(No Model.)

H. H. FORSYTH, Jr.

BEATER FOR RAILWAY CAR SEATS.

No. 500,059. Patented June 20, 1893.

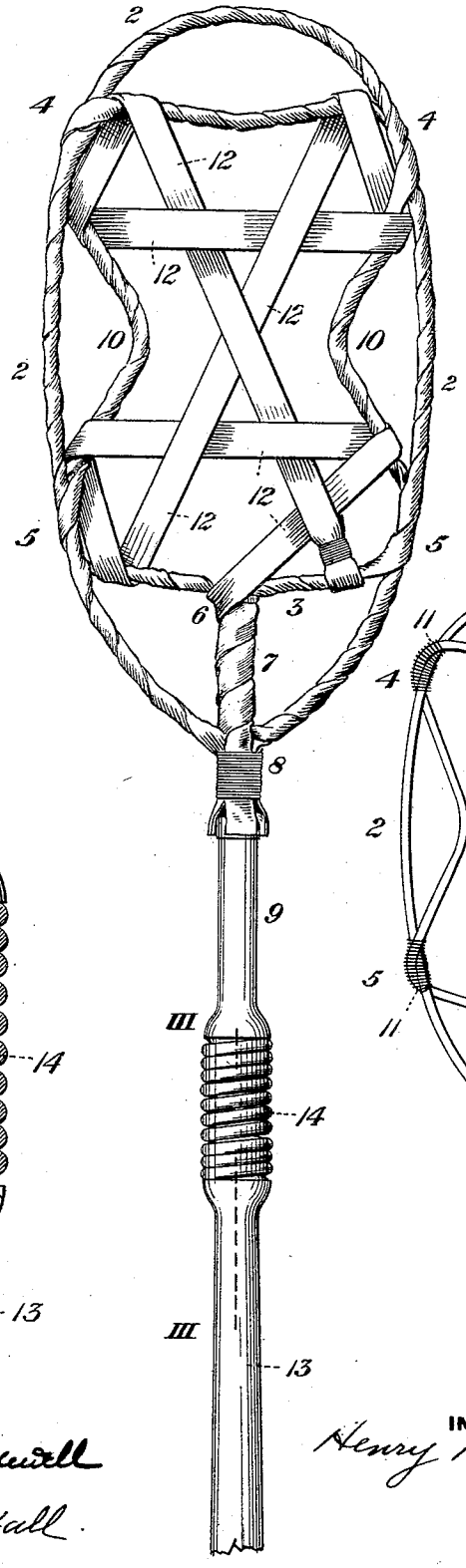

Fig. 1.

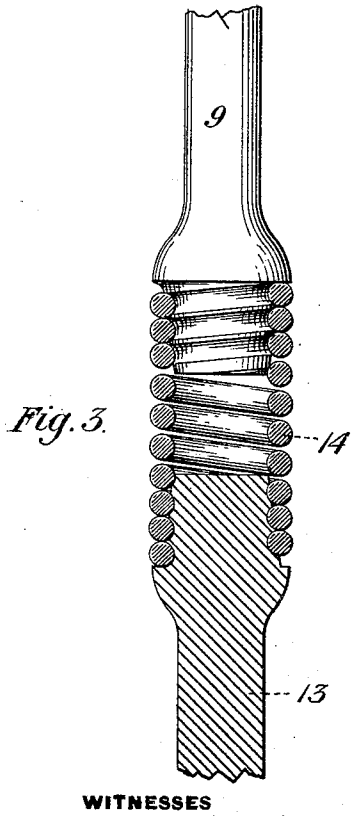

Fig. 3.

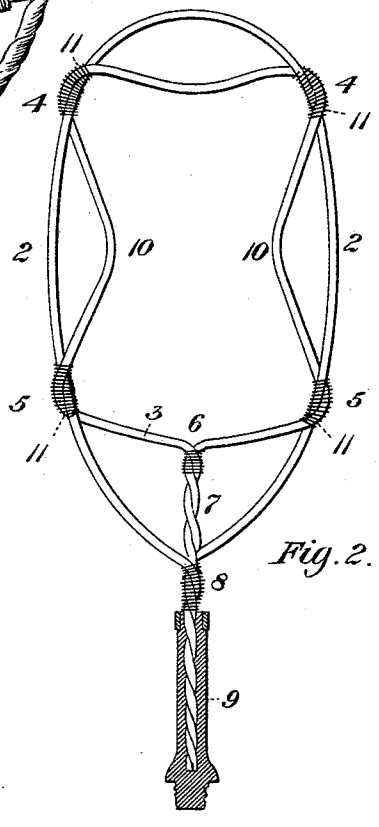

Fig. 2.

WITNESSES

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HENRY H. FORSYTH, JR., OF CHICAGO, ILLINOIS.

BEATER FOR RAILWAY-CAR SEATS.

SPECIFICATION forming part of Letters Patent No. 500,059, dated June 20, 1893.

Application filed March 8, 1892. Serial No. 424,126. (No model.)

To all whom it may concern:

Be it known that I, HENRY H. FORSYTH, Jr., of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Beaters for Railway-Car Seats, &c., of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 shows in plan view a finished beater embodying the most desirable form of my invention. Fig. 2 is a plan view, showing on a smaller scale the beater-head without the flexible covering the place of attachment of the head to the sheath being shown in section. Fig. 3 is a view on a larger scale in section on the line III—III of Fig. 1.

The object of my invention is to provide a beater for railway car seats, &c., which shall avoid the difficulties incident to prior beaters, and shall be strong, durable, efficient and non-destructive in its action on the fabrics beaten thereby.

The items in which my invention consists are summarized in the claims.

The beater which I am about to describe embodies what I consider to be the most desirable form of my invention, but I wish it to be understood that within the scope of the several claims the construction may be modified in various particulars and that each claim is unlimited by qualifications and conditions not expressed therein, but peculiar to other claims. I also disclaim the construction herein described when used for any other purpose than as a beater for fabrics, cushions, &c., since they are especially applicable to such use, and when so used perform peculiar functions. When I use the word "beater" I intend therefore to refer solely to beaters of this description. The word "wire" as used herein is not limited to drawn wire, but includes also metal strips or rods of any manufacture or form.

Referring now to the drawings, in which Fig. 1 shows the metal frame-work of the beater-head enwrapped with leather strips, 2 represents the continuous marginal loop, made preferably of wire and of curved outline. The inner bracing strips consist preferably of a continuous piece of wire 3, 3, looped so as to extend across the marginal loop near the outer end folded around the same at 4, 4, thence extending rearwardly to the back portion of the marginal loop, folded again around it at points 5, 5, and thence extending inwardly to a point 6, where the ends are twisted together at 7. The ends of the wire 3 are twisted together with the ends of the loop 2 to form a shank 8, which is inserted in a sheath 9, preferably consisting of a piece of wood. The sides of the piece 3 are preferably arched inwardly at 10, 10, and at the points of crossing of the parts 2, and 3, I prefer to enwrap them with wire 11, (Fig. 2,) which holds these parts firmly together and prevents possibility of their slipping or displacement. The parts 2 and 3 are enwrapped by a strip of flexible material, preferably leather, and strips 12 extend across the frame thus constituted and afford with the loops a substantial beating surface.

In making the beater-head I prefer to shape first the continuous loop 3 and to twist its ends partially together, then to bend the part 2 into loop form, interweave it through the loop 3, and twist the ends of these two parts together to form the shank 8. The head is then compressed so as to bind the wires together at their crossing points, the binding wires are applied, the loops then wrapped with leather, preferably applied in the form of a strip or ribbon, and the strips 12 applied and attached as shown. The twisted shank 8 is then driven into the hole in the sheath 9, thus completing the beater-head.

The preferable construction of the handle 13 is shown in Figs. 1 and 3. The ends of the handle and the part 9 are constructed to enter a spiral spring 14 made of coiled wire, which is attached directly and independently to the ends of the handle and part 9, preferably by screwing it upon previously formed screw-threaded portions, or these parts may be made of soft wood, so that the spring when screwed on may form or compress a thread. By thus attaching these parts a firm, strong connection is made, and by reason of the compressing action of the inclosing spring, they cannot be separated without the use of special appliances. The rigid attachment of the spring at each end prevents lateral flexure except at the intermediate part of the spring, and affords a remarkably substantial construction, enabling the beater to be used with

excellent effect, a result which would not be accomplished were the spring held otherwise. If the handle or spring of the beater should be damaged in any way, the spring can easily be removed by means of a spanner. The ease of interchanging and replacing the parts afforded by the construction illustrated in the drawings are of material importance.

The advantages of my improvement will be appreciated by those having occasion to use the same. The beater-head is strong, and is so braced and strengthened by the interior wires that it will endure long continued use without breaking. The inner loop or brace, being attached to the marginal loop, braces the same and prevents its elongation and distortion. The beater is of convenient weight, and as all parts of the frame are in substantially the same plane, they act conjointly in beating. The presence of the spring 14, by giving elasticity and flexibility to the beater-head, prevents crystallization of the wires, and thus removes a fruitful cause of breakage. The flexible or soft covering inclosing the wires of the head enables the beater to be used without cutting or injuring the most delicate fabric.

I claim as my invention—

1. A beater for railway car-seats, having a handle and a head which comprises a continuous marginal metal loop, and an inner brace situate substantially in the same plane, attached to the marginal loop, and exerting on the latter a bracing action to resist its elongation, said metal loop and inner brace being twisted together at the end to form a common handle-shank; substantially as described.

2. A beater for railway car-seats, having a handle and a head which comprises a continuous marginal covered metal loop, and an inner bracing loop situate in substantially the same plane with the marginal loop, interwoven therewith, and attached thereto at the points of crossing; substantially as and for the purposes described.

3. A beater for railway car-seats, having a handle and a head which comprises a continuous marginal metal loop, and an inner bracing loop situate in substantially the same plane with the marginal loop, interwoven therewith, and attached thereto at the points of crossing, the ends of the two loops being united to form a shank; substantially as and for the purposes described.

4. A beater for railway car seats, having a head comprising a metal loop, a flexible sheath or covering therefor, and flexible cross strips; substantially as and for the purposes described.

5. A beater-head for railway car seats, &c., comprising a flat open metallic frame work, having a flexible sheathing; substantially as and for the purposes described.

In testimony whereof I have hereunto set my hand this 25th day of February, 1892.

HENRY H. FORSYTH, JR.

In presence of—

R. C. COLE,

THOMAS W. BAKEWELL.