UNITED STATES PATENT OFFICE.

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FORK-GRID FOR LOOMS.


Application filed January 28, 1908. Serial No. 413,124.

To all whom it may concern:

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

This invention has for its object the production at small cost of a simple, efficient and durable fork-grid for looms so constructed and arranged that its manufacture is greatly simplified and cheapened while at the same time being particularly adapted for use with very light or fine yarns and with forks which are delicate in their action.

Fork-grids are commonly made of cast-metal, and the bars forming the grid or grating proper have to be carefully machined and finished in order to present a smooth surface which will not catch the yarn.

When using very fine and light yarn as filling the fork must be delicate and quickly responsive in its action, and it is highly desirable that the grid bars be small as well as smooth and rounded, a result very difficult to secure in even a limited way.

My present invention overcomes the objections attendant upon the usual cast-metal grids and secures at the same time the desired results above set forth.

Figure 1 is a perspective view of a fork-grid embodying one form of my invention; Fig. 2 is a right-hand side elevation thereof.

In accordance with my invention I make the body portion of cast-metal, such as brass, or other desirable metal easily cast, and the bars are made of wire of the desired diameter, the ends of the bars being firmly and permanently embedded in the cast metal.

Referring to Fig. 1 the body portion 1 is substantially U-shaped in side elevation, with laterally extended head and foot portions 2, 3, parallel to each other and at right angles to the body, the latter at its opposite side having a lateral extension or lug 4, provided with a slot 5 to receive the usual bolt by which the grid is secured in place on the lay.

The part of the grid so far described is cast in a suitable mold, and into the head and foot portions are permanently embedded the ends of the bars. Said bars are made of wire, preferably cylindrical, and herein they are shown as substantially U-shaped, said bars being located in parallel vertical planes.

The main parts 6 of the bars are vertical and sustain the filling, the upper and lower ends being bent rearwardly, at 7 and 8, and are embedded at their extremities in the metal forming the head and foot portions 2 and 3, respectively, see dotted lines Fig. 2.

By this construction machining is obviated, with its cost, the bars are perfectly smooth and can be as fine or small in diameter as necessary, and they are rigidly and firmly held in place by the heavy cast-metal part of the grid.

The bend given to the bars brings their vertical portions into proper position to sustain the filling while their rearwardly extended upper and lower ends act as braces to maintain the bars rigid, as well as affording ample space for the fork-tines to enter when the filling is absent.

The particular shape of the cast-metal portion of the grid may be altered and the bending of the bars varied to correspond, without departing from the spirit and scope of my invention.

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

1. As a new article of manufacture, a fork-grid for looms comprising a cast-metal body having laterally extended head and foot portions, and an attaching lug, and wire bars arranged in parallelism and bent at their upper and lower ends, the extremities of such ends being permanently embedded in the metal forming the head and foot portions of the body.

2. As a new article of manufacture, a fork-grid for looms comprising a cast-metal body having laterally extended head and foot portions, and a series of U-shaped wire bars arranged in parallelism and having the extremities of their upper and lower ends permanently embedded in the metal forming the head and foot portions of the body.

3. As a new article of manufacture, a fork-grid for looms comprising an U-shaped cast-metal body having parallel and laterally extended head and foot portions, and a series of round wire bars arranged in parallelism and
also C-shaped, the upper and lower ends of the bars being permanently embedded in the metal forming the head and foot portions of the body.

4. As a new article of manufacture, a fork-grid for looms comprising an C-shaped metal body having parallel and laterally extended head and foot portions and an attaching lug, and a series of C-shaped bars arranged in parallelism and having the extremities of their upper and lower ends permanently united with the head and foot portions of the body.

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

ALONZO E. RHIOADES.

Witnesses:

JESSE D. BROMLEY,

EDWARD DANA OSGOOD.