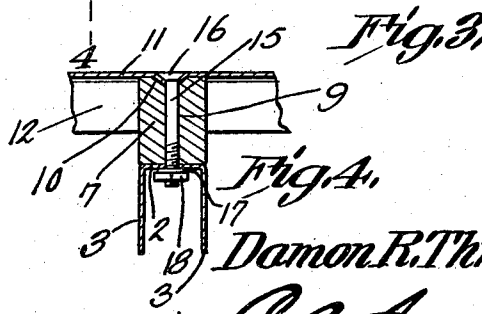
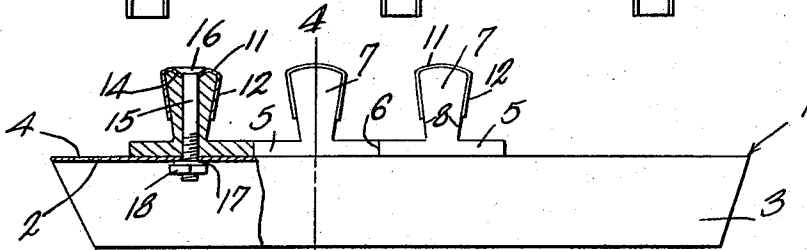
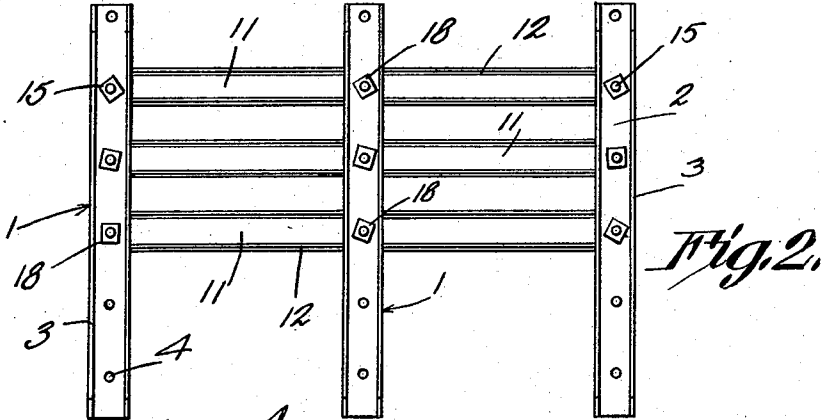
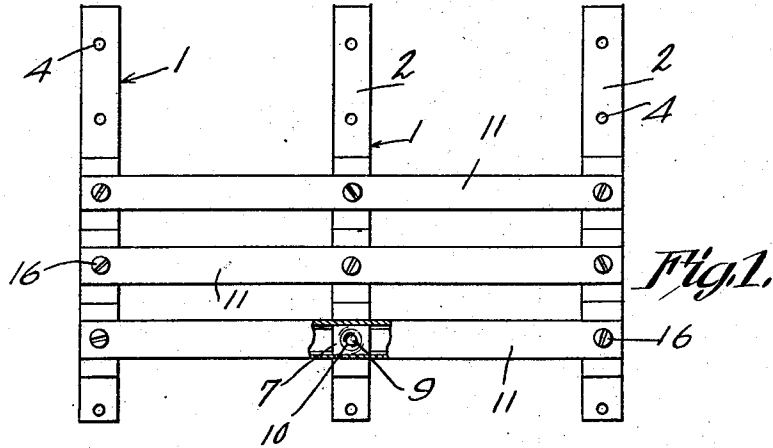


D. R. THROOP.
 SCREEN FOR FRUIT GRADING MACHINES.
 APPLICATION FILED NOV. 8, 1916.

1,216,629.

Patented Feb. 20, 1917.



Witnesses

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UNITED STATES PATENT OFFICE.

DAMON R. THROOP, OF DAVIS, CALIFORNIA.

SCREEN FOR FRUIT-GRADING MACHINES.

1,216,629.

Specification of Letters Patent.

Patented Feb. 20, 1917.

Application filed November 8, 1916. Serial No. 130,190.

To all whom it may concern:

Be it known that I, DAMON R. THROOP, a citizen of the United States, residing at Davis, in the county of Yolo and State of California, have invented a new and useful Screen for Fruit-Grading Machines, of which the following is a specification.

The device forming the subject matter of this application is a metal screen adapted to be used in fruit grading machines, and it is the object of the invention to provide a screen of this kind which may be manufactured readily out of metal stock the construction of the screen being such that it will possess great strength and durability.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the present invention appertains.

With the above and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings:—

Figure 1 shows in top plan, a portion of a screen constructed in accordance with the present invention;

Fig. 2 is bottom plan of the structure shown in Fig. 1;

Fig. 3 is a side elevation of the screen, wherein parts are broken away; and

Fig. 4 is a section on the line 4—4 of Fig. 3.

The device forming the subject matter of this application preferably is made of metal throughout and includes longitudinal channels 1, the tops of which are denoted by the reference character 2, the channels 1 including depending flanges 3. The tops 2 of the channels 1 are equipped with openings 4. Superposed on the tops 2 of the channels 1 are plates 5, the ends of which are in abutment as shown at 6. The plates 5 are supplied with upstanding lugs 7, the side faces 8 of which converge as they extend downwardly. The plates 5 and the lugs 7 are supplied with openings 9 therethrough, adapted to be alined vertically with the

openings 4 in the tops 2 of the channels 3. At the upper ends of the openings 9, enlarged seats 10 are formed. Transverse channels 11 are supported on the lugs 7 and include depending flanges 12, which converge downwardly, to correspond with the downwardly converging faces 8 of the lugs 7. In the tops of the channels 11, burs 14 are formed. These depending burs 14 fit in the recesses or seats 10 at the upper ends of the openings 9. Bolts 15 pass through the openings 9 of the lugs 7 and through the openings 4 in the tops 2 of the longitudinal channels 1. The bolts 15 have heads 16 received in the burs 14 and lying flush with the upper surfaces of the tops of the transverse channels 11. The bolts 15, which project through the openings 4 in the tops 2 of the longitudinal channels 3, carry locking washers 17, and nuts 18 are threaded onto the lower ends of the bolts, to hold the plates 5, the lugs 7 and the transverse channels 11 on the longitudinal channels 1, the nuts 18 being housed between the depending flanges 3 of the longitudinal channels 1.

The device forming the subject matter of this application will possess great strength, even though made out of comparatively light stock. For instance, it will be obvious to those skilled in the art that since the members 1 and 11 are the shape of channels having depending flanges, a distortion of the screen will be brought about only with the greatest difficulty. Because the ends of the plates 5 abut, as shown at 6, the plates will not tend to twist on the bolts 15. The downwardly converging flanges 12 of the channels 11, coacting with the downwardly converging faces 8 of the lugs 7, serve to limit the upward movement of the transverse channels 11 with respect to the longitudinal channels 1. Further, because the burs 14 are engaged in the seats or recesses 10, the transverse channels 11 will have an unusually strong hold on the lugs 7 when the bolts 15 are in place.

The screen forming the subject matter of this application has been shown as of small size, in order that the parts may appear on a large scale in the drawings. It will be understood, however, that the longitudinal channels 1 and the transverse channels 11 may be of any desired length, and that there may be as many of the channels 1 and 11 as

is considered expedient or necessary, depending upon the size which the completed screen is to have.

Having thus described the invention, what is claimed is:—

1. In a screen for fruit grading machines, longitudinal members; plates superposed on said members and having their ends in abutment, the plates having upstanding lugs provided with downwardly converging side faces, the lugs and the plates having openings therethrough, there being enlarged recesses in the lugs at the upper ends of the openings; transverse channels supported on the lugs and including downwardly converging flanges engaging the downwardly converging faces of the lugs, the transverse channels being provided in their tops with depending burs engaged in the recesses; bolts passing through the openings and through the longitudinal members and having heads fitting in the burs; and nuts mounted on the bolts and coacting with the under faces of the longitudinal members.
2. In a screen for fruit grading machines, longitudinal members; plates superposed on the longitudinal members and having their ends in abutment, the plates having upstanding lugs, the lugs and the plates having openings therethrough, there being enlarged recesses in the lugs at the upper ends of the openings; transverse channels supported on the lugs and including depending flanges engaging the side faces of the lugs, the transverse channels being provided in their

tops with burs engaged in the recesses; and securing devices engaging the longitudinal members and located in the openings, the securing devices including heads fitting in the burs.

3. In a screen for fruit grading machines, longitudinal members; lugs mounted on the longitudinal members and provided with downwardly converging side faces; transverse channels supported on the lugs and including downwardly converging flanges engaging the downwardly converging faces of the lugs; and securing devices connecting the longitudinal members and the transverse channels, the securing devices passing through the lugs.

4. In a screen for fruit grading machines, longitudinal members; lugs mounted on the longitudinal members and provided with openings, the lugs having enlarged recesses at the upper ends of the openings; transverse channels supported on the lugs and provided with burs engaged in the recesses; and securing devices passing through the openings and engaging the longitudinal members, the securing devices having heads fitting in the burs.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

DAMON R. THROOP.

Witnesses:

W. B. LILLY,
J. R. SHARPE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."