides vertical and the other side sloping or inclined, and having arranged about midway between the cutters, in the same vertical plane, the punches *a*, as and for the purposes hereinbefore described.

2. In a machine for making metal laths, a device constructed substantially as described, arranged in front of the cutting or punching dies, for the purpose of straightening the metal before it reaches the dies.

3. The combination of the stationary frame G with rollers *e* and the hinged top frame G', with rollers *e'*, substantially as and for the purposes set forth.

4. The slide H, provided with the lug *f*, dog *h*, and eccentric-lever I, in combination with the frames G and G', substantially as and for the purposes set forth.

5. The combination, with the rollers C D, constructed substantially as described, of a frame, J, having a series of vertical shafts, *n*, carrying upon their lower ends rollers *m*, for the purpose of bending the lips of the lath to the desired angle, substantially as described.

6. The combination of the two series of bars L, provided with rollers *i*, and hinged to the adjustable plates *p*, and the board or frame K, having curved slot *k*, all substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WESLEY M. PARKER.

Witnesses:
C. I. NORBURY,
B. H. PHILIPPI.