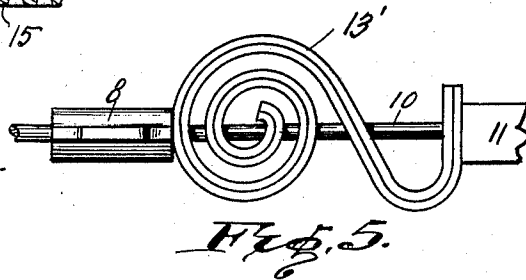
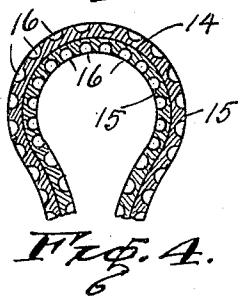
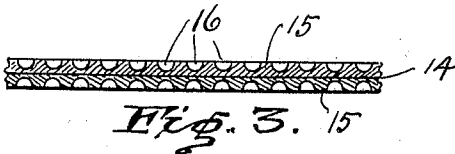
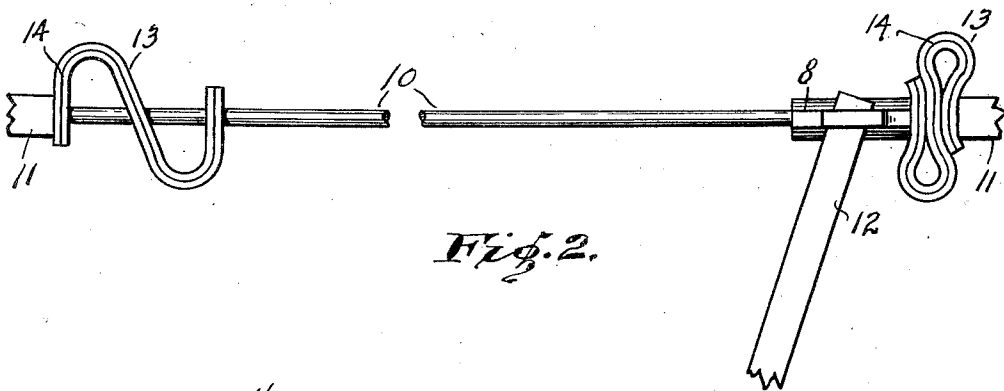
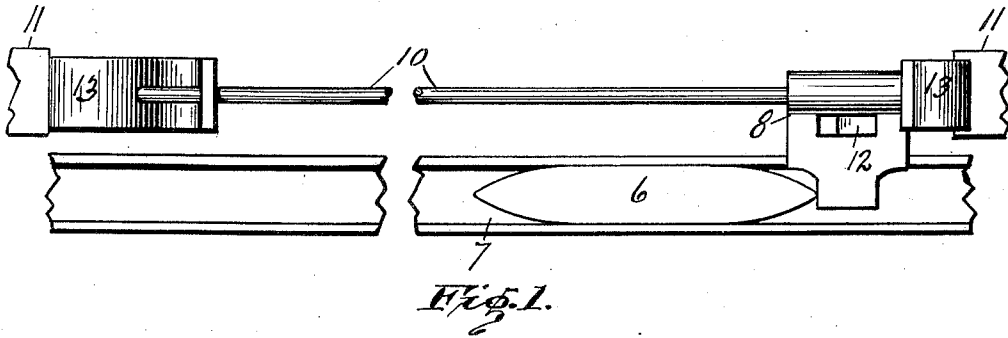


H. M. GUSDORF.
 BUFFER CHECK FOR LOOM PICKERS.
 APPLICATION FILED FEB. 19, 1921.

1,375,841.

Patented Apr. 26, 1921.



Inventor,
 Harold M. Gusdorf
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UNITED STATES PATENT OFFICE.

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BUFFER-CHECK FOR LOOM-PICKERS.

1,375,841.

Specification of Letters Patent.

Patented Apr. 26, 1921.

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To all whom it may concern:

Be it known that I, HAROLD M. GUSDORF, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented new and useful Improvements in Buffer-Checks for Loom-Pickers, of which the following is a specification.

In a box loom the shuttle is thrown back and forth from one shuttle box to another and is arrested at each end of its travel by contact with a device called the picker, which slides on a rod or a pair of parallel rods and has a portion projecting into the path of the shuttle.

The picker, acted on by the picker-stick, affords a yielding resistance to the shuttle, minimizing the blows from and reversing the travel of the latter. Springs of various forms and materials have been suggested and tried as bumper-checks for the picker, but, owing to the rapid and innumerable stresses to which they are subjected, metal springs are lacking in durability and a resilient leather has been found to give the best results. But even the best grades of leather have been comparatively short lived.

The object of this invention is to provide a recoil strap as a bumper-check for loom-pickers which will be of superior resiliency and of great durability and in the solution of this problem the conception toward which I have worked has been a strap of appreciable thickness with a middle longitudinal strong and non-elastic material between layers of elastic material pitted on their outer surfaces with cup-like depressions which distribute the rending strain on the outer curve when the strap is bent and provide room for the compacted material of the inner curve; the elasticity of the material of the walls of the cups tending on both sides to restore the cups to their normal shape.

I accomplish the above, and other objects which will hereinafter appear, by the means shown in the accompanying drawings, in which—

Figure 1 is a top plan view of the shuttle and shuttle box of a loom with a picker and rod, and having a bumper-check made in accordance with the teachings of my invention. Fig. 2 is a front elevation of same with the box and shuttle removed. Fig. 3 is a longitudinal section of my improved material in the flat. Fig. 4 is a like section

of same in bent position showing how the cups are expanded on the outer portion or curve and compressed on the inner curve of the strap, and Fig. 5 is a view in side elevation of a modified application of the strap.

Like characters of reference indicate like parts in the several views of the drawing.

Referring particularly to Fig. 1, the shuttle 6, shuttle-box 7 in which the shuttle is reciprocated, picker 8, picker-rod 10 on which the picker is slidingly mounted, frame-supports 11, 11, for the picker-rod, and the picker-stick 12 entering a slot in the picker and having means (not shown) for moving the stick and through it the picker in a manner to shoot the shuttle to the opposite picker are all old and well known. The drawing shows the picker mounted on a single rod but in some looms there are two parallel rods (not shown). My invention relates to the bumper-check, here shown as the recoil straps 13, 13, which are located at each end of each box.

The preferred form for the assembly of these straps 13 is that of the letter S, with holes formed therein through which the picker-rod 10 passes in the manner shown in Figs. 1 and 2, but this is sometimes modified as shown in Fig. 5. The special construction of these straps constitutes the essential feature of this invention and comprises a middle portion 14 of strong and practically inelastic material, between equal layers of elastic material 15, indented with cups 16. This may be entirely produced by artificial means, as by coating both sides of a woven fabric with elastic rubber or like suitable material having cup-like indentations in each of the elastic surfaces; or out of leather to which similar cups have been imparted. But in practice I have discovered that the best results were obtained by forming the strap from two other straps of pigskin leather with the grain side in and cemented together.

In the operation of my invention a strap formed as above described will bend indefinitely without breaking by the closing together of the walls of the cups on its inner curve and the spreading apart of the walls of the cups on its outer curve, because the inner curve recesses provide room for the compressed material which tries constantly to spring back to normal position while the profusely distributed recesses on the outer

curve distribute the rending strain on that side.

While I have here shown and described my invention as applied to buffers for looms it is obvious that it is valuable for use in many other mechanisms and I therefore do not desire to limit its application, but what I claim is:—

1. A buffer strap having a practically inelastic portion between elastic portions having outer surfaces pitted with cup-like indentations.

2. A buffer-strap having a longitudinal member of the same width as the strap of practically inelastic material and elastic members on each side of said inelastic member united with the latter, said elastic

members having outer surfaces pitted with cup-like indentations.

3. A buffer-strap formed from two units each having one side more elastic than the other the surfaces of the more elastic sides having cup-like indentations and the less elastic sides of the two units being united to each other.

4. A buffer-strap having a practically inelastic longitudinal portion and coextensive elastic portions on each side integral therewith the outer surfaces of the elastic portions being numerously provided with cup-like indentations.

Signed at Indianapolis, Indiana, this the 17 day of February 1921.

HAROLD M. GUSDORF.