

Dec. 14, 1926.

1,611,036

O. H. HOVDA
NAIL SORTING DEVICE
Filed Jan. 7, 1926

Fig. 1.

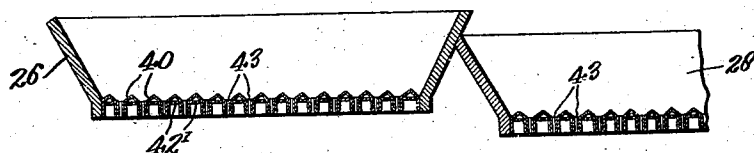
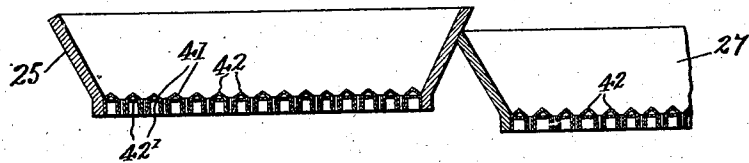
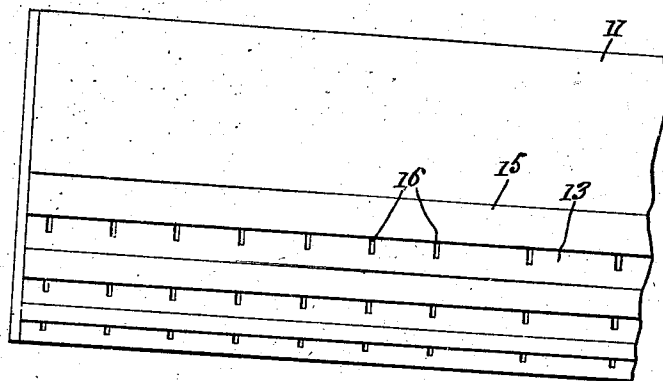


Fig. 2.

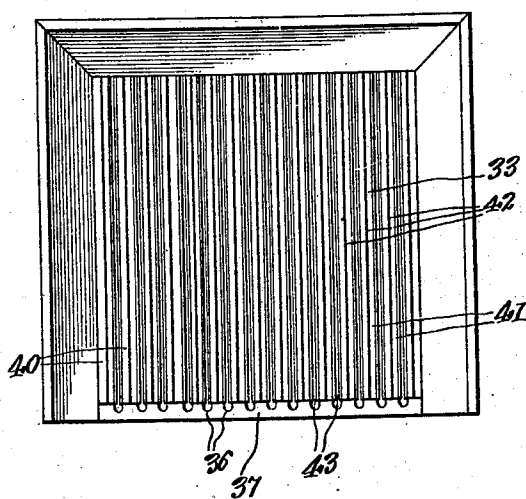


Fig. 3.

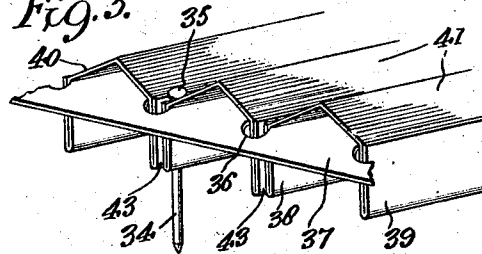
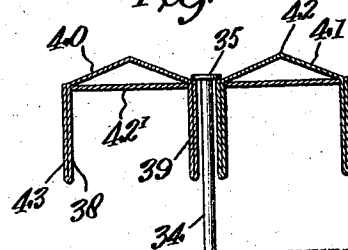


Fig. 4.



INVENTOR
O. H. Hovda
BY
Wilkinson & Gustaf
ATTORNEYS

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UNITED STATES PATENT OFFICE.

OLIVER H. HOVDA, OF BILLINGS, MONTANA.

NAIL-SORTING DEVICE.

Original application filed October 9, 1924, Serial No. 742,657. Divided and this application filed January 7, 1926. Serial No. 79,856.

The present invention relates to improvements in nail sorting devices, and the present application is a division of my prior co-pending and similarly entitled application filed October 9, 1924, Serial No. 742,657, Patent No. 1,592,697, patented July 13, 1926.

The invention forming the subject-matter of this divisional application has in common the same objects as those described in the parent case, above referred to, and additionally aims to provide an improved sieve or tray for the efficient separation of the nails or like articles, said tray to be used in conjunction with the drum forming the subject-matter of the parent case.

With the foregoing and other objects in view, the invention will be more fully described hereinafter, and will be more particularly pointed out in the claims appended hereto.

In the drawings, wherein like symbols refer to like or corresponding parts throughout the several views.

Figure 1 is a fragmentary elevation of a nail sorting drum shown above several sieves illustrated in vertical section, certain of the sieves being broken away,

Figure 2 is a plan view of one of the sieves,

Figure 3 is a fragmentary perspective view, showing a portion of the sieve construction, and

Figure 4 is a cross-section taken on an enlarged scale of a portion of the sieve.

Referring more particularly to the drawings, the drum designated at 11 is of the construction more particularly shown, described and claimed in my co-pending application aforesaid. The peripheral plates at one side of the drum are indicated at 13 and these are spaced apart to permit the passage of the nails to the several sieves below the drum which is disposed with its axis at an inclination to the horizontal. The base plates of the drum are indicated at 15, and the partitions at 16. These partitions are grouped together more closely at one end of the drum and the distance between them increases progressively from one end to the other of the drum, whereby nails of different lengths may be liberated from the drum at certain designated sections of the drum beneath which are placed individual sieves to catch and further sort such nails.

These sieves are composed of metal mem-

bers as shown in Figures 3 and 4, these metal members paralleling one another and spaced apart so as to provide the slots 33 for the purpose of admitting the shanks 34 of the nails while the heads 35 are caught in the members at the sides of the slots. At the ends of the slots are openings 36 large enough to permit the heads 35 of the nails to drop through. These openings 36 will be of graduated size in each sieve or in the various sieves. These openings are provided in the end plate 37 held in the frame of the sieve. The members are made up of inverted U-shaped pieces of sheet metal or channel strips having the side walls 38 and 39 with the open portion of the channel disposed downwards while the upper part is closed by the upwardly convergent walls 40 and 41 meeting at the ridge 42. The sloping walls 40 and 41 direct the nails downwardly toward the slots. A reinforcing plate 42 is inserted between the walls 38 and 39 preferably at the upper portions thereof so as to form with the sloping walls a triangular arrangement of great strength. From the bottoms of the side walls 38 and 39 the metal is returned upon itself outwardly and folded into parallel relation against the outside faces of the said walls thus producing plates 43 and 44 which are of slightly greater height than the walls 38 and 39 producing upwardly extending sharp edges on which the heads of the nails 35 are intended to easily ride. The sieves may be inclined so that the nails will ride down the slots and drop through the openings 36 where the nails are of a size to pass through such openings.

The sieves may be vibrated by an eccentric or other motion to cause the nails to seek the openings 36.

It is obvious that various changes and modifications may be made in the details of construction and design of the above specifically described embodiment of this invention without departing from the spirit thereof, such changes and modifications being restricted only by the scope of the following claims.

What is claimed is:—

1. A sieve for sorting nails comprising a frame having openings to admit the nail heads, parallel members in said frame spaced apart to provide slots and said members being substantially of channel shape with closed upper sloping walls and side

walls extending down from the sloping walls, reinforcing plates within said side walls at the upper ends thereof, and plates on the outside of said walls extending above
5 the walls to receive the heads of the nails.

2. A slotted and perforated sieve for sorting nails and the like including parallel members having spaced side walls forming the slots, and outer walls lying against and
10 reinforcing said side walls, said outer walls extending above the members and said side walls and positioned to receive the undersides of the nail heads to form runways for the latter.

15 3. A sieve for sorting nails comprising adjoining parallel members having slots therebetween for admitting the shanks of the nails, a frame for holding said members having enlarged perforations at the ends of
20 the slots between the members for permitting the heads of the nails to pass through, said members being made of substantially inverted U-shaped pieces of metal having side walls with upwardly converging and ridged top walls, and upturned outer walls

along the side walls having their upper free
25 edges at the sides of the slots for receiving the under sides of the nail heads and forming runways therefor.

4. A sieve for sorting nails comprising adjoining parallel members having slots
30 therebetween for admitting the shanks of the nails, a frame for holding said members having enlarged perforations at the ends of the slots between the members for permitting the heads of the nails to pass through, said
35 members being made of substantially inverted U-shaped pieces of metal having side walls with upwardly converging and ridged top walls, upturned outer walls along the
40 side walls having their upper free edges at the sides of the slots for receiving the under side of the nails and forming runways therefor, and a reinforcing plate extending
45 between the side walls at substantially the base of the convergent top walls for forming therewith a substantially triangular structure of great strength.

OLIVER H. HOVDA.