W. L. SCOTT.

FILLING FORK GRID FOR LOOMS.

APPLICATION FILED JAN. 11, 1908.

916,617. Patented Mar. 30, 1909.

Fig: 1.

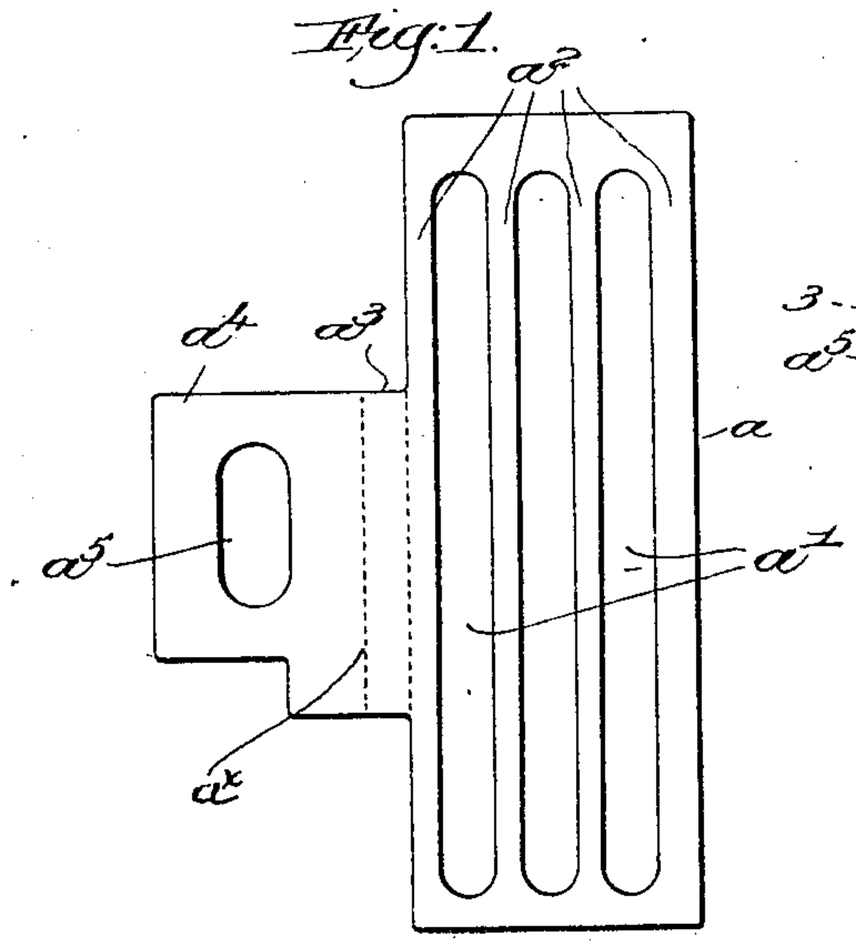


Fig: 2.

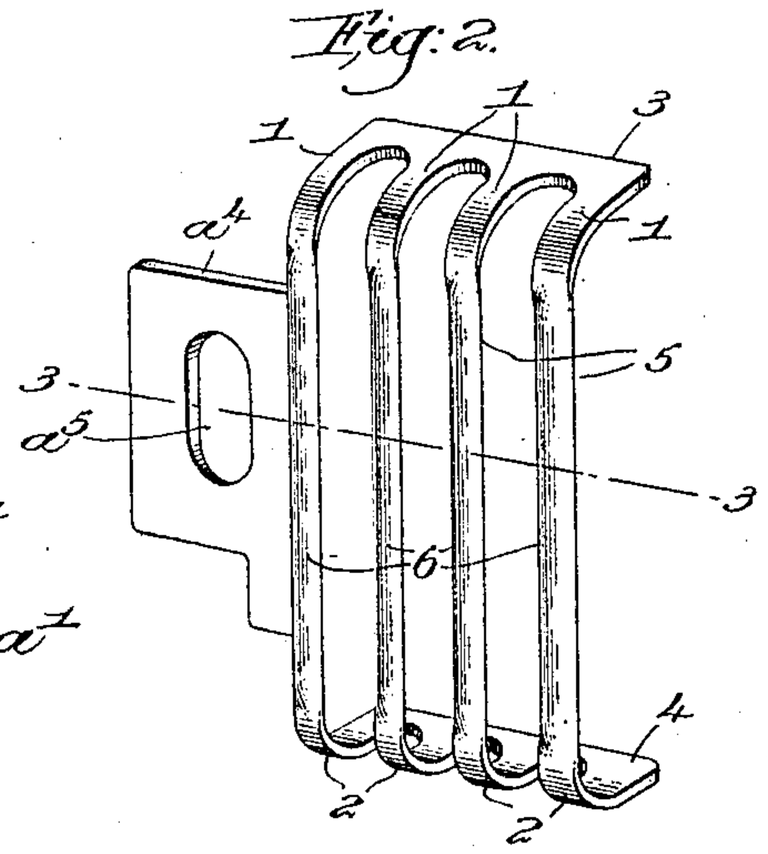


Fig: 3.

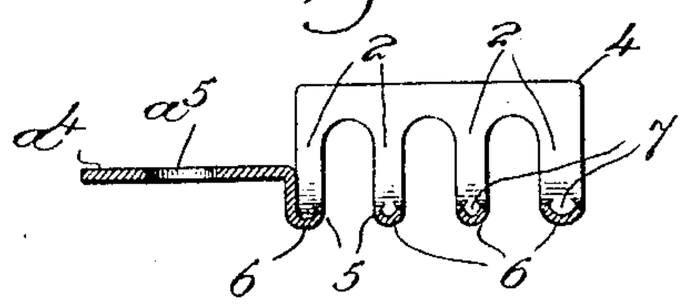


Fig: 4.

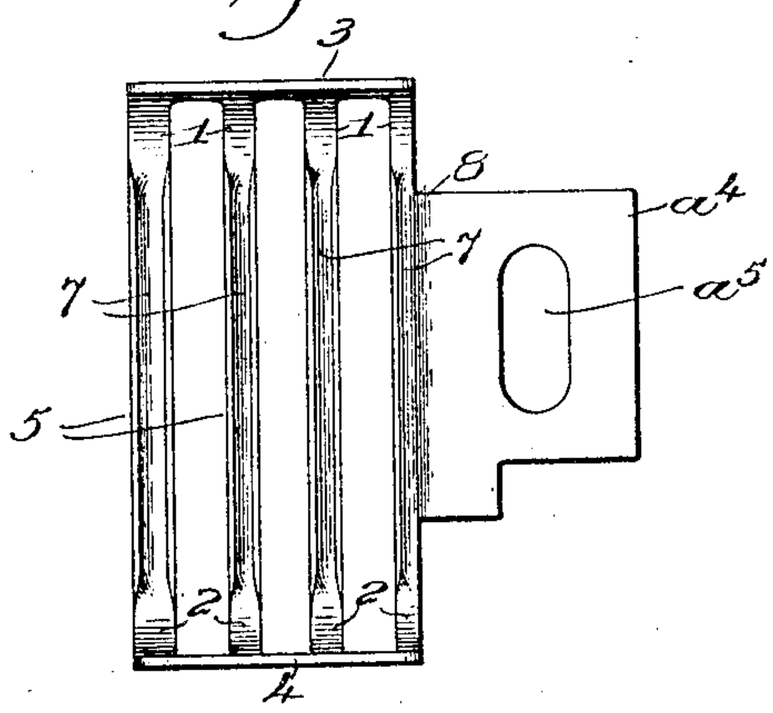
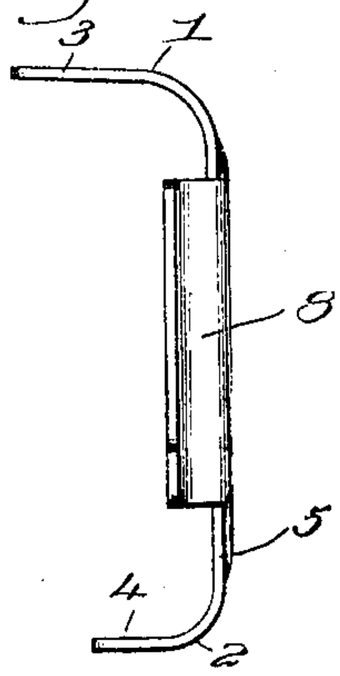


Fig: 5.



Witnesses,
Edward G. Allen.
Joseph M. Ward.

Inventor:
Wilfred L. Scott,
By Crosby Gregory.
Attys.

UNITED STATES PATENT OFFICE.

WILFRED LAWSON SCOTT, OF HOPEDALE, MASSACHUSETTS, ASSIGNOR TO DRAPER COMPANY, OF HOPEDALE, MASSACHUSETTS, A CORPORATION OF MAINE.

FILLING-FORK GRID FOR LOOMS.

No. 916,617. Specification of Letters Patent. Patented March 30, 1909.

Application filed January 11, 1908. Serial No. 410,328.

To all whom it may concern:

Be it known that I, WILFRED L. SCOTT, a citizen of the United States, and resident of Hopedale, county of Worcester, State of Massachusetts, have invented an Improvement in Filling-Fork Grids for Looms, of which the following description, in connection with the accompanying drawing, is a specification, like characters on the drawing representing like parts.

This invention has for its object the production of a novel, strong and durable fork-grid for looms, made of stamped or pressed sheet-metal suitably shaped and stiffened to combine strength and rigidity with lightness while presenting a smooth surface to the weft or filling.

In carrying out my invention a blank is formed by suitable dies from plate or sheet metal of requisite thickness, having a series of longitudinal openings therein separated by narrow strips of the metal. The blank is then subjected to the action of suitable forming dies and pressed into finished shape, presenting a plurality of upright, laterally separated bars flattened at their upper and lower ends and connected by flat integral webs, the body portions of the bars being transversely arched to stiffen and strengthen the same and present transversely convex, smooth front faces. One of the side bars has an integral, flat attaching ear extended laterally therefrom.

The completed grid is exceedingly stiff and strong, it cannot be bent readily owing to its mode of construction, and it is very light in weight.

Figure 1 is a plan view of the blank from which the fork-grid embodying my present invention is formed; Fig. 2 is a face view in perspective of the finished grid; Fig. 3 is a transverse section thereof on the line 3—3, Fig. 2; Fig. 4 is a rear view of the grid; Fig. 5 is a left hand side elevation of the grid shown in Fig. 2.

The blank *a*, Fig. 1, is cut or stamped out of sheet or plate metal of suitable thickness, the body portion of the blank being substantially rectangular and having a plurality of elongated openings *a'* formed in it, alternating with strips a^2 of metal which are to form the bars of the finished grid. From one side of the body of the blank extends a portion a^3, a^4, the portion a^4 having an opening a^5. The blank is subjected to the action of suitable forming dies and is pressed into the shape shown in Figs. 2 to 5 inclusive, the finished grid comprising a plurality of upright, laterally separated bars flattened at their upper and lower ends, as at 1, 2, the flat upper ends being bent rearwardly and terminating in a flat integral connecting web 3 of like thickness. I have shown the flat lower ends 2 also bent rearwardly, but to a less extent, and terminating in a flat, integral connecting web 4. The intervening body portions 5 of the bars are bent or arched transversely, to present transversely convex front faces 6 and longitudinally channeled or concave on their rear faces, as at 7, Figs. 3 and 4. The front faces 6 present a smooth surface to the thread or filling when laid across them during the weaving, so that there is nothing to catch the filling, and the transversely arched or concavo-convex form given to the body portions of the bars give the structure great strength and rigidity.

When the grid is pressed into shape the part a^3 of the blank, Fig. 1, is bent rearward to form an offset 8, and again bent along the dotted line $a^\times$, Fig. 1, to form the flat, laterally extended attaching ear a^4, with the hole a^5 for the attaching bolt by means of which the grid is secured in position on the lay. It is not necessary to arch the bar next the attaching ear to the same extent as the other bars are arched, as the additional metal provided by the offset 8 acts as a stiffener. The other side bar may be made slightly wider than the other bars, to give greater strength and rigidity to that side of the grid, and I have so shown it herein.

From an inspection of the drawing, it will be seen that the thickness of the grid is the same in all parts thereof, *i. e.*. the thickness of the plate from which the blank was cut, the rigidity and stiffness of the bars being secured by their transverse arching or bending. Such stiffness and rigidity is so great that quite thin metal may be used, as will be manifest, thereby greatly reducing the weight of the grid.

My invention is not restricted to the precise shape, nor to the number of the bars, and the general contour of the grid may be varied without departing from the spirit and scope of my invention, as expressed in the appended claim.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent is:—

A pressed, sheet-metal fork-grid for looms, having a plurality of upright, laterally separated bars flattened and bent rearwardly at their upper ends and terminating in an integral flat connecting web, the body portions of the bars being transversely convex on their front faces and longitudinally channeled on their rear faces, and a rearwardly offset, laterally extended flat attaching ear forming a continuation of the outer edge of one of the side bars.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

WILFRED LAWSON SCOTT.

Witnesses:
ALEXANDER P. DAVIS,
EDWARD DANA OSGOOD.