(No Model.)

R. T. BROWN & W. ORR.

FIRE PROOF MATERIAL FOR DROP CURTAINS.

No. 387,137. Patented July 31, 1888.

Fig 1

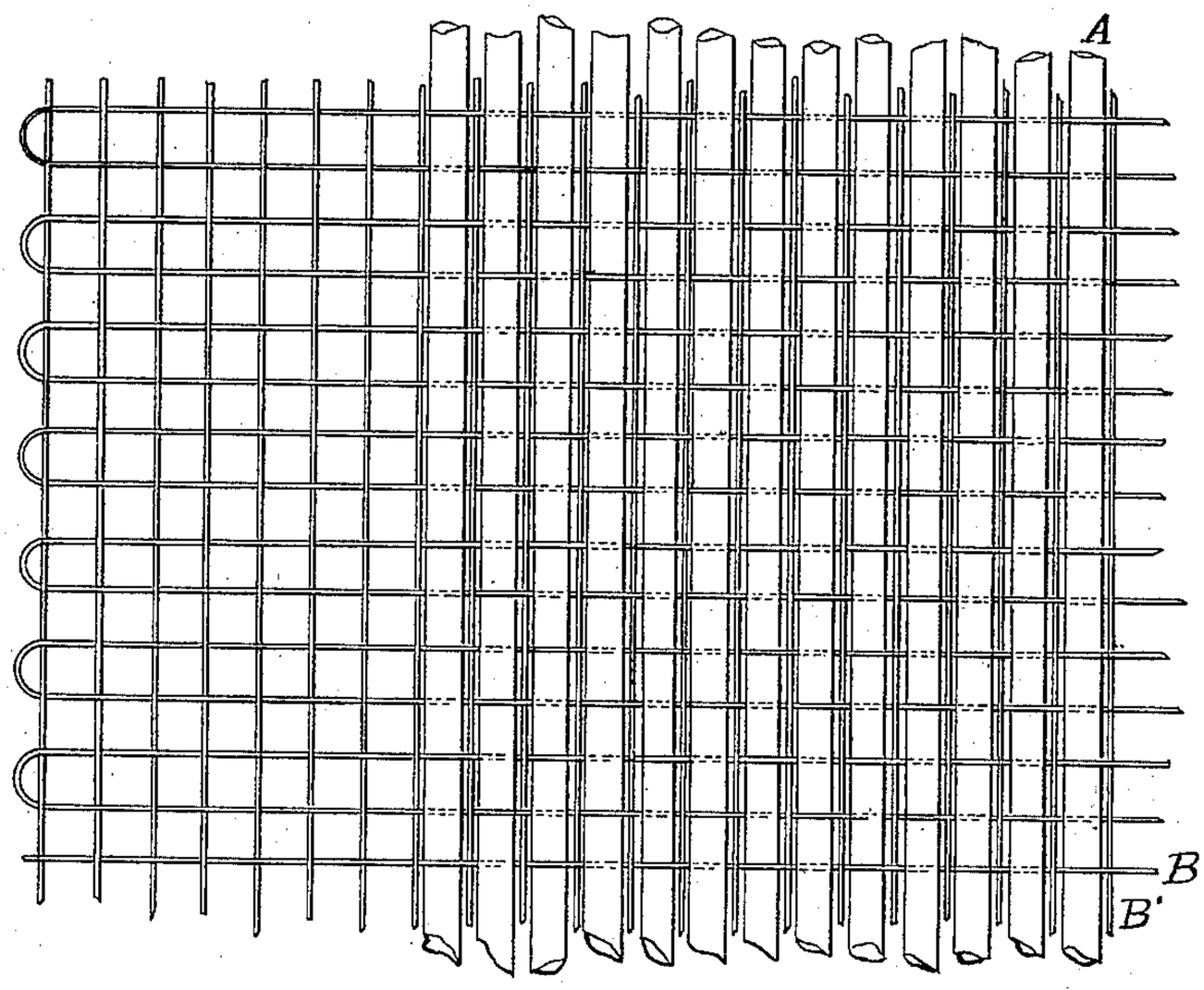
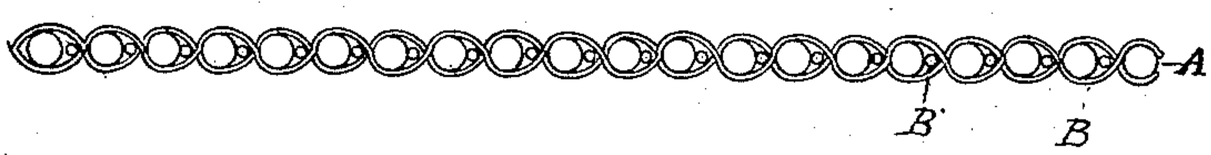


Fig 2



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UNITED STATES PATENT OFFICE.

ROBERT T. BROWN, OF BOSTON, MASSACHUSETTS, AND WILLIAM ORR, OF TRENTON, NEW JERSEY, ASSIGNORS TO THE NEW JERSEY WIRE CLOTH COMPANY, OF TRENTON, NEW JERSEY.

FIRE-PROOF MATERIAL FOR DROP-CURTAINS.

SPECIFICATION forming part of Letters Patent No. 387,137, dated July 31, 1888.

Application filed October 29, 1887. Serial No. 253,794. (No model.)

To all whom it may concern:

Be it known that we, ROBERT T. BROWN, of Boston, in the county of Suffolk and State of Massachusetts, and WILLIAM ORR, of Trenton, in the county of Mercer and State of New Jersey, have invented a new and useful combination called Fire-Proof Material for Drop-Curtains and Scenery, more especially designed for theaters and other places of public amusement, and which we fully describe in the following specification.

The object of our invention is to produce a material for drop-curtains and scenery in theaters and other places of amusement which will be absolutely fire-proof, and which will also be capable of resisting great strain and hard usage without injury.

The material heretofore used has either been too frail to withstand the rough usage it had to bear, and too expensive to be used generally, or it has been of such a composition that, although perfectly fire-proof as far as resisting a light flame, as of a gas-jet, the material of which it was composed separated when roughly handled or when exposed to intense heat, and the whole became useless as a protection against fire.

Our method of constructing the material is different from any heretofore shown; and it consists in the combination of wire and asbestus cord or fiber interwoven in the fabric, or of wire and cord or strand composed of cotton, linen, wool, or any like substance, and made non-inflammable by being treated for that purpose, either before or after it is woven in with the wire, with a bath of tungstate of soda or some of the sulphates.

The warp of this new article of manufacture may be composed entirely of wire, and the filling or part of the fabric laid in with the shuttle may be entirely of asbestus, or the warp may be of asbestus and the filling of wire, or each alternate thread in warp or filling or in both may be of wire and asbestus, or of wire and cords or strands of cotton, linen, wool, or like substance treated as above described, so as to be rendered non-inflammable. The way we prefer to make it, however, more especially for drop-curtains, is to have a wire and a cord or strand of asbestus alternate each other in the warp, (the asbestus cord should be of sufficient size to fill the meshes entirely, either when woven or after being pressed between rollers to flatten the fabric,) and to use wire entirely in the filling. This method gives us not only the strength of the wire to support the curtain or scenery, but also the strength of the asbestus cord, which in this case would run from top to bottom, and which would of itself have strength enough to support the weight of either the curtain or scenery, and in case of a fire causing heat intense enough to melt the wire would remain intact and prevent the spread of the flames.

It is necessary that the drop-curtain should be absolutely fire-proof, and this method of construction renders it so. The scenery, hangings, wings, and other parts necessary in the make-up of the stage need not be absolutely indestructible by fire, but should be non-inflammable. In other words, combustion should be so slow that the material could only waste away by becoming charred, but could produce no flame. Of course asbestus fiber would be better for this purpose than any other material, but its high cost would prevent its use unless compelled by statute. By the use of cheaper fibers woven into the meshes of the wire-cloth and rendered non-inflammable by the treatment herein described we obtain a material but little, if any, more expensive than a good quality of the inflammable material now used, and at the same time it would present a better appearance. Being so much stiffened by the wire part it would have more the appearance of the objects represented and would not shake and vibrate with every breath of air or touch. To give the material the surface required to paint on, we pass it between heavy rollers, which flattens the asbestus or other soft fiber woven into the meshes of the wire, and also spreads it out so as to cover the wire of which the other part of the material is composed, thus aiding materially in the protection of the wire against the action of fire.

In the drawings accompanying this specification, A represents the asbestus or fire-proofed cord woven between the warp and filling-wires B and B′ and before it has passed between the rollers to flatten and spread it into proper shape upon which to paint.

Figure 1 is a plan or face view of the ma-

terial, a part of which shows only the wire part thereof, and a part the fire-proof filling A, between the meshes of the warp and filling-wires B and B′. Fig. 2 is a section of same, showing alternately a strand of wire, B′, and of asbestus or other fire-proofed material, A, in the warp and the filling-wires B, crossing over and under them to hold them in place.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A fire-proof curtain and scenery material for theaters and other places of amusement, consisting of interwoven strands of wire and fire-proof cord or fiber, substantially as described.

2. The combination, in the same fabric, of strands of wire and strands of fire-poof cord or fiber having the cord or fiber so woven in that the spaces between the wires are completely filled with the material, substantially as described, and for the purpose set forth.

3. The combination of fire-proofed cord or strand and wire woven together and forming a fire-proof fabric, the soft fibrous part of which can be pressed out and made to cover the wire and also form a flat surface upon which to paint the scenery, substantially as described.

4. The combination, in the same fabric, of strands of wire and of strands of fire-proofed material so woven together that the whole will form a fabric which will be opaque and which can be used for fire-proof curtains and scenery, substantially as described.

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