July 26, 1932. G. P. ANSTISS 1,868,514

CONVEYER

Original Filed May 26, 1928

Fig. 1

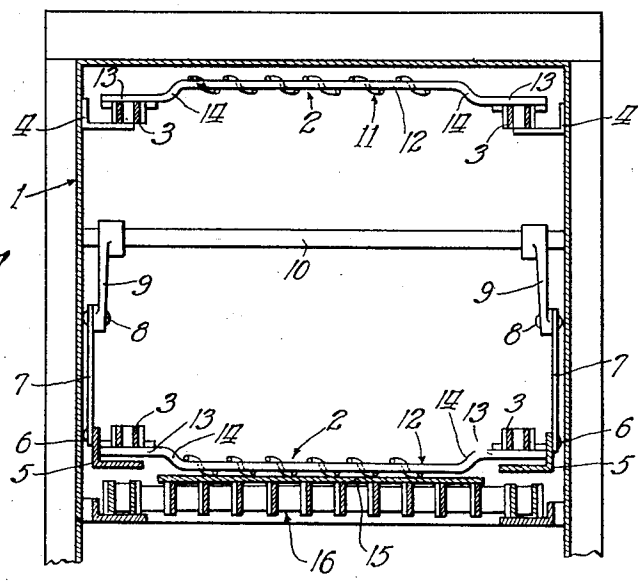


Fig. 2

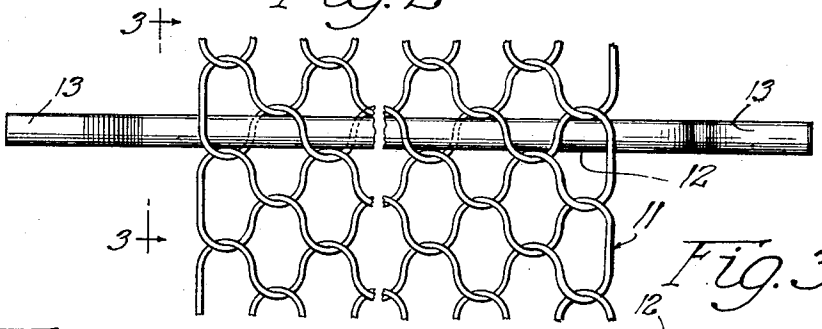


Fig. 3

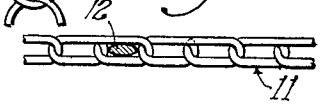


Fig. 4

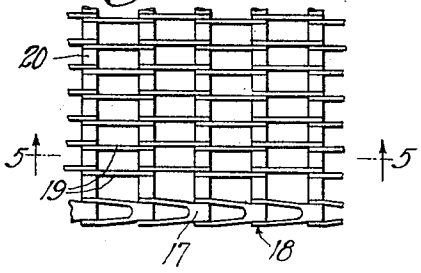
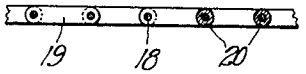


Fig. 5



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Patented July 26, 1932 1,868,514

UNITED STATES PATENT OFFICE

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CONVEYER

Original application filed May 26, 1928, Serial No. 280,673. Divided and this application filed July 8, 1929. Serial No. 376,519.

This invention relates to conveyers and the structure thereof and more particularly to the types of conveyers for a washing machine of the type shown and described in my copending application for washing machine, Serial No. 280,673, filed May 26, 1928, of which this application is a division.

In my copending application above identified I have disclosed a washing machine particularly adapted for treating punchings, castings, and like articles.

It is desirable that such articles be effectively cleaned to remove scales, grease and other foreign matter therefrom so as to be in proper condition to be subjected to further operations in the completion of the articles to be produced. To this end, it is desirable to employ two conveyers, one a main conveyer and the other, a hold down conveyer, relatively positioned one above the other so that the articles washed are confined between them. Due to the great diversity in weight of the various articles to be washed, it is desirable that the lower or main conveyer be of substantial construction to support objects of various weights. This conveyer must also be flexible. Inasmuch as the various articles to be washed include a great diversity of shape, size and weight and must be subjected to streams of washing solution under high pressure so as to assure proper cleansing thereof, and many may be of insufficient weight to resist such pressure, it is desirable that means be employed for holding the articles in position, such means being adapted to conform to variously shaped and sized articles and yet permitting of thorough cleansing. A flexible upper or hold down conveyer is therefore employed.

One of the objects of this invention is to provide a simple and efficient supporting or main conveyer effective for sustaining articles of various weights and sizes.

Another object is to provide such a conveyer as will be flexible and at the same time be effective for supporting relatively heavy articles.

A further object is to provide a simple and efficient hold down conveying means, such means being effective for holding articles of insufficient weight to resist the force of the spray streams striking them.

Another object is the provision of such a hold down means as will be readily flexible to conform to articles of a diversity of form and size and at the same time be effective in holding such articles down against the pressure of the spray steams.

A further object is the provision of such a hold down conveyer as will permit of thorough cleansing of the articles washed.

Further objects and advantages of this invention will appear from the detailed description thereof, reference being had to the accompanying drawing in which:

Figure 1 is a fragmentary transverse vertical sectional view of the upper portion of the machine shown in my copending application with the spray jets and pipes omitted, showing the operative position of the lower or main conveyer and the hold down conveyer, both in section;

Figure 2 is a fragmentary plan detail of the web and rod structure of the hold down conveyer;

Figure 3 is a sectional view taken substantially on line 3—3 of Figure 2;

Figure 4 is a fragmentary detail of the lower or main conveyer; and,

Figure 5 is a section taken substantially on line 5—5 of Figure 4.

The upper portion of the machine shown and described in my copending application comprises a casing 1 suitably constructed of sheet metal and being of elongated rectangular shape in plan and, of rectangular cross-section as shown in Figure 1. The hold down conveyer 2 is adapted to run over sprocket wheels mounted on shafts (not shown) at each end of the upper casing 1 which is open at each end. This conveyer comprises endless side chains 3 slidably supported near the top of the casing by tracks or guides 4 and below upon the tracks 5.

Pivotally secured to the lower tracks 5, at 6, are links 7 of bell-crank formation which are further pivotally secured at 8 to arms 9. These arms are secured to a shaft 10 suitably mounted in casing 1 transverse-

ly thereof and between the runs of the hold down conveyer. A plurality of these shafts (not shown) are mounted in the casing and suitably connected for raising and lowering tracks 5 in the event it is desired to move the hold down conveyer to an inoperative position.

Between the endless chains 3 is mounted an endless belt or apron 11, through the meshes of which, at spaced intervals, the rods 12 are inserted.

These rods are made of suitable material and are slightly offset at the ends 13, as shown at 14, in the same direction and are suitably secured to the chains 3 so that the mesh belt in the upper position is above the plane of the chains and in the lower position, below. The mesh structure 11 is preferably formed of a continuous wire suitably woven or reticulated to provide a plurality of interengaging meshes (Figure 2) which are loosely connected but are not secured together so that the meshes are free for relative movement. This provides an open and easily flexible structure which will readily adapt itself to variously shaped objects which may be carried by the lower main conveyer 16, and with which the upper or hold down conveyer is adapted to cooperate. As will be noted more clearly from Figures 1 and 3, the meshes of this conveyer have their upper and lower portions offset laterally and oppositely. This facilitates insertion of the rods 12 through the meshes of the conveyer. Referring to Figures 4 and 5, the lower or main conveyer 16 comprises endless side chains 17 which are connected by cross rods 18 which are suitably secured in the chains. The rods 18 pass through the ends of a plurality of links 19, the ends of which overlap at the rods, and through spacing collars 20 disposed between the ends of the pairs of links. This provides a conveyer construction of rugged structure, which has the desired flexibility and yet is capable of supporting heavy loads.

As illustrated in Figure 1, 15 is a flat plate punching confined between the conveyers for passage through the machine. While a flat plate is shown, articles of irregular contour will be similarly held by the hold down conveyer, due to its flexibility.

As will be understood by those skilled in the art, changes may be made in the construction and arrangement of parts of the invention without departing from the scope thereof, and I intend to include all such variations, as fall within the scope of the appended claims, in this application in which the preferred forms only of my inventions are disclosed.

What I claim is:

1. A conveyer comprising side members, a web comprising a single strand of wire forming a mesh of continuous, reticulated construction including mutually interengaged loop portions, and cross rods inserted through the web and supported from said side members.

2. A conveyer comprising side members, a web comprising a single strand of wire forming a mesh of continuous, reticulated construction including mutually interengaged loop portions, and cross rods inserted through the web and supported from said side members, said cross rods having offset ends whereby said web is disposed in a plane other than the plane of the side members.

3. In a conveyer, the combination of side members, a web comprising a single strand of wire forming a mesh of continuous reticulated construction including interengaging loop portions, and means inserted through the loop portions of said web and lying upon said side members for supporting said web.

4. In a conveyer, the combination of side members, a web comprising a single strand of wire forming a mesh of continuous recticulated construction including interengaging loop portions, and means inserted through the interengaging loop portions of said web and lying upon said side members for supporting said web in a plane other than the plane of said side members.

In witness whereof, I hereunto subscribe my name this 2nd day of July, 1929.

GEORGE P. ANSTISS.