No. 767,922. PATENTED AUG. 16, 1904.

M. BENSINGER.

COMPOUND BILLIARD CLOTH.

APPLICATION FILED MAR. 24, 1904.

NO MODEL.

Fig. 1.

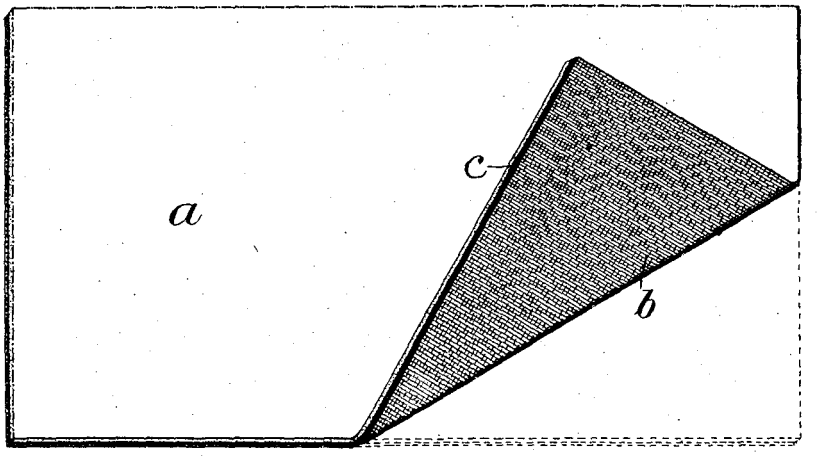



Fig. 2.

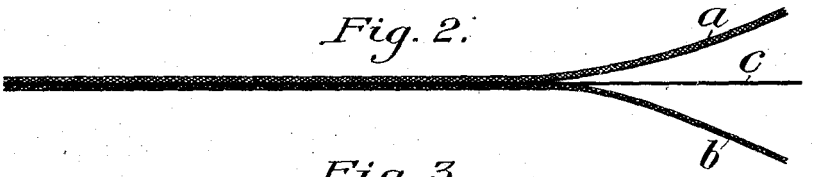
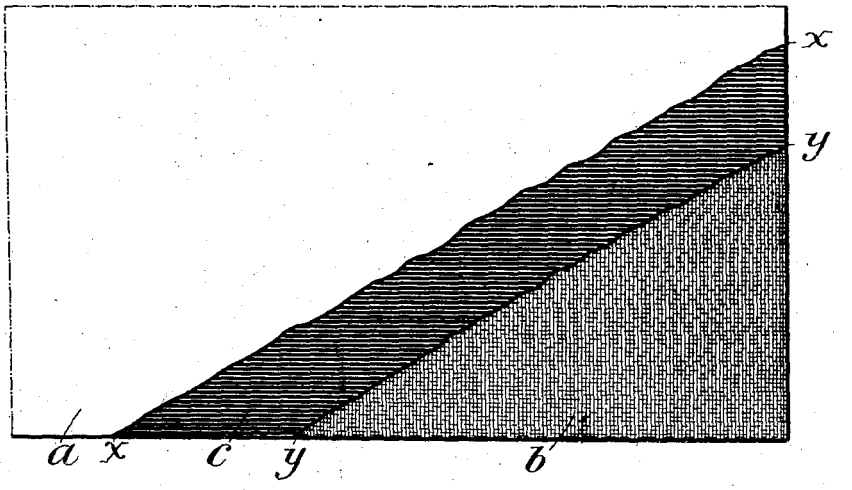



Fig. 3.




Witnesses:

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Att'y.

No. 767,922. Patented August 16, 1904.

# UNITED STATES PATENT OFFICE.

MOSES BENSINGER, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE BRUNSWICK-BALKE-COLLENDER COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF OHIO.

## COMPOUND BILLIARD-CLOTH.

SPECIFICATION forming part of Letters Patent No. 767,922, dated August 16, 1904.

Application filed March 24, 1904. Serial No. 199,784. (No specimens.)

*To all whom it may concern:*

Be it known that I, MOSES BENSINGER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Compound Billiard-Cloth, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form part of this specification.

As is well understood by those skilled in the art of making billiard-tables and familiar with their uses, it is most important that the playing-surface (of slate bed) of the table be covered with a cloth of such quality and character so applied to the bed-surface as to constitute the best possible sort of surface for the fine ivory billiard-balls to roll on, while at the same time the bed-covering cloth shall possess in the greatest degree practicable the quality of durability and be such as to withstand to the greatest possible extent the pounding action thereon of the balls both in the making of massé shots and where the balls are caused to contact concussively with the bed-cloth in striking the cushion. It is also very important to have the bed-covering cloth such that chalk-dust, &c., cannot sift through and collect between it and the slate bed-surface in such a manner as to impair the evenness of the playing-surface, thus undesirably affecting the true rolling thereon of the balls. With these well-known necessary features of a desirable billiard-table-bed covering in view it has been sought to gain as far as possible all the desiderata of a perfect bed-covering cloth by the use of a compound cloth composed of the usual green billiard-cloth provided with a backing of some comparatively thin woven fabric of a non-stretchable character united permanently with the green cloth by an intermediate film or layer of some suitable adhesive material—such, for instance, as pure rubber or a rubber compound—operating to perfectly unite the upper green cloth with the nether non-stretchable woven fabric and serving at the same time to prevent the passage through the covering-cloth (and any accumulation thereof beneath the cloth) of any chalk-dust or other fine dirt particles, and compound billiard-cloths of this character have been made and used to some extent; but such compound table-covering comprises the defects or objections of lacking the fine and desirable qualities as a playing-surface for the balls that are possessed by the simple green cloth either disconnected from any separately-employed backing of woven fabric (first applied to the slate bed-surface) or used alone or nakedly on the slate bed-surface, because of such green cloth so used being put onto the table-bed in a taut or stretched condition, that operates to cause the ivory balls to roll thereon faster and better or more readily.

I propose to produce for use a compound billiard-cloth possessing the good qualities of compound cloths heretofore made—*i. e.*, capacity to prevent the passing through the table-covering of chalk and other dust, capacity to withstand the concussive action of the balls, and great durability—while at the same time possessing the important quality of the simple green cloth stretched taut on the slate surface to effectuate the best possible rolling action of the balls on the playing-surface of the table, and I produce such a table-covering by permanently combining with the usual green billiard-cloth a backing of a stretchable or elastic woven fabric, such preferably known to the trade or in the market as "stockinet," through the medium of an interposed film of suitable adhesive material—such, for instance, as a rubber compound.

To enable those skilled in the art to make and use a billiard-table cloth embodying my improvement, I will now more fully explain the latter by reference to the accompanying drawings, in which—

Figure 1 is a perspective view of a small piece of one of my improved cloths having the several thicknesses thereof drawn of a somewhat exaggerated thickness in order to better illustrate visually my invention. Fig. 2 is a cross-sectional illustrative view of the same, showing partially separated or stripped apart the three layers of material which

united constitute the compound cloth. Fig. 3 shows the sample with the upper two layers removed to the line *y y* and the green cloth removed to the line *x x*.

In the views the same part will be found designated by the same letter of reference.

*a* represents the usual green billiard-cloth.

*b* is a backing composed of stockinet, and *c* represents the intermediate film or layer of compound rubber or other suitably adhesive substance which operates to permanently unite the green cloth *a* with the stretchable or elastic woven fabric *b* and which also serves as a preventive to the passage of any dirt or dust or chalk-dust through the cloth covering of the table for lodgment or accumulation beneath the green cloth or table-covering, with the ill effects of any such collection of dirt or dust beneath the cloth.

To make or produce my improved compound cloth, I simply apply to those surfaces of the green cloth *a* and the textile fabric *b* that are to be united, either in solution or semisolution, some suitably adhesive and elastic substance—such, for instance, as rubber, gutta-percha, or a rubber compound—and then placing the green cloth *a* and the backing fabric *b* in juxtaposition securely and smoothly press them together either in a press or by passage of the two fabrics between calendering-rolls in the manner familiar to those skilled in the manufacture of rubber goods made of compounded fabrics united by means of an intermediate film or layer of such rubber compound as is usually employed in the manufacture of such goods.

The application to the surfaces of the woven fabric to be united of the rubber solution or other uniting material may be effectuated by hand with a brush, or the compound to be applied may be put on by a spreader or "spreading-machine," such as commonly used for such purpose in rubber-goods factories, and if found expedient in lieu of coating the prospective adjacent surfaces of the fabrics *a* and *b* with a solution or spreadable compound of some suitable cementing material impervious to dust and dirt a very thin layer or film of suitably-prepared rubber may be laid between the green cloth *a* and the stockinet *b* and the three layers of, respectively, billiard-cloth, fine rubber, (or rubber compound,) and stockinet (or other elastic or stretchable woven backing) then united by passage between rolls (preferably heated) or in any other known practicable manner.

If desired or found to be expedient, the united parts or materials may be subjected to a suitable vulcanizing process of the uniting intermediate layer *c* to render the finished article firmer or somewhat harder, while at the same time not materially detractive of the stretchable quality of the compound cloth.

In the use of my improved billiard-table-bed covering the cloth is put onto the table by the "setter-up" in the usual manner of putting on the simple green cloth—viz., by thoroughly stretching it over the slate bed and tacking it to the wooden stab-frames or framework of the bed, so that when thus securely fastened on the green cloth will be in the taut condition, which in the use of this green cloth unattached to or compounded with any backing-cloth has been found to give the most satisfactory results with reference to the fast and true rolling on the playing-surface of the billiard-table of the billiard-balls.

It will be seen that by reason of the backing fabric *b*, which operates (as in the case of a canvas or cotton-cloth backing heretofore used) to "cushion" the concussive action of the balls, and thus render the table-covering more durable, being stretchable the compound cloth can be stretched on the table-bed or tacked on taut, while at the same time the compound cloth, like those heretofore made, but non-stretchable, prevents the passage through it of dust and dirt.

I have so far used, as described, for the stretchable woven backing element stockinet and have found this to perfectly serve the purposes of my invention; but in practicing the latter some other fabric possessing the requisite qualities may of course be employed, the only indispensable quality being a sufficiency of elasticity to permit the necessary usual stretching of the green cloth in applying it to the table-bed.

What I claim as new, and desire to secure by Letters Patent, is—

A compound billiard-table-bed covering composed of the usual green cloth; a textile-fabric backing, about as elastic as the green cloth; and an intermediate uniting substance; all substantially as and for the purposes hereinbefore set forth.

In witness whereof I have hereunto set my hand this 16th day of March, 1904.

MOSES BENSINGER.

In presence of—
H. F. DAVENPORT,
A. L. GREENBERG.