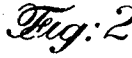
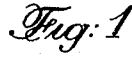


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2 SHEETS—SHEET 1.



26 7a Inventor
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 CLEARER COVER.
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1,002,478.

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2 SHEETS—SHEET 2.

Fig: 6

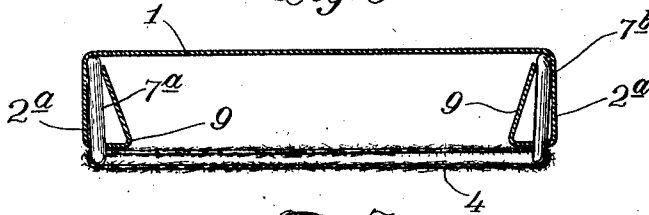


Fig: 7

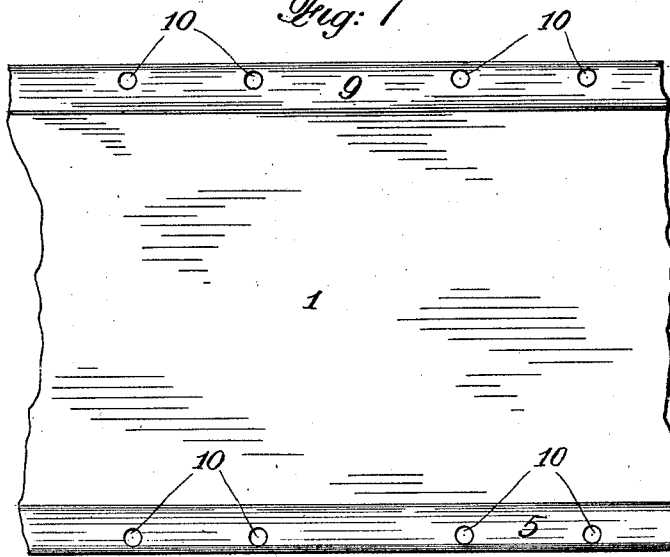


Fig: 8

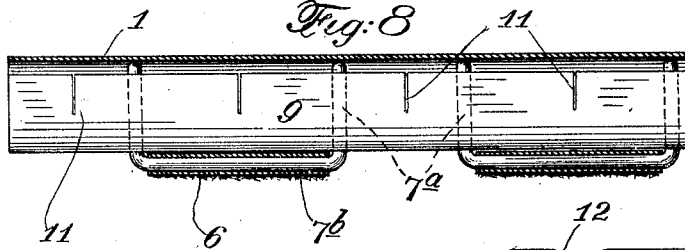
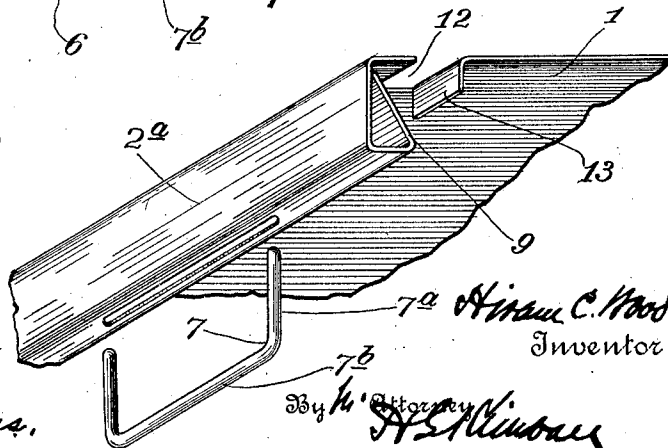


Fig: 9



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UNITED STATES PATENT OFFICE.

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CLEARER-COVER.

1,002,478.

Specification of Letters Patent.

Patented Sept. 5, 1911.

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To all whom it may concern:

Be it known that I, HIRAM C. WOOD, a citizen of the United States, residing in Whitinsville, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Clearer-Covers for Spinning-Frames, of which the following is a true specification as required by statute.

10 This invention is an improved type of metallic clearer-cover for the drawing or delivery rolls of spinning or twisting machines, and consists in a sheet-metal clearer-cover having provisions for the individual and removable support of a plurality of flannel-holders upon or over which the clearer flannels are stretched.

As heretofore made, all the clearer flannels of the metallic cover have been stretched or supported on two rods held in ears formed on the opposite side flanges of the cover, the said rods being generally equal in length to the length of the latter. Replacement or renewal of one of the flannels in such covers necessitates the removal of the common support of all the flannels, resulting in much trouble and loss of time, which it is the object of the present invention to avoid.

It is a further and special object of the invention to provide a clearer-cover wherein the flannels can be readily placed and held under tension, in which condition they are best adapted to perform their required functions as is well known.

35 To this end the present invention consists in the structure, arrangement and coöperation of parts as fully described below, and as exemplified in the accompanying drawings, wherein—

40 Figure 1 is a bottom plan view of an end portion of a metallic clearer-cover embodying this invention. Fig. 2 a perspective view with parts broken away showing the same cover with one of the flannels and its two holders removed; Fig. 3 is a cross-section of the clearer-cover indicating the manner of inserting the flannel-holders, whereby the flannel is put under tension; Fig. 4 is an enlarged detail of the marginal portion of the cover shown in the foregoing figures; Fig. 5 is a similar view of a modified form; Figs. 6 and 7 are respectively a cross-sectional view and a part bottom plan view of a modified form of the invention; Fig. 8 is a longitudinal section through the modification of

Fig. 7, showing a development thereof; and Fig. 9 is a perspective detail of a modified style of recess, as will be later described.

In the foregoing drawings, the clearer-cover only is shown, inasmuch as the structure of the spinning frame upon which it is adapted for use forms no part of this invention and is well known to those skilled in this art. The cover is adapted to rest, as usual, upon the tops of the top rolls of the spinning or twisting frame, its purpose being to preserve such rolls in a clean condition, free from oil or other form of dirt likely to interfere with the action of the rolls or to contaminate the yarn or thread passing through them, as is also well understood.

The cover consists of a sheet metal plate formed with a substantially flat body portion 1, and two depending longitudinal marginal portions, designated generally by 2, in which there is provided a plurality of recesses 3 opening downwardly, as shown more clearly in Fig. 2. The depending marginal portion comprises, in the form of Figs 1 to 4 inclusive, a downturned flange 2^a and a rim strip 2^b secured thereto, the recesses 3 referred to being formed by bending or grooving the rim strip 2^b, as indicated at 4.

Both sides of the cover are shown as formed exactly alike, which is a matter of preference, and the rim strips are secured by rivets 5 to the inside of both side flanges, so that they are thus concealed from view. The rim strips, moreover, are also and preferably continuous strips extending the full length of the clearer cover, although they can be made as individual, short, plate-sections if desired. Each of the several flannels 6, which may be of the usual belt or loop form heretofore employed, is carried by a pair of U-shaped clips or holders 7, one of which is placed within the loop of flannel at each end thereof, as shown in Fig. 2. The portion or head bar which is embraced by the flannel is marked 7^b and the two prongs or legs thereof 7^a. With the flannel thus located on the head-bars, the prongs 7^a are pushed into the openings or recesses 3, into which they enter until their extremities strike the abutment formed by the under surface of the body portion 1. In this position, all their several head-bars will occupy the same plane with relation to the body portion as will also the clearer

flannels stretched upon them. This mode of mounting the flannel holders possesses an advantage in respect of the tension possible to be put upon the flannels, which, so far as I am aware, is not attainable in any of the existing forms of clearer-covers, either metal or wood. By placing one of the holders in its recess or recesses and then introducing the ends of the opposite holder into its recesses as indicated by the diagram in Fig. 3, and then forcing the latter holder into the said recesses, the head-bar 7^b thereof becomes swung or drawn into alinement with the recesses and thereby stretches or distends the flannel accordingly, so that when the holder is pressed fully home the flannel will be in a desirable state of tension. It will be readily perceived from an inspection of the action just described, that the manner of providing the cover with the recesses 3, to receive the holder is not of material consequence to the attainment of the flannel stretching result, and it is, therefore, to be understood that any suitable means of producing the lateral movement of the head-bar of the holder while pushing it to its seated position, will fall within this invention. For instance, it would be possible, though less convenient of manufacture, to provide the recesses on the holder and the prongs or prong members on the clearer-cover,—a mere reversal of the arrangement above described. In either case the cover will provide seats for the holders whereby the pushing or sliding of the latter to place will produce stretching of the flannel. The friction necessary for sustaining the flannel holders may be provided either by the resilience of the holder itself, which in the present instance is made of wire, or by the resilience of the rim member 2^a.

In Figs. 1 to 4, the prongs of the holder 7^a are slightly flared, as indicated by the full lines, and are adapted to be contracted to the dotted line position when inserted in the holes, so as to be thereby held by the friction resulting from the pressure exerted by them upon the walls of the holes. In Fig. 5, however, the rim member, there marked 8, is made of a resilient strip or strips of steel, which is adapted to provide the necessary resilience, the rivets thereof being located in the spaces between the recesses for the holders. In this form the clip or holder may be non-resilient, but otherwise the action of the device will be the same.

In Figs. 6 and 7, the rim member, instead of being riveted to the side flange 2^a as above described, is integral therewith as shown at 9, and is provided with a series of downwardly opening holes 10 or recesses in which the prongs of the holders are adapted to be contained as before. The free edge of this rim member may be, and preferably is, bent over toward the side flange 2^a, where

it is adapted to bear more or less resiliently upon the inserted holder prongs. To increase the resilience of this rim member, it may be slotted at intervals, as shown at 11, in Fig. 8, but of course the friction can be obtained by the resilience of the wire holder if desired, the same as in the case of Fig. 1. In other respects the advantages of this modified form of the invention will be seen to be the same as in the figures already described, but particularly in respect of the facilities for stretching the flannels tightly across the clearer-cover by the act of inserting and pressing or sliding the holders into their recesses.

The modification shown in Fig. 9 consists in forming but a single oblong slot or recess in the rim member 9 to accommodate each holder instead of having two separate holes for this purpose. Convenience in manufacture and greater resilience in the inturned edge of the rim member are the advantages of this form, as will be readily understood. The clearer-cover as thus constructed and combined with the flannel holders may be supported on the back or cap-bars of the roll stand of the spinning frame in any suitable or convenient, removable manner. In the present instance, the ends of the cover are formed with slots 12 and downturned tabs 13 which form a bearing adapted to engage upright horns (not shown) carried by the cap-bar of the drawing rolls, as will be readily understood.

I claim:

1. A clearer-cover for spinning frames, comprising a sheet metallic body portion and depending longitudinal marginal portions provided with recesses which open transversely to the plane of the flannels and a plurality of flannel-holders removably sustained in said recesses and having head-bars on which the flannels are stretched.

2. A clearer-cover for spinning frames comprising a sheet metal body portion provided with depending side flanges, a plurality of flannel-holders having head-bars on which the flannels are stretched and a plate or strip extending adjacent said side flanges forming therewith a plurality of recesses which open transversely to the plane of the flannels and serving to sustain the said holders in position on the clearer cover.

3. A clearer-cover for spinning machines comprising a body portion having metallic marginal portions provided with a series of seats for the flannel-holders, in combination with such flannel-holders formed to engage the said seats by sliding thereon transversely to the plane of the said body portion, and flannels on said holders adapted to be stretched by the seating thereof.

4. A clearer-cover for spinning machines, comprising a body portion having marginal portions provided with a series of metallic

seats thereon, and a corresponding series of holders adapted to engage and be held by said seats, the said holders being each removable independently of the others and
5 provided with means for supporting one end of a clearer-flannel and adapted to stretch the same by insertion in its seat.

5. A clearer cover comprising a body portion provided with a marginal portion having downwardly opening, metallic, seating-recesses therein, in combination with a
10 plurality of U-shaped flannel-holders with their prong members adapted to be thrust into said recesses, to hold the flannels to
15 the cover.

6. A clearer cover having metallic seats thereon, a flannel holder comprising a part to hold the flannel end and two separate

parts to engage the seat, these said parts being sprung from their normal seat engaging positions and being thereby adapted
20 to produce friction upon the seating means.

7. A clearer cover formed of sheet metal and having downturned marginal portions formed with a series of parallel seating
25 recesses extending upwardly from the lower edge of said marginal portions, and flannel holders removably seated in said recesses.

In testimony whereof, I have signed this specification in the presence of two witnesses.
30

HIRAM C. WOOD.

Witnesses:

HARMON O. NELSON,
OSCAR L. OWEN.

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