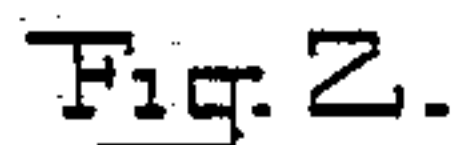


Patented July 31, 1900.

MACHINE FOR MANUFACTURING METAL LATH.

(Application filed Aug. 24, 1898.)

2 Sheets—Sheet 1.



INVENTOR

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No. 654,765.

Patented July 31, 1900.

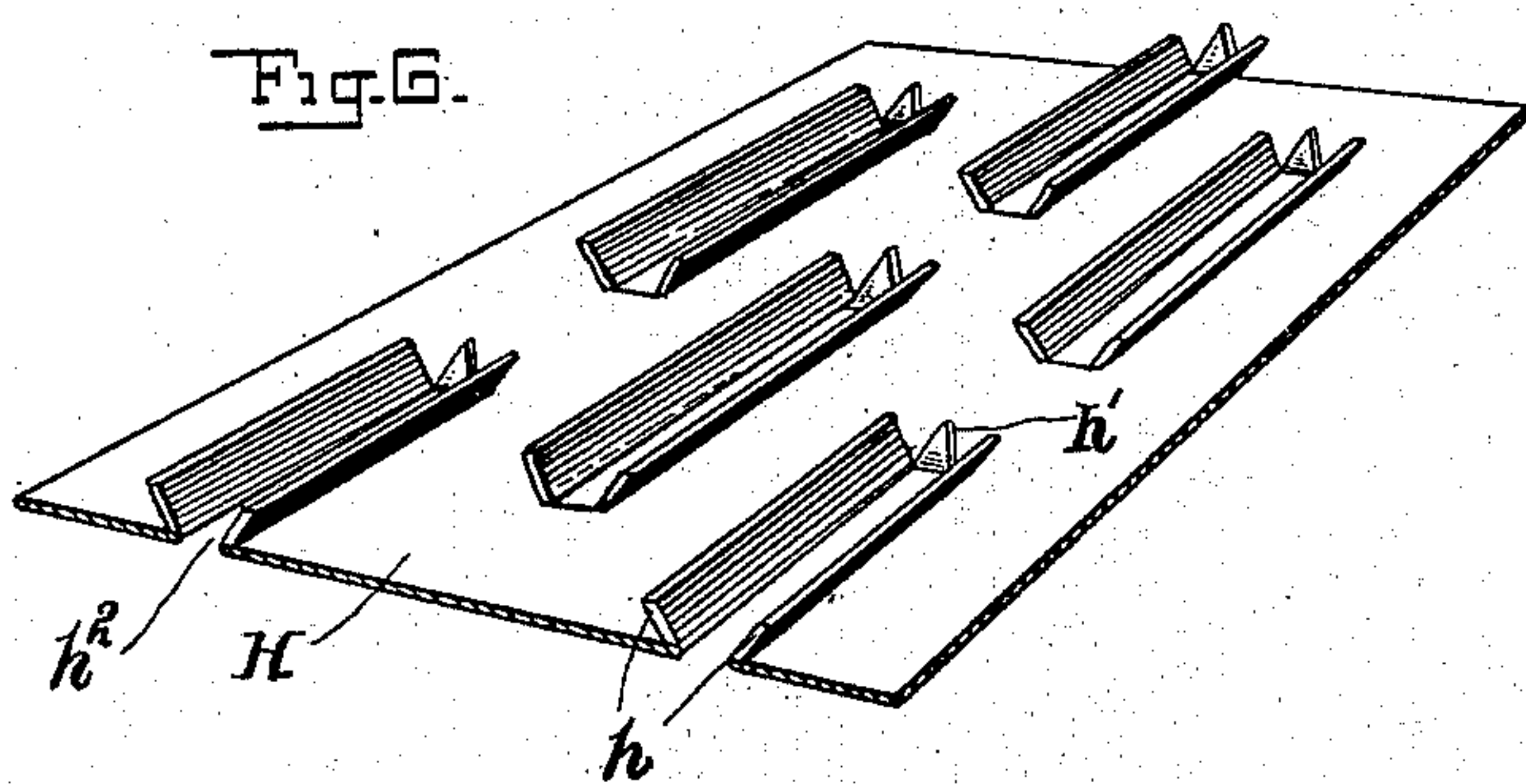
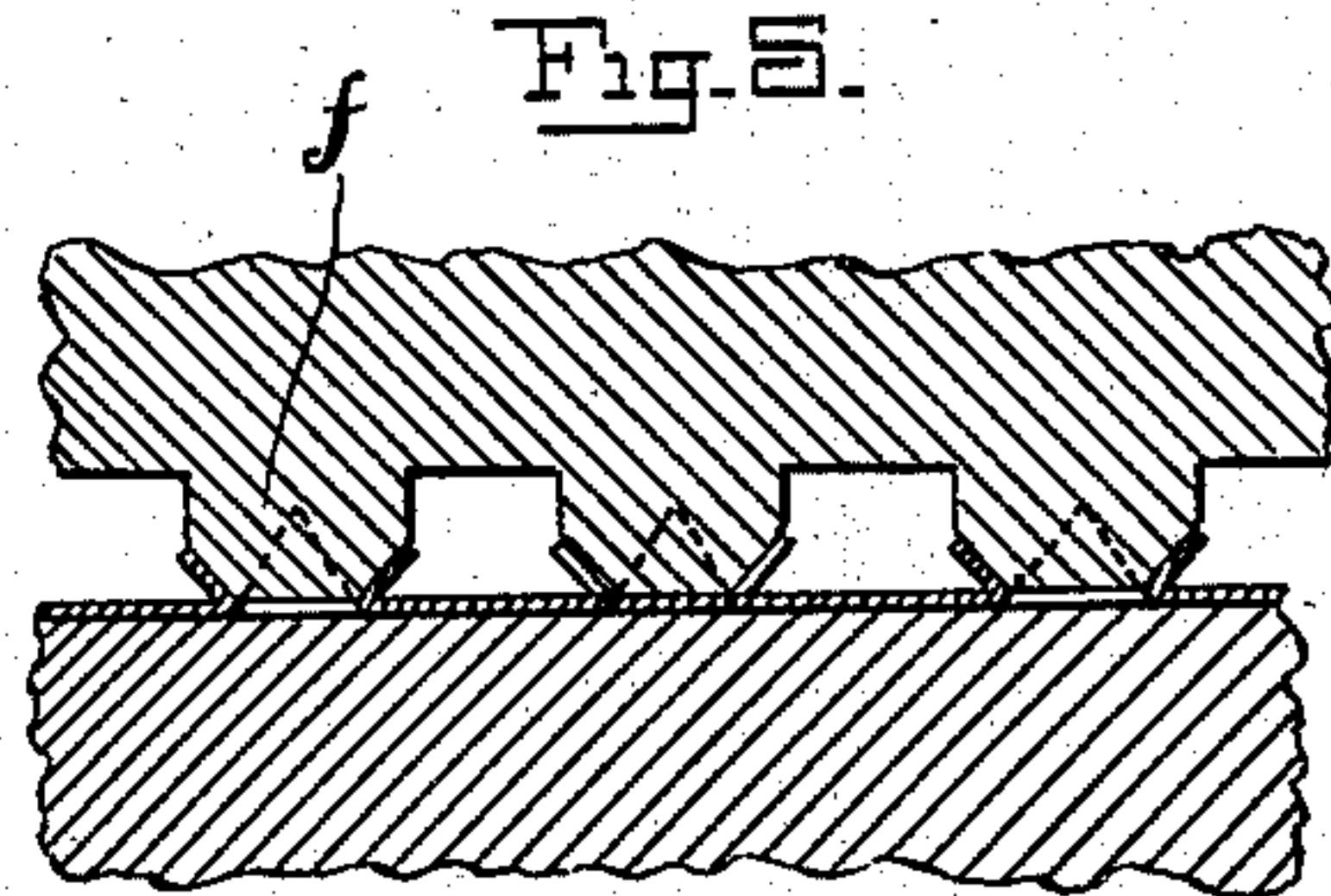
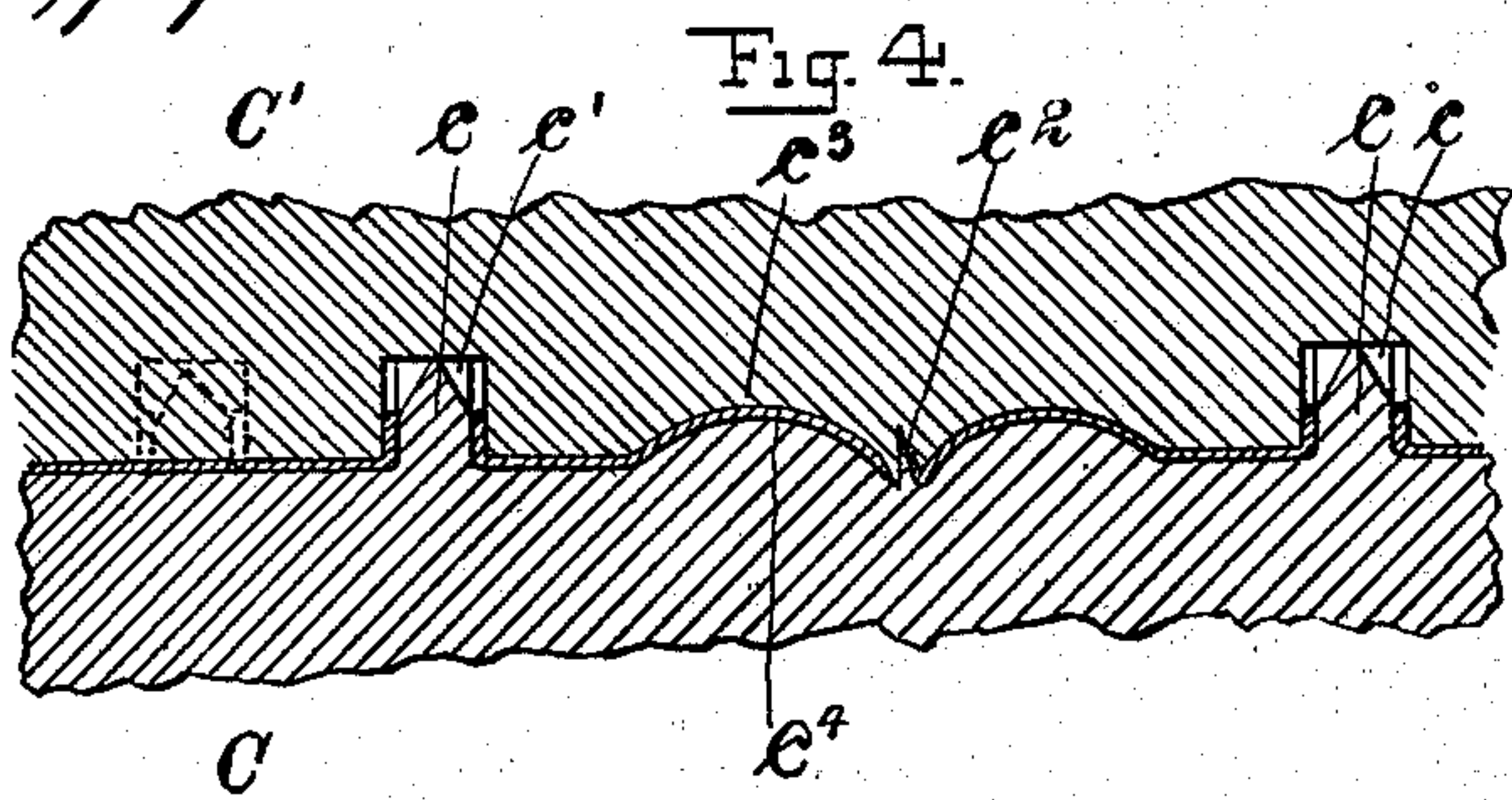
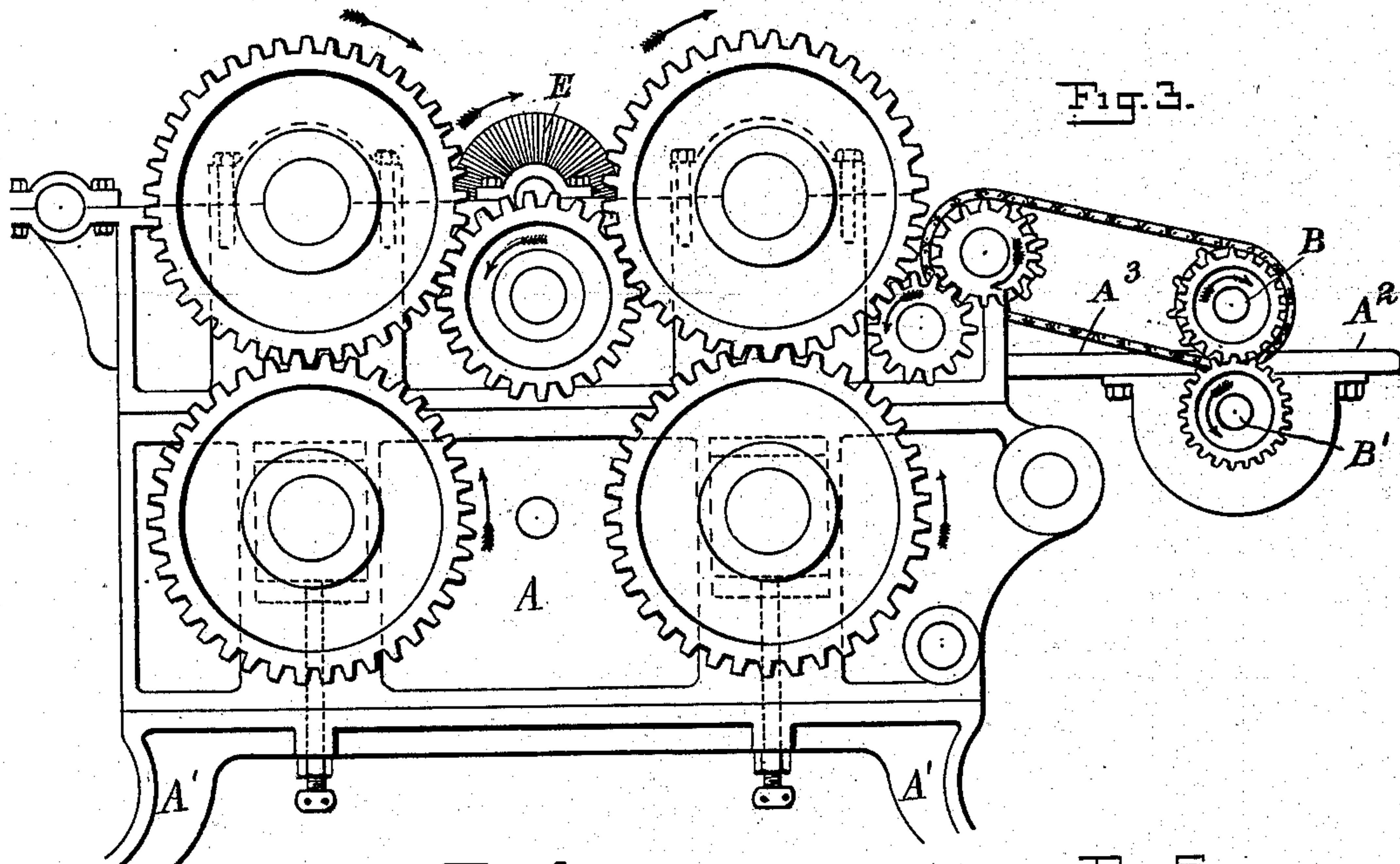
J. SCHRATWIESER.

MACHINE FOR MANUFACTURING METAL LATH.

(Application filed Aug. 24, 1898.)

(No Model.)

2 Sheets—Sheet 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JACOB SCHRATWIESER, OF NEW YORK, N. Y.

MACHINE FOR MANUFACTURING METAL LATH.

SPECIFICATION forming part of Letters Patent No. 654,765, dated July 31, 1900.

Application filed August 24, 1898. Serial No. 689,428. (No model.)

To all whom it may concern:

Be it known that I, JACOB SCHRATWIESER, a citizen of the United States, residing in the borough of Brooklyn, city of New York, county of Kings, and State of New York, have invented certain new and useful Improvements in the Manufacture of Metal Lath, of which the following is a specification.

My invention relates to improvements in the manufacture of metal lath from sheet metal, and particularly to means for operating upon the blank plates or sheets of metal from which the lath is manufactured, whereby the same is rendered serviceable for the purpose designed, and its objects are, among others, to provide reliable and efficacious means whereby the sheet metal may be so treated as to produce a lath of strong and durable construction and which will at the same time afford a proper "key" for the plaster when spread upon its surface; and to this end it consists of the construction of parts and arrangement of details hereinafter described and claimed, and illustrated in the accompanying drawings referred to herein, like letters of reference indicating like parts in each figure of the drawings.

In the said drawings, Figure I is a vertical medial cross-section of a machine for the manufacture of metal lath constructed in accordance with my invention. Fig. II is a plan view of the same with certain parts cut away. Fig. III is a side elevation of the same, illustrating the gearing of the machine. Fig. IV is a vertical section of the cutting-dies during the operation of cutting the metal plate. Fig. V is a vertical section of the acuting-ridges on the rollers taken during the operation of acuting the flanges of the metal plate. Fig. VI is a perspective view of a piece of the metal plate after passing through the machine.

The framework A, upon which the working parts of the device are mounted, is sustained by suitable legs A' and supports tables A², A³, A⁴, and A⁵, adapted to carry the sheet metal while passing through from one part to another of the machine. The table A² leads to the oil-rollers B B', which comprise perforated cylinders surrounded peripherally by a layer of felt or other absorbent material b. The upper roller is journaled

upon the oil-supply pipe B², passing through its center and having perforations at the part within the cylinder through which the said cylinder receives its oil-supply, the supply of oil from the pipe being controlled by the valve B³. Beneath the lower roller B' is a drip-pan B⁴, adapted to receive the drip from the rollers and also replenish the oil-supply of the said lower roller. The table A³ leads from the oil-roller to the perforating or cutting rollers C C', which are journaled upon the framework, the lower roller C being journaled in a vertically-adjustable box, so that the wear upon the cutting-dies may be compensated for by raising the same, and thus bringing the dies into closer contact. The upper roller C' has the female dies c' sunk in its outer surface and the lower roller has the male cutting-dies c thereon. Each roller is provided with an annular cutter c² at or near the middle, the two cutters on the upper and lower rollers being complementary to each other. The purpose of these cutters is to shear the sheet metal and divide it into sheets of convenient width. On either side of each of these cutters are annular beads and grooves, the grooves c³ being on the upper roller C' and the beads c⁴ on the lower roller C. The object of these is to form a gutter along the edge of each sheet of metal. Another bead and groove may also be provided intermediate the cutters and each edge of the roller for the purpose of forming a gutter in the center of each sheet of metal lath, if desired.

An upper and a lower row of finger-bars D are located adjacent to the rollers C C' and on the inner side thereof, having their beveled edges curved parallel to the curve of the rollers, one of the said finger-bars projecting between each two annular rows of cutters c. The object of these finger-bars is to strip the sheet of metal from the cutting-rollers and allow it to pass between them onto the table A⁵, leading to the acuting-rollers F F'. The upper one of these rollers F' is provided with annular ridges f, directly in line with the cutters c, of somewhat greater thickness than said cutters and having V-shaped interstices f' at intervals corresponding to the length of the cutting-knives c and dies c', the object of which will hereinafter appear. The lower roller F has a plain surface and, like

the lower roller C, is journaled in a vertically-adjustable box for the purpose of affording means for taking up the wear on the surface of the rollers.

5 The brush-rollers E E' are located intermediate the cutting and acuting rollers and are geared in such a manner as to revolve in the opposite direction from the rollers C C', respectively, their bristles entering the dies
10 of these rollers as they revolve and removing any dust or particles of metal from the metallic plates in process of cutting which may adhere to the said rollers.

It will be seen that the dies c' are slightly
15 larger than is necessary to admit the entrance of the cutting-dies c . The object of this is to allow the edges of the cut made in the metal sheet by the knives to be pressed into the dies.

20 All the working parts of the machine are geared together, revolving in the directions indicated by the arrows, Fig. III, in such a manner that all the surfaces which come in contact with the metal sheets move at an
25 equal rate of speed, which insures that the said sheets will not tear or become crimped while passing through the machine, as these sheets are preferably of such length as to be in the act of passing through two or more of
30 the rollers at the same time.

The operation of this device is as follows: The sheet of metal to be treated is first placed on the table A^2 and fed into the oil-rollers B B', where it receives a coating of oil on both
35 sides, which reduces the friction on the dies and renders them less liable to overheating. It is then passed by the said rollers to the cutting or perforating rollers C C'. The cutters c on the lower roller being V-shaped will
40 first cut the metal and then as they enter the dies c' will spread the edges of the cut, turning flanges h on either side and h' at the forward end thereof, which flanges project at right angles from the sheet. The V-shaped
45 flanges h' are caused by the abrupt forward edges of the knives c , which strike the sheet at an acute angle and turn as they pass therethrough until they reach a position at right angles to the sheet. The sheet of metal
50 while being perforated is pressed firmly between the main surfaces of the rollers, and thus prevented from slipping or becoming bent or otherwise affected by the cutting-dies except at the places where the said dies
55 come in actual contact therewith. The shoulders c^5 , interrupting the dies c' , are a very material aid to this end, and this feature insures strength and stiffness to the lath. The perforated sheet after being stripped

from the rollers by the finger-bars D D' next
60 passes from the table A^5 to the acuting-rollers F F', where the ridges f , passing through between the two flanges of each perforation upon the upper side of the sheet, bend them
65 outwardly until they project at an acute angle to the said sheet, while at the same time the beveled interstices f'' , passing over the V-shaped flanges or ears h' , "acute" them to the
70 same extent as the flanges h . The metal sheet then passes from the acuting-rollers over the table A^4 into any suitable receptacle which may be provided therefor. The metal
75 lath thus produced consists of the flat plate or sheet H, with rectangular apertures h^2 and acute flanges $h h'$ on three sides thereof, and it will be readily seen that when plaster is
80 spread upon a lath of this construction it will enter between the main surfaces of the sheet and the flanges, thus forming a dovetail key to retain the same in place. The flanges h'
85 also when the lath is used for walls with the apertures h^2 vertically disposed will prevent the plaster from slipping downwardly before it becomes dried and hardened.

What I claim is—

1. In a machine for the manufacture of
85 metallic lath, the combination of a plurality of primary rollers bearing complementary perforating-dies, and a plurality of secondary rollers one of which bears a series of annular
90 ridges having interstices at intervals corresponding to the length of the cutting-dies on the primary rollers

2. In a machine for the manufacture of
95 metallic lath, the combination of a plurality of primary rollers bearing complementary perforating-dies, and a plurality of secondary rollers, one of which bears a series of annular
100 ridges of greater thickness than said perforating-dies and in line with the same, and the other a plain surface.

3. In a machine for the manufacture of
105 metallic lath, the combination of a plurality of primary rollers bearing complementary perforating-dies, the male dies arranged in annular rings with annular apertures between, and the female dies arranged in like manner
110 with shoulders corresponding to said apertures, and a plurality of secondary rollers one of which bears a series of annular ridges.

In testimony whereof I have hereunto set my hand, this 9th day of August, 1898, at the city of New York, N. Y.

JACOB SCHRATWIESER.

In presence of—

F. M. SENIOR,
C. RAY COX.