

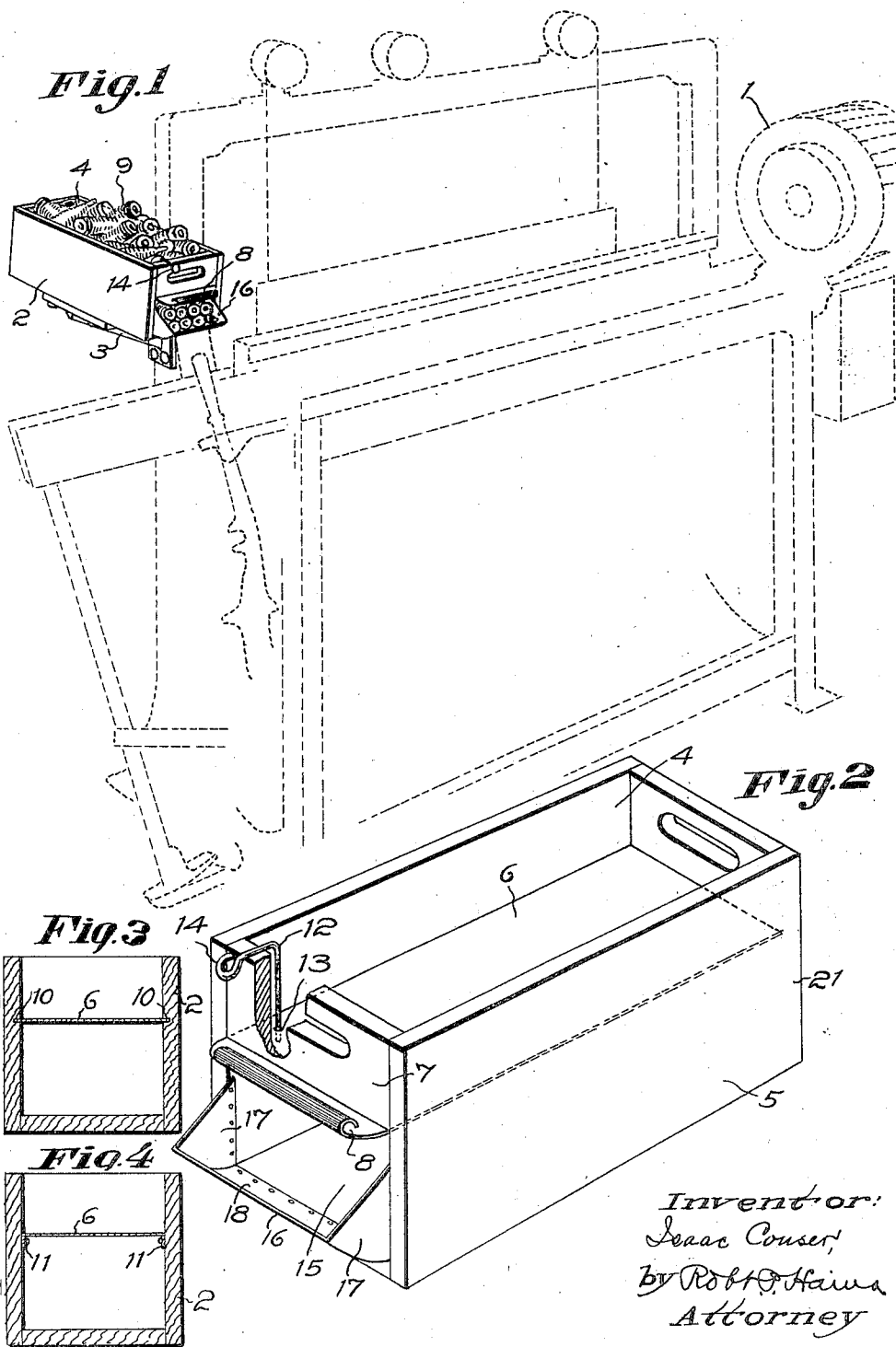
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BOBBIN SUPPLY BOX

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## UNITED STATES PATENT OFFICE.

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## BOBBIN SUPPLY BOX.

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*To all whom it may concern:*

Be it known that I, ISAAC COUSER, a citizen of the United States, residing at Manchester, in the county of Hillsboro and State of New Hampshire, have invented an Improvement in Bobbin Supply Boxes, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention relates to bobbin supply boxes for filling replenishing looms.

Filling replenishing looms are ordinarily provided with the magazine or hopper at the replenishing side, in which filled bobbins or carriers are placed from time to time, as occasion requires. These filled bobbins are supplied to the loom by an attendant or boy who dumps a new supply of bobbins on top of those previously in the box. The trouble with this is that the loom attendant takes the top bobbins from the box and places these in the hopper, and then before the supply box is entirely emptied, the supply attendant dumps a lot more bobbins in the box, with the result that the filled bobbins in the lower part of the box may remain there for an indefinite length of time, and the yarn on them becomes soiled and injured, especially where different kinds or colors of filling are used from time to time. One of the objects of the present invention is to provide a bobbin supply box so constructed and arranged that the filled bobbins or carriers placed in the supply box by the supply attendant will be progressively taken from the bottom of the supplied bobbins, with the result that the lowermost bobbins placed in the supply box are delivered for transfer to the replenishing magazine, and none of the filled bobbins remain in the supply box to have the yarn soiled or injured.

In carrying this purpose of the invention into practical effect, the bobbin supply box is conveniently supported upon the loom frame, preferably at the side remote from the filling replenishing hopper, and is provided with a division wall which conveniently separates the box into a receiving compartment and a delivery compartment, into the latter of which the bobbins are passed when the division wall is moved to establish communication between the two compartments. The delivery compartment is provided with a delivery opening, and

where the bobbin supply box is mounted in an inclined position, as is preferably the case, the delivery opening is properly guarded to prevent the bobbins in the delivery compartment from dropping therefrom.

In the drawings:—

Figure 1 is a diagrammatic view of the front of a filling replenishing loom, showing the bobbin supply box of the present invention supported by the loom frame;

Fig. 2 is a perspective view of the bobbin supply box on an enlarged scale;

Fig. 3 is a section of the supply box showing one means for movably supporting the division wall; and

Fig. 4 is a similar cross section, showing a modified form of means for supporting the division wall.

In the drawings: The loom frame is of a character to provide a desired support for the operating parts, and has mounted at one side thereof the filling replenishing magazine 1 for the supply of bobbins to the filling replenishing mechanism, as usual. In the preferred arrangement of parts the bobbin supply box is supported on the loom frame in convenient position for the loom attendant to take filled bobbins therefrom and transfer them manually to the filling replenishing magazine. In the present instance, the bobbin supply box 2 is shown as mounted at the side of the loom remote from the replenishing magazine by means of a bracket 3 and is preferably, though not necessarily, inclined frontwardly in order that filled bobbins therein may gravitate to the delivery opening of the delivery compartment.

The bobbin supply box 2 is divided into a receiving compartment 4 and a delivery compartment 5 by means of a division wall or plate 6, which is so supported in the bobbin supply box as to normally separate the receiving and delivery compartments.

The division wall 6 as shown, is formed as a metal plate, one end of which extends beyond the front end portion 7 of the supply box, and is provided with a hand grip or handle 8, whereby the division wall or plate 6 may be withdrawn manually in order to establish communication between the receiving and delivery compartments, that the filled bobbins 9 placed in the receiving compartment may pass into the delivery compartment.

The division wall or plate 6 may be supported in the supply box for movement from its operative position dividing the two compartments by means of grooves 10 formed in the walls of the supply box, the construction being such that by manual frontward pull on the grip or handle 8, the division wall may be moved from its operative position to allow the lowermost bobbins in the receiving compartment to gravitate in to the delivery compartment.

In Fig. 4 a modified form of means for supporting the division wall 6 is shown, comprising supporting strips 11 secured to the inner surface of the side walls of the box.

Inasmuch as the bobbin supply box is preferably supported in a frontwardly-inclined position, it is desirable in some cases that a lock be provided to prevent movement of the division wall from its operative position separating the two compartments. As shown in the present instance, the lock comprises a member 12 having a downwardly-extending end portion adapted to engage an opening 13 in the division wall, and as a convenient means for tripping the lock it is turned frontwardly at its upper portion into a hand-piece 14, the construction being such that upon upward movement of the hand-piece 14, the lock will be withdrawn from its engagement with the opening 13 of the division wall, and thereupon free the division wall for movement from its operative position.

The filled bobbins which are delivered to the delivery compartment 5 are taken therefrom by the loom attendant or other operative, and placed in the replenishing magazine, and for this purpose the delivery compartment is provided with a delivery opening 15 which is shown as formed in the end portion of the delivery compartment. Since the supply box is preferably inclined, and even in cases where it may not be so inclined, the exit, or delivery opening 15 is provided with a guard 16 which prevents the filled bobbins from accidentally dropping out of the delivery opening. As shown, the guard 16 comprises the side members 17 secured to the side walls of the delivery opening, and a lower portion 18 which is curved upwardly, as shown. The guard 16 may be conveniently formed of metal, though this is not essential, and in such case it may be bent from a blank or otherwise formed.

The supply box or other operative dumps a supply of filled bobbins 9 in the receiving compartment 4 when the division wall 6 is in operative position separating the two compartments, and as the occasion requires provides a further supply as the filled bobbins in the receiving compartment become depleted. When the division wall 6 is unlocked and moved from its operative position separating the two compartments, the

lowermost filled bobbins in the receiving compartment 4 pass into the delivery compartment and toward the delivery opening 15, where the guard 16 serves to prevent their accidental discharge, and yet in convenient position to be manually taken therefrom and transferred to the filling replenishing magazine. Thus the filled bobbins are taken from the supply box in substantially the progressive order in which they are delivered to the receiving compartment, so that at no time is there an accumulation of filled bobbins in the supply box which remain there indefinitely to have the filling injured or soiled—an objection which is liable to be reflected in the finished cloth.

What is claimed is:—

1. A bobbin supply box for filling replenishing looms having an upper receiving compartment in which the filled bobbins are placed and a lower delivery compartment from which the filled bobbins are removed and placed in the magazine, a division plate normally separating the two compartments, a lock for locking the division plate in its normal position separating the compartments and movable from its locking position to permit the division plate to be moved at will for dumping filled bobbins from the receiving to the delivery compartment.

2. A bobbin supply box for filling replenishing looms supported on the loom frame at the side remote from the replenishing mechanism, and having a bobbin receiving compartment in which filled bobbins are placed and a delivery compartment provided with a delivery opening from which filled bobbins are manually removed and placed in the replenishing magazine, a division plate normally separating the two compartments and mounted for movement from its position separating the two compartments that filled bobbins in the receiving compartment may be transferred at times to the delivery compartment for removal from the delivery opening and a part extending from the division plate to the outside of the supply box for moving the division plate.

3. A bobbin supply box for filling replenishing looms having an upper receiving compartment in which filled bobbins are placed, and a lower delivery compartment provided with a delivery exit from which filled bobbins may be removed, a sliding division plate normally separating the box into the two compartments and slidable at will for transferring the lowermost filled bobbins in the receiving compartment to the delivery compartment beneath for removal from the delivery exit.

4. A bobbin supply box for filling replenishing looms having a bobbin receiving compartment in which filled bobbins are placed, a delivery compartment from which the filled bobbins are removed, a division wall

completely separating the receiving and delivery compartments, and means for supporting the division wall for movement from its normal position separating the two compartments that filled bobbins placed in the receiving compartment may be transferred to the delivery compartment for removal.

5. A bobbin supply box for holding filled bobbins to be supplied to the replenishing magazine of filling replenishing looms, comprising, in combination, an upper receiving compartment in which the filled bobbins are placed, a lower delivery compartment from which the filled bobbins are removed for transfer to the magazine, a division plate normally separating the two compartments, and means for supporting the division plate for movement from normal position separating the two compartments that the under filled bobbins in the receiving compartment may be transferred to the delivery compartment for removal to the magazine.

6. A bobbin supply box for filling replenishing looms, having a division wall which normally divides the box into two compartments, into one of which filled bobbins are

placed from a source of supply, means for supporting the division wall in the box for movement from its position separating the two compartments that filled bobbins placed in the receiving compartment may be transferred to the other compartment at will for removal to the replenishing magazine and a hand grip extending from the division wall through a wall of the supply box for moving the division wall.

7. A bobbin supply box for filling replenishing looms, having a division wall separating the box into a receiving and a delivery compartment, the latter of which has a delivery opening, a guard at the delivery opening which prevents bobbins from accidentally passing from the delivery opening and means for movably supporting the division wall in the box that it may be moved from its position separating the two compartments to transfer filled bobbins first placed in the receiving compartment to the delivery compartment for removal through the delivery opening.

In testimony whereof, I have signed my name to this specification.

ISAAC COUSER.