

March 29, 1927.

1,622,399

G. SCHLESINGER
BOBBIN BIN AND SHELF THEREFOR
Filed Oct. 15, 1926

Fig. 1.

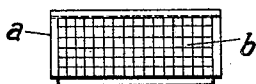


Fig. 2.

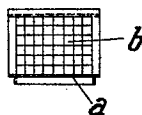


Fig. 3.

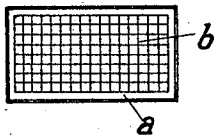


Fig. 5.

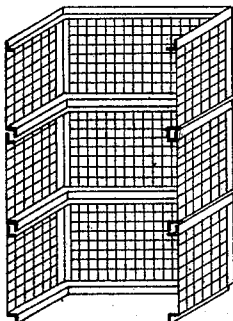


Fig. 4.

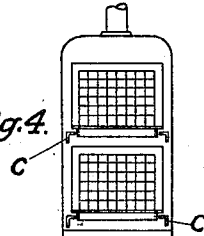


Fig. 8.

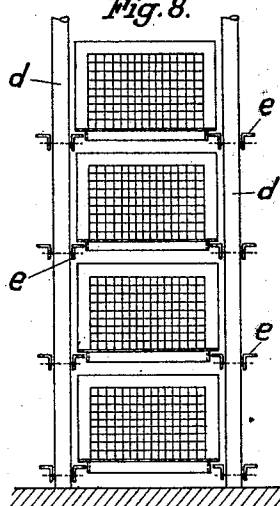


Fig. 9.

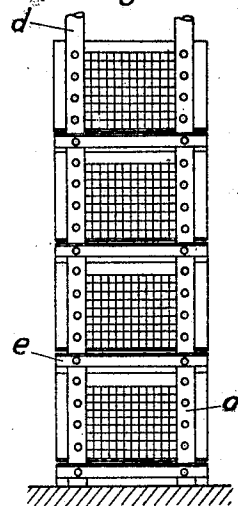


Fig. 6.

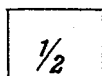
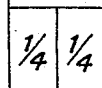


Fig. 7.



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UNITED STATES PATENT OFFICE.

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BOBBIN BIN AND SHELF THEREFOR.

Application filed October 15, 1926, Serial No. 141,865, and in Germany April 24, 1925.

This invention relates to bobbin-bins and shelves therefor and the object of the invention is to improve the bins in order to be adapted to take up bobbins, cops and the like directly near the spinning machine and to be retained therein throughout, and while subjected to various treatments, until finally they are delivered for use, as for instance to the loom. In other words the bobbins or cops remain in my bins when transported to the store room, to the steam boxes, back to the store room, to the shearing machine and to the loom. The improved bobbin-bins should be adapted to be superposed to form a shelf and to be placed into the steam boxes; they should not be subjected to variation of weight by hygroscopical properties or easy wearing, for the purpose of having an ever known or uniform standard weight, and they should render their contents visible from the exterior.

By my invention there is avoided the need for emptying the bobbins from the bins, and refilling them many times and in consequence damage and loss of material by yarn-scrap and bending the heads of the cops or breaking the spool-tubes is avoided. By my invention the empty bins do not require retaring each time the contents are to be weighed, and the need for shelves in the store and for special containers in the steam-boxes is avoided.

Another object of the invention is to provide shelves of simple and cheap construction which in some cases may be used, adapted to receive my improved bins.

With these and other objects in view, my invention consists in a bin for bobbins and the like and a shelf hereinafter fully described and claimed, and illustrated in the annexed drawings.

In the drawings:

Figs. 1-3 show the bobbin-bin respectively in side elevation, in end elevation and in plan;

Fig. 4 shows the bobbin-bin within the steam-box,

Fig. 5 shows the use of the bin as a shelf, the front and bottom walls being shown broken away,

Figs. 6 and 7 show the sub-division of the main bin in $\frac{1}{2}$ and $\frac{1}{4}$ units,

Figs. 8 and 9 show in front and side elevation respectively a shelf for containing the bins.

The bin has an iron-frame *a*, which is strong enough to resist the usual shop use by pulling, pushing, throwing, etc., and which is also stiff enough to serve as a seat for the workmen; for in practice the workmen will sit on the bins. The frame is galvanized or otherwise rendered rust-proof. The side and bottom walls *b* are made from galvanized iron-wirework, which is resistant to the effect of steaming and the meshes of which are made so small that the heads of the cops cannot slip through. Fig. 4 shows a steam box containing two of my improved bins, placed on angle-irons *c* with which the bottoms of the bins coact. The perforations of the walls of the bins allow the steam to pass freely to the contents. The bin being made rust-proof, it is not damaged by the steam. The bottoms and rims of the bins are so shaped that the bottom of each basket can fit into the rim of another. The angle-irons forming the bottom to this end turn their hollow sides to the exterior and the angle-irons forming the rim edges turn their hollow sides to the interior; the outer edges having the same size on top and bottom, the bottom iron-angles fit into the opening iron-angles.

Fig. 5 represents an example of using the bins as shelving. These iron-bins may be easily stacked up a height of seven without deflection from vertical alignment. This column of bins forms in this way quite a solid vertical block. The store-room requires no shelves or other fixtures which results in the advantages of:

A very cheap installation, and entire freedom or interchangeability in setting-up of bins in any desired arrangement and last but not least the invention permits of displacement and transposition of the bins to other departments while the room that heretofore served as a store-room may be cleared and used for other purposes. By creating a standard bin for the varieties of yarn, which are used in greater lots (about 50 pounds) 70 to 80% of the piled-up quantities of yarns may be stored in most cases without any shelves.

To prevent a changing or mingling of the different kinds of yarns the lots belonging together can be marked. The quality and quantity of the bin contents can be ascertained at a glance through the open mesh walls.

The bin is big enough to hold as many cops as belong to a whole or half a selfactordoffing yet is not too big to be carried easily by women and is of such a shape as can be easily pushed into the usual steam-apparatus.

The subdivision into smaller baskets: $\frac{1}{2}$ and $\frac{1}{4}$, Fig. 6, for smaller lots of a few pounds renders possible minute subdivision. These smaller bins may be placed into suitable shelves, as their smaller bases hardly admit of considerable vertical piling up. A shelf adapted for this purpose is shown in Figs. 8 and 9. Tubes or rods d are fastened vertically in the floor and united together in pairs by iron-angles e . Two iron angles e are arranged in the same height on opposite sides of the tubes or rods and the pairs in such a distance from one another as to receive a bin between them. The iron-angles may rest on loose bolts passing through the tubes or rods d , so as to permit varying the distance of the pairs. In some cases the bins of standard type may be also placed in such shelves instead of being piled one on the other.

The following shows the economical results of the described stiff and transparent bin:

1. A repacking of the bobbins on the way to the loom is no longer necessitated,
2. Any loss of yarn by damage is excluded,
3. The utmost facility of inspection and utilization of space in store rooms are accomplished,
4. The number of operators is reduced to a minimum,
5. Retaring of empty bins (tara) is no longer required; whereas it is daily necessary

with wooden boxes, willow-baskets etc. since they take up humidity and wear out,

6. The bin is cheap, and durable requiring no repair for years, as distinguished from wooden boxes.

I claim:

1. An improved bin for bobbins, cops and the like comprising a rectangular foraminated metallic box having a bottom, side walls and end walls, said box having a frame about its bottom and a frame about its rim, said frames being complementary so that the bins may be stacked, the outer parts of said frames being encircled by the side wall of the box so that the sides of the stack form walls without projections.

2. An improved bin for bobbins, cops and the like having a wire mesh bottom, an angle bar frame about said bottom, a wire mesh side and end wall structure and an angle bar frame at the rim of said box, the angle frame at the bottom and at the rim being turned in opposite directions whereby the bins may be readily stacked.

3. A bin for bobbins and cops having a wire mesh bottom, an angle bar frame supporting said bottom, said frame having its corner uppermost and innermost, wire mesh side and end walls extending upward from the upper edge of said angle bar frame, said bin having an angle bar rim with its corner at the respective side and end walls and its horizontal web extending inward therefrom; whereby said bins may be stacked one above the other with the angle bar frames of superposed bins nested.

In testimony whereof I have affixed my signature.

GEORG SCHLESINGER.