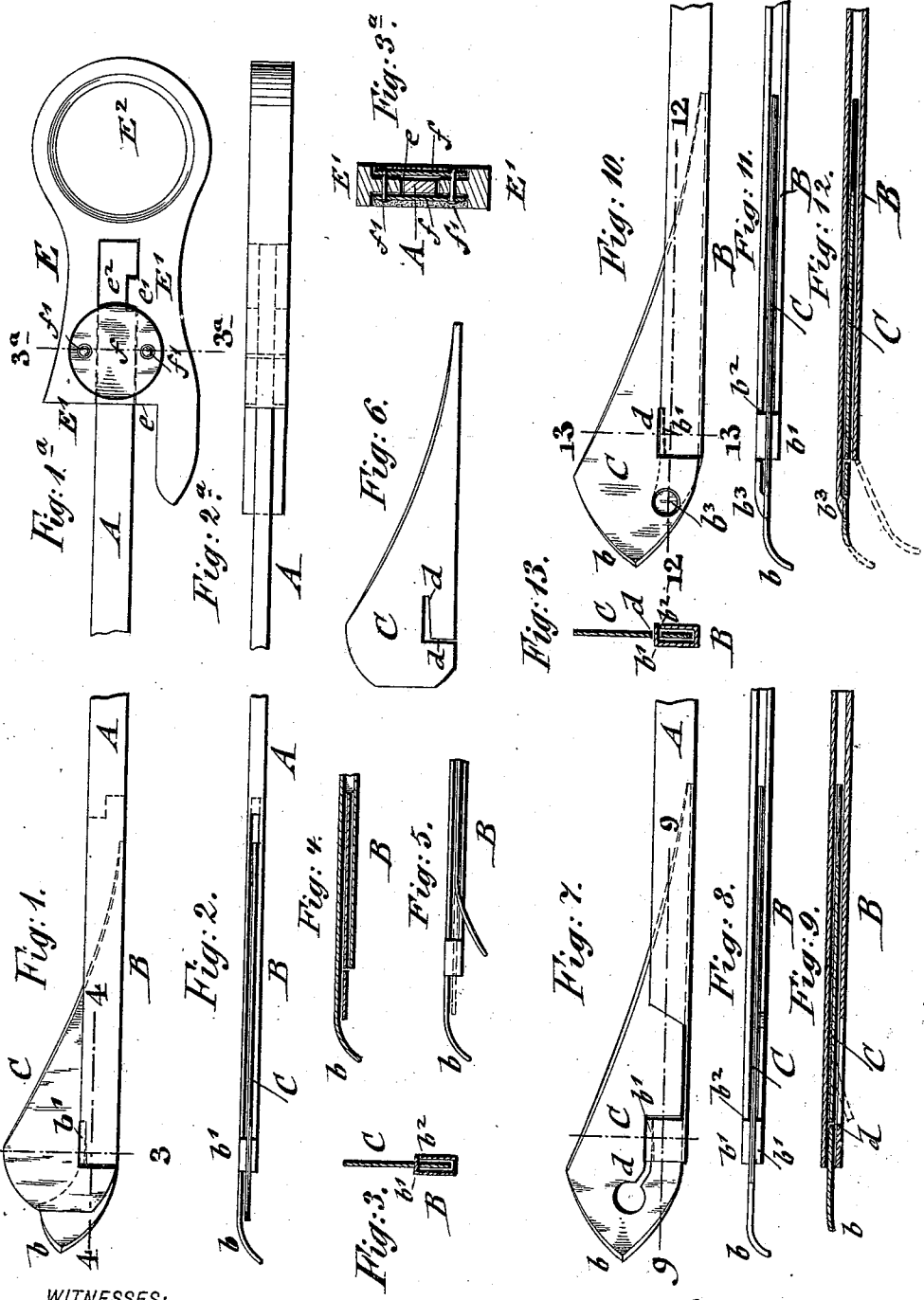
(No Model.)

G. SEGSCHNEIDER.

PILE WIRE FOR LOOMS.

No. 512,063. Patented Jan. 2, 1894.



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PILE-WIRE FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 512,063, dated January 2, 1894.

Application filed May 4, 1893. Serial No. 473,038. (No model.)

To all whom it may concern:

Be it known that I, GUSTAV SEGSCHNEIDER, a citizen of the United States, residing in Yonkers, county of Westchester, and State of New York, have invented certain new and useful Improvements in Pile-Wires for Looms, of which the following is a specification.

In Letters Patent for an improved pilewire for looms, No. 500,275, dated June 27, 1893, I have shown and described a pilewire for looms to one end of which is attached a sheet metal holder into which a removable cutting blade is inserted and retained at its inner end by a spring or other suitable means. The sheet-metal holder was applied by means of tongues to the recessed end of the pilewire and attached thereto by brazing, soldering or otherwise. I have since found that a separate spring for retaining the inner end of the cutting blade in the holder can be dispensed with and the blades retained by imparting the required spring-action to the blade itself, by providing the body of the same with an L-shaped slit, into which the outer end of the holder takes so as to lock thereby the blade firmly in position.

For this purpose this invention consists, first, of a pilewire for looms in which a sheet metal holder is attached to the end of the pilewire, said holder being provided at one side of its outer end with a transverse projection that engages the cutting-blade which is provided with a slit that extends from the base of the blade into the body of the same.

The invention consists secondly, of a novel construction of the head of the pilewire in which the shank of the head is provided with a longitudinal recess and a projection in said recess into which the opposite end of the pilewire is inserted and retained by sheet metal caps that extend over the end of the pilewire and that are riveted and soldered into the corresponding depressions of the heads, as will be fully described hereinafter and finally pointed out in the claims.

In the accompanying drawings, Figures 1 and 1^a represent a side-elevation of my improved pilewire for looms showing respectively the holder in which the blade is retained and the opposite end to which the head of the pilewire is attached. Figs. 2 and 2^a represent top-views of Figs. 1 and 1^a; Figs. 3 and 3^a vertical transverse sections respectively on lines 3, 3 and 3^a, 3^a, Figs. 1 and 1^a. Fig. 4, is a horizontal section of the holder and cutting blade, on line 4 4 Fig. 1. Fig. 5, is a top-view of the holder and blade, showing the latter in the act of being inserted into the holder. Fig. 6, is a side-elevation of the cutting-blade, shown as detached from the holder. Figs. 7, 8 and 9, represent respectively a side-elevation, a top-view and a horizontal section on line 9, 9, Fig. 7, of a modified construction of the holder and cutting-blade in which the curved lug or guard at the outermost end of the holder is dispensed with. Figs. 10, 11 and 12, represent a side-elevation, a top-view and a horizontal section on line 12, 12 Fig. 10, of another modification of the holder and cutting blade, and Fig. 13, is a vertical transverse section on line 13, 13, Fig. 10.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents a pilewire for looms and B a blade-supporting holder which is made of suitable sheet metal, preferably of sheet steel. The holder B is made from a blank, the width of which is equal to twice the height of the pilewire plus the width of the base of the same, so that when the blank is bent up into shape it forms a pocket-like receiver for the cutting blade C. The end of the pilewire is inserted into the inner end of the holder and rigidly united therewith by means of brazing, soldering or otherwise. The outer end of the holder B is provided with a lug *b* which is bent at a suitable angle of inclination to the vertical center-plane of the pilewire so as to form a guard for the holder B and prevent it from striking the reeds. The slight curve or inclination imparted to the guard *b* produces the ready glancing off of the end of the holder from the reeds in case it should abut against the same so as to secure thereby the reliable movement of the pilewire during the ingoing motion of the same. The outer end of the holder B next to the guard lug *b* is provided with a recess b^2 and at the opposite side with a pro-

jection b' which engages the recess b^2 when the blank is bent into shape so as to form the holder B. The blade C is made of triangular shape or nearly so, the inner tapering edge of which is sharpened while the base and outer edge remain blunt. The body of the blade C is provided with an L-shaped or other slit d which extends from the base into the body, as shown in Fig. 6, the lateral end of the slit being somewhat larger than the vertical part and slightly inclined at its lower edge for the purpose of facilitating the interlocking of the projection b' with the slightly enlarged end of the slit d and lock thereby the cutting-blade C rigidly to the holder B when the former is placed into position therein.

For connecting the blade to the holder, the outermost end of the blade on the left of the slit d is bent sidewise as shown in Fig. 5, so as to bear on the outside of the holder B while the remaining portion of the blade is inserted into the holder and moved along the same until its projection b' enters into the larger portion of the slit B, which is indicated by a slight click that is produced when the projection b' springs into the slit d. The slitted body of the blade C abuts against each end of the shoulder formed by the transverse projection b' of the holder, while the outer end of the blade rests against the curved guard b, as shown clearly in Fig. 1. In this manner the blade is firmly locked into the holder by the spring-action of the slitted body of the blade without requiring a special spring-tongue for retaining the inner tapering end of the blade as in my prior patent referred to. The opposite end of the pilewire A is attached to the head E the shank E′ of which is proved with a longitudinal recess e that extends nearly up to the eye E^2. The end of the pilewire A is inserted into the recess e of the shank E′. A lug or projection e' at one side of the recessed shank E′ engages a corresponding recess e^2 in the end of the pilewire A. The shank E′ has depressions at both sides and at each side of the pilewire, so as to permit the insertion of sheet metal caps $f\,f$, of disk or other shape, which are attached by rivets $f'\,f'$ to the shank E′, one rivet being arranged at each side of the end of the pilewire. After the rivet-connection of the caps with the shank of the head E is made, the entire head is dipped into solder which fills up all the interstices between the shank and caps and the depressions above the caps so that the latter are flush with the sides of the shanks as shown in Fig. 3^a. The riveted and soldered caps produce the rigid connection of the shank of the head E with the end of the pilewire in lateral direction, while the projection at the inner edge of the recess of the shank E and the interlocking recess in the end of the pilewire secure the rigid connection of the pilewire with its head against the longitudinal strain exerted on the parts during the cutting motion of the pilewire.

In Figs. 7 to 9 a modified form of the connection of the cutting blade with the holder B is shown, in which the curved lug or guard b at the outer end of the holder B is dispensed with and made integral with the outer end of the blade by which the same effect is obtained. In this case the slit d is extended into the curved end of the blade, so as to render the same more yielding and elastic, the interlocking of the holder and the blade being otherwise substantially the same as that shown in Figs. 1 to 5. Another connection of the holder and blade is shown in Figs. 10 to 13, in which the holder B is extended at that side back of the blade, the extension b^3 being adapted to engage an opening in the body of the blade, whereby an additional interlocking between the holder and blade is obtained.

The advantages of my improved pilewires for looms are, first, that the blade can be readily removed or inserted by the fingers without requiring a pair of pliers or other tool for this purpose; secondly, that the connection between the holder and the blade is made without requiring a separate locking spring, which when the pilewire is in use for some time, is liable to wear out and become loose; thirdly, that the head is attached to the opposite end of the pilewire in a simple and very effective manner that permits the quick and ready connection of the parts and produces the reliable connection of the same, both as against longitudinal and lateral strain or displacement.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a pilewire for looms, the combination of a holder attached at its inner end to the pilewire and provided at its outer end with a bent-over projection, and a cutting blade which is inserted into the holder and provided with a slit that is engaged by the projection of the holder, substantially as set forth.

2. In a pilewire for looms, the combination, of a sheet metal holder attached to the end of the pilewire, said holder being provided with a bent-over projection at one side of the outer end of the holder and a recess at the other side of the same, and a cutting blade which is inserted into the holder and provided with an L-shaped slit extending from the base into the body of the blade, the upper portion of the slit being made wider than the lower portion so as to permit the projection to enter and engage the blade, substantially as set forth.

3. In a pilewire for looms, the combination of a holder attached at its inner end to the pile wire and provided at its outer end with a bent-over projection and with an extension, and a cutting blade having a slit engaged by said

projection and an opening engaged by said extension, substantially as set forth.

4. The combination, with a pilewire, the end of which is provided with a recess at one edge, of a head having a longitudinal recessed shank and a projection extending into the recess and engaging the recessed end of the pilewire and caps fitted into depressions at both sides of the shank, said caps being attached by rivets and solder to the shank, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

GUSTAV SEGSCHNEIDER.

Witnesses:

PAUL GOEPEL,

CHARLES SCHROEDER.