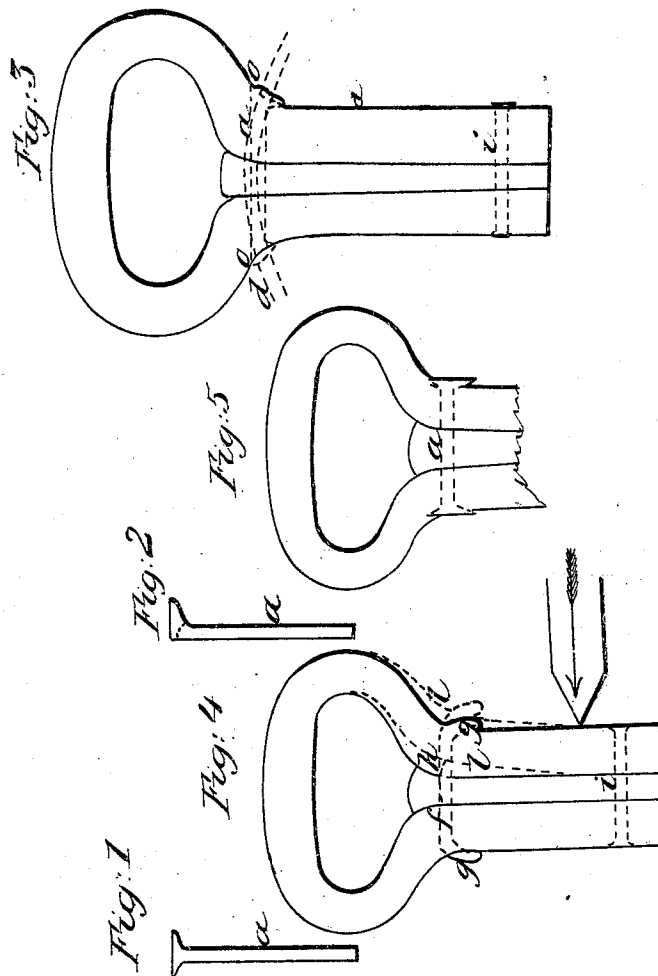


B. A. Holbrook.

Loom Picker.

N^o 4, 514.

Patented May 9, 1846.



UNITED STATES PATENT OFFICE.

BENJAMIN A. HOLBROOK, OF PROVIDENCE, RHODE ISLAND.

RIVETING WEAVERS' PICKERS.

Specification of Letters Patent No. 4,514, dated May 9, 1846.

To all whom it may concern:

Be it known that I, BENJAMIN A. HOLBROOK, of Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in the Method of Fastening Rawhide Pickers Used in Weaving-Looms, and that the following is a full, clear, and exact description of the principle or character which distinguishes it from all other things before known and of the manner of making, constructing, and using the same, reference being had to the accompanying drawings, making part of this specification, in which—
Figure 1 is a representation of the old rivet with the heads projecting all around; Fig. 2, a rivet with the head only on one side; Fig. 3, a picker riveted after my improved manner; Fig. 4, a picker united with the clenched rivet; and Fig. 5, the same united with the old rivet.

The same letters indicate like parts in all the figures.

The great strain to which the pickers of looms, made of raw hide, are subjected in driving the shuttle, renders it indispensable that the parts constituting the stem should be united by rivets passing through the stem at its junction with the bow, and in the curve formed by the bending of the hide at that point. When the common rivet is employed for this purpose, such as is represented at Fig. 1 of the accompanying drawing, it cannot be carried sufficiently into the curve of the bow, and by leaving too much space between it and the bow, the picker soon yields to the strain of the blows and becomes worthless; and besides this, that part of the head toward the bow cuts into the hide at the curve which breaks off small particles of hide that are, by the violence of the blow, scattered in all directions, and by the direction of the blow carried toward and woven in the web. These particles are so small as to escape the attention of the weaver, and in the weaving of cloths intended for printing, the passage of these between the printing rollers destroys their delicate surfaces, which can only be replaced at great cost. To avoid these and other serious inconveniences pickers have been united by substituting for the common rivet

a piece of wire both ends of which are bent over in the manner of a clench, as represented at Fig. 4, where (*f*) is the wire and (*g, g*) the clenched ends; but although this avoids the inconvenience of breaking off small pieces of rawhide, it does not give the requisite strength, for on examination of Fig. 4 of the accompanying drawings, it will be seen that when the picker strikes the shuttle the strain is in the direction of the arrow, and tends to open the stem at (*h*), to assume the shape represented by dotted lines (*l*), and as the upper end of the stem is secured by the rivet (*i*) the only force required to open the picker at the junction of the bow and stem is slightly to bend the clench rivet, which readily and with little force assumes the curve represented by dotted lines, and in so doing breaks off small particles of iron which are woven into the cloth and do more injury even than the small particles of raw hide.

The object of my improvement is to avoid this as well as the other objection, which I effect by making the rivet (*a*) used at the junction of the bow and stem, with heads on one side only the shank on the side opposite the heads being straight instead of forming a curve as in the clench. By this form of rivet the heads take the form of the curve at the junction of the bow and stem, the headless side being toward the bow, which admits of putting in the rivet nearer thereto; and as the tendency to open the picker under the strain, is in the direction of the curved line (*d*) which has for its center the middle of the rivet (*i*) at the end, the angle (*o*) on the headless side constitutes a head to resist the opening of the picker, for if the shank of the rivet is imagined to be as represented by dotted lines, in the direction of the curved line (*d*), it will be seen that the angle (*o*) constitutes a head to such a shank hence so long as the end of the stem be held together by a rivet (*i*), or by any equivalent therefor, making the rivet (*a*) with the heads on one side only will fully answer the purpose of riveting with the heads all around, at the same time avoiding all the inconvenience arising from the use of the old rivets as well as the clench.

What I claim as my invention and desire to secure by Letters Patent is—

The method herein fully described of fastening raw hide pickers by means of a rivet
5 at the junction of the bow and stem, which has the heads all on one side, that side of the stem toward the bow being straight from end to end, when this is combined

with a rivet or other equivalent fastening at the end of the stem for the purpose and 10 in the manner substantially as described.

BENJAMIN A. HOLBROOK.

Witnesses:

NAHUM H. LOW,
JOHN P. KNOWLES,
J. C. AIDEN.