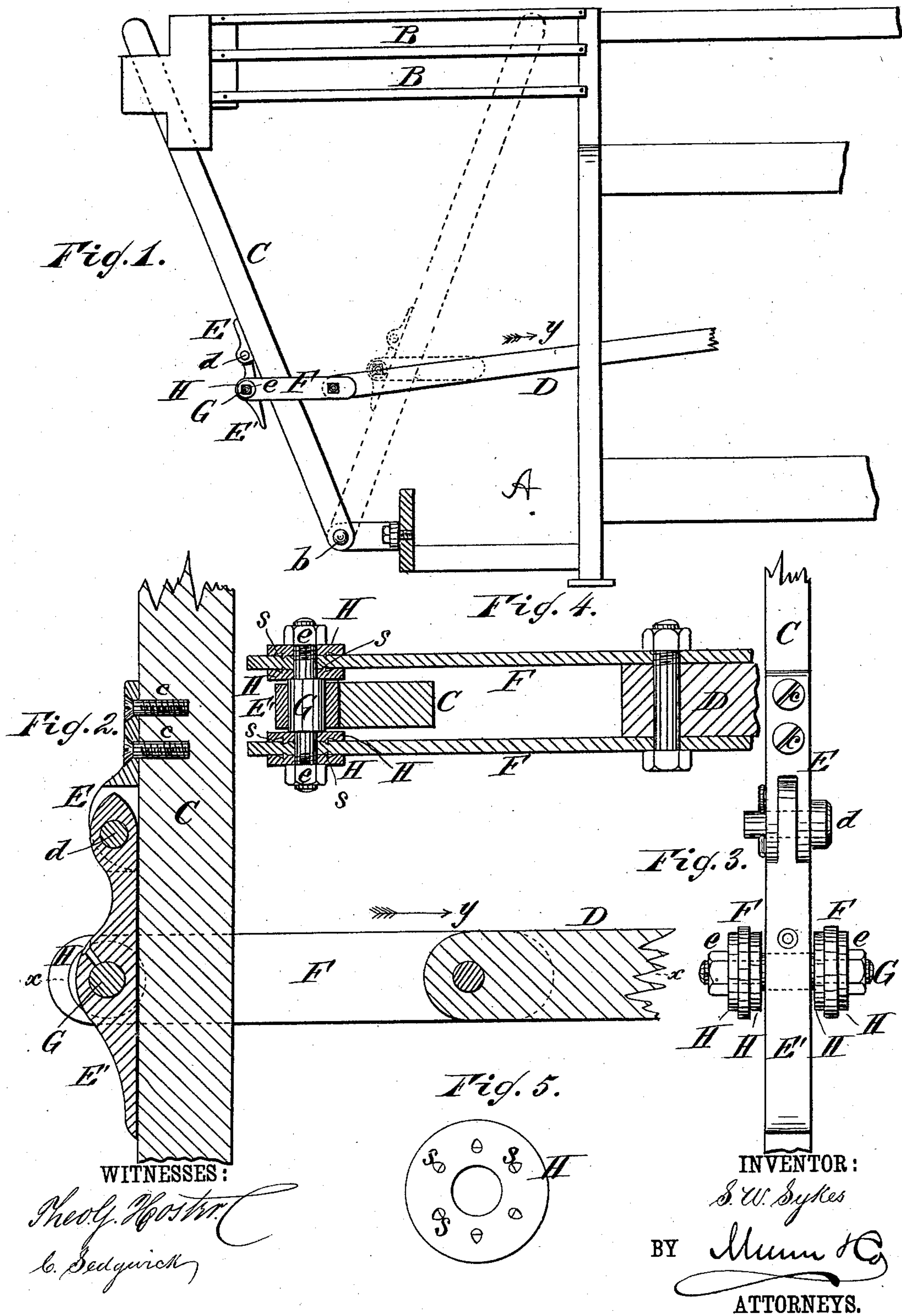


(No Model.)

S. W. SYKES.

SWEEP STRAP CONNECTION FOR PICKER STICKS OF LOOMS.  
No. 286,971. Patented Oct. 16, 1883.





# UNITED STATES PATENT OFFICE.

SYLVESTER W. SYKES, OF PASSAIC, NEW JERSEY.

## SWEEP-STRAP CONNECTION FOR PICKER-STICKS OF LOOMS.

SPECIFICATION forming part of Letters Patent No. 286,971, dated October 16, 1883.

Application filed January 24, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, SYLVESTER W. SYKES, of Passaic, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Sweep-Strap Connections for Picker-Sticks of Looms, of which the following is a full, clear, and exact description.

This invention relates to means for operating the picker staffs or sticks of looms.

Usually the picking-strap is connected with its picker-staff by means of a short link or sweep-strap, which passes around the picker-staff, and is secured in place thereon by a small supporting loop or hanger. The supporting loops or hangers, as well as the sweep-straps, are ordinarily made of leather, although, to increase their durability, metal ones have been employed; but these, owing to defects of construction, their liability to cut the sticks, and their imperfect action, have not been generally adopted. When the supporting-loop is made of leather or other analogous material, receiving the bent or looped portion of the sweep-strap through it, and is adjustably connected above by a screw with the picker-stick, said supporting-loop wears but a short time and is very liable to break or be cut by the screw as the picker-stick assumes certain angles. Sometimes the screw which holds the supporting-loop to the stick will break, and as the sweep-strap is comparatively narrow, affording only a small wearing-surface, it too will wear out in a very short time. Such breakages, too, often prevent the shuttle from being driven entirely across the loom, so that by remaining within the warp it will sometimes be caused to break or cut through the same when the lay beats up, which results in a loss of many hours both to the weaver and manufacturer.

My invention consists in a jointed metal hanger of novel construction and having a rocking connection with the sweep strap or straps, which may be of leather; also, in special means for uniting the strap or straps with the pivot or cross-bolt of the rocking connection, whereby the durability of both the hanger and the sweep-strap is greatly increased, which will prove a great benefit both to the weaver and manufacturer.

Reference is to be had to the accompanying drawings, forming part of this specification, in

which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents a broken front elevation of one end portion of a loom with my invention applied. Fig. 2 is a side sectional elevation, in part, upon a larger scale of my improved hanger, showing it as applied to a picker-stick and connected with a picking-strap. Fig. 3 is an end view of the same, and Fig. 4 a horizontal section on the line *x x* in Fig. 2. Fig. 5 is an inside face view of one of a series of jagged washers or plates, between which the outer ends of the sweep-straps are clamped.

A indicates one of the end frames of the loom; B B, shuttle-boxes; C, one of the picker-sticks hung to rock on a pivot, *b*, and actuated by a picking-strap, D, as usual.

E E' indicate the metal hanger by which the driving-connection is made through the sweep strap or straps F, between the picking-strap and picker-stick. This hanger is secured by one or more screws, *c*, in any desired place on the picker-stick—that is to say, the upper portion, E, of the hanger is so secured to the stick. The lower portion, E', of said hanger, which forms an elongated tail-piece extending both above and below the straps F, is jointed, as at *d*, to the lower end of the portion E, forming a butt-hinge joint therewith, opening outward, to give the usual lost motion at the back end of the picker-stick stroke, as shown in Fig. 1; but, providing, after the picking-strap D has traveled a given distance in the direction indicated by the arrow *y* in Figs. 1 and 2, for an extended flat or even bearing throughout the remainder of the forward or throwing motion of the picker-stick of said tail-piece E' on the picker-stick, as clearly shown in Fig. 2, thus avoiding all possibility of cutting or breaking the picker-stick, said tail-piece, too, shutting down in an easy manner on said stick. The hinged portion or tail-piece E' of the hanger E E' has a rocking connection intermediately of its length with the sweep-straps F F, which virtually form but a single strap, as they both connect with the same picking-strap D, although not closed at their outer ends, at least not necessarily so, as is the usual leather sweep-strap. This rocking connection is formed by a pivot bolt or pin, G, arranged to pass freely through the tail-piece E', and connected at its opposite ends,



which are of reduced diameter and pass through the straps F F, with said straps by clamping-plates or washers H H. The latter are arranged on both sides or faces of said straps, 5 and jagged or formed with teeth s on their inner surfaces to take a firm hold on the straps, so that on tightening up nuts e e on the outer ends of the reduced portions of the pivot or pin G, the straps F will be restrained from 10 wear and be locked by the plates H H on the pin G, which is free to turn in the tail-piece E'. By this construction of the sweep-strap connection the leather or other like straps are relieved from all tension or strain, except in 15 the direction of their length, and the hanger readily accommodates itself to the different angular positions of the picker-stick without liability to break or to cut said stick, and the same has a durable metal bearing.

20 Having thus described my invention, what I

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

1. The combination, with the sweep strap or straps F, of the hanger composed of an upper section, E, adapted for attachment to the picker- 25 stick, as described, and a lower section or elongated tail-piece, E', jointed, as at d, to the section E, and having a pivoted or rocking connection with said straps, substantially as specified.

2. The combination, with the picker-stick C 30 and picking-strap D, of the sweep strap or straps F, the hanger E E', constructed of jointed sections or lengths, as described, and the pivot or pin G, clamping plates or washers H H, and nuts e e, substantially as and for the purposes 35 herein set forth.

SYLVESTER W. SYKES.

Witnesses:

JOHN E. ACKERMAN,  
JOHN B. PUDNEY.