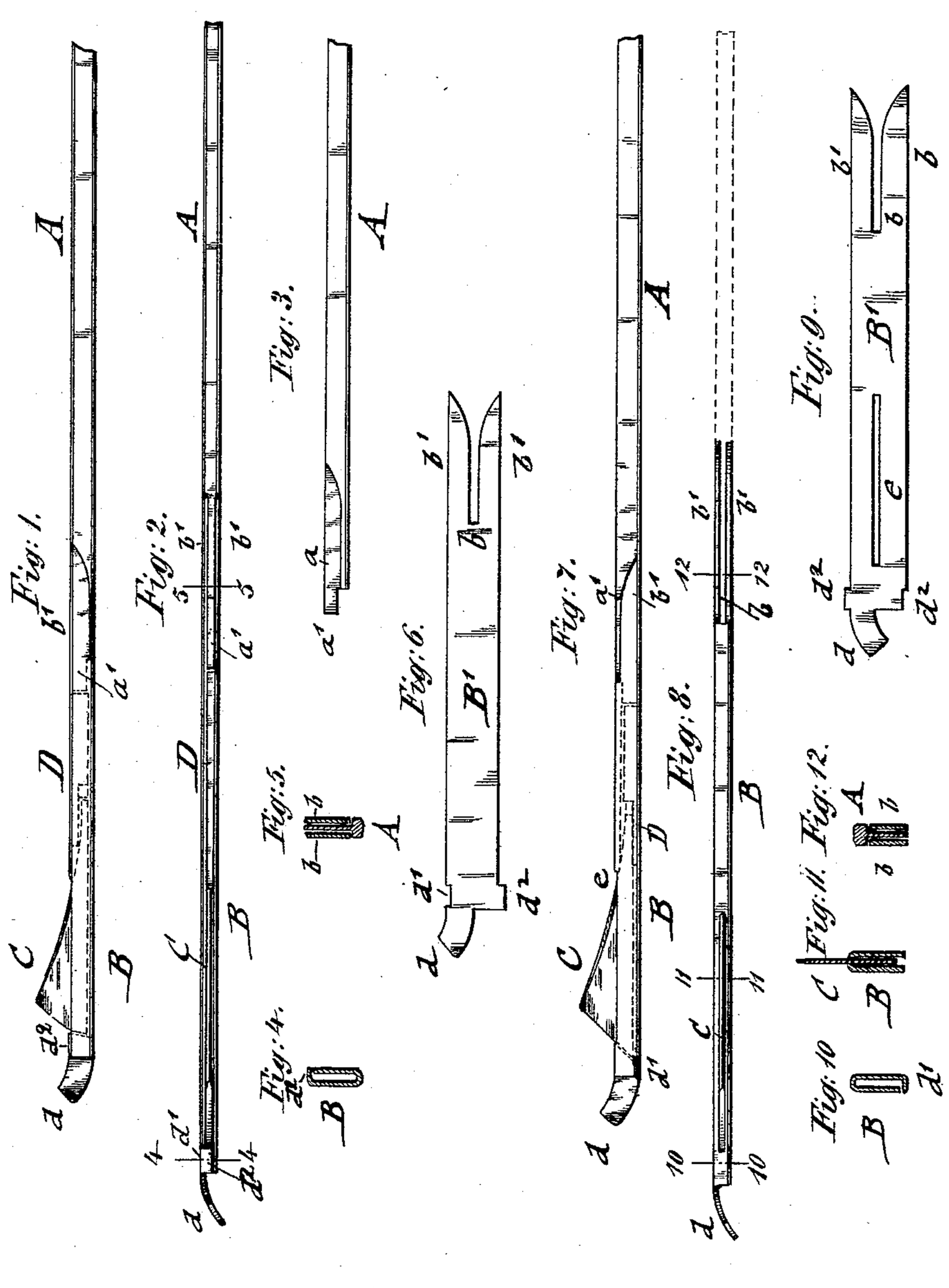
(No Model.)

G. SEGSCHNEIDER.

PILE WIRE FOR LOOMS.

No. 500,275. Patented June 27, 1893.



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UNITED STATES PATENT OFFICE.

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PILE-WIRE FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 500,275, dated June 27, 1893.

Application filed October 26, 1892. Serial No. 450,048. (No model.)

To all whom it may concern:

Be it known that I, GUSTAV SEGSCHNEIDER, a citizen of the United States, residing in Yonkers, in the 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.

This invention relates to certain improvements in pile wires for looms for which Letters Patent were granted to me, No. 478,369, dated July 5, 1892, the improvements relating more especially to the construction of a holder for the cutting blade and its connection with the pile wire proper, whereby not only the cutting blades can be readily inserted and removed but also old pile wires utilized by attaching new holders and cutting blades thereto; and the invention consists of the combination with a pile wire, of a holder that is attached to the end of the same, said holder being provided with means for retaining the cutting blade.

The invention consists further, of a holder for the cutting blades of pile wires which is made of suitable sheet metal and bent into shape so as to form a heel for retaining the cutting blade in connection with a spring that is inserted into the shank of the holder.

The invention consists further, of a holder for the cutting blades of pile wires which is provided at the outer end with a curved guard that is made integral with the holder and with an abutment or heel for the cutting blade, and with a longitudinal slot at the inner end by which the holder is attached to the recessed end of the pile wire, as will be fully described hereinafter and finally pointed out in the claims.

In the accompanying drawings, Figure 1 represents a side-elevation of the cutting end of my improved pile wire for looms. Fig. 2 is a top-view of the same drawn on a larger scale. Fig. 3 is a detail side-view of the end of the pile wire. Figs. 4 and 5 are vertical transverse-sections respectively on line 4—4 and 5—5 Fig. 2. Fig. 6 is a top-view of the blank from which the holder for the cutting blade is made. Fig. 7 is a side-elevation of a modified form of pile-wire and holder. Fig. 8 is a top-view of the holder, shown in Fig. 7 said figure being drawn on a larger scale. Fig. 9 is a top-view of the blank from which the modified holder is made, and Figs. 10, 11, and 12 are vertical transverse sections, respectively on lines 10 10, 11 11 and 12 12, Fig. 8.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents a pile-wire 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 B′, which is shown in Fig. 6, the width of the blank being equal to twice the height of the holder plus the width of the base of the same, so that when the blank is bent up into shape a rigid support for the cutting blade is obtained. The end of the pile wire A is provided at both sides with recesses *a* which are of slightly less height than the height of the pilewire and with a tongue *a′* that forms an extension of the recessed portion. The inner end or shank of the holder B is provided with a longitudinal slot *b*, the width of the slot being equal to the thickness of the recessed end of the pilewire A so that when the tongue *a′* of the shank is inserted into the inner end of the holder B, the sidewalls of the holder can be readily brazed, soldered or otherwise fastened to the recessed end of the pile wire, the lower part of the end of the pile wire abutting against the lower inner end of the holder, as shown clearly in Fig. 1. The outer end of the blank B is provided with a curved lug *d* and adjacent to the lug with a recess *d′* and at the opposite side of the blank with a projection d^2 which takes into the recess *d* when the blank is folded up so as to form the holder B. The projection d^2 forms then the heel or abutment against which the blunt outer edge of the blade C rests. The inner sharpened and tapering end of the cutting blade C is retained in position by a spring D, which is brazed, soldered, riveted or otherwise fastened to the shank of the holder B, the free end of the spring extending over the tapering end of the blade, so as to retain the blade in connection with the heel or abutment d^2 firmly in position. The lug *d* is curved away from the longitudinal plane of the holder, as shown in Fig. 2, so as to form a guard by which the end of the holder E does not interfere with the reeds during the ingoing-motion

of the pile wire. The slight curve imparted to the guard *d* produces the ready glancing off of the end of the holder from the reeds in case it should catch or abut against the same and secures thereby the reliable working of the pile wire in its motion from one side of the loom to the other. The blade C is made of triangular shape with an outer edge, a blunt base and a slanting and sharpened inner edge, to which hardy temper is imparted after grinding. The blade C is inserted into the open top part of the holder by first inserting the tapering end of the blade below the spring and then moving it outward until the blunt end of the blade abuts against the head *d'*, in which position the blade is rigidly held in position by the spring and heel. On removing the blade, either for sharpening or for inserting a new blade, the inverse operation is performed.

In place of inserting the pile wire through the open upper part of the holder, the holder can also be made from the blank shown in Fig. 9, in which case the holder is open at the lower part and the blade also inserted from the open bottom-part of the same. In this case the middle portion of the blank is provided with a longitudinal slot *e* through which the blade extends, it being inserted by putting the tapering end of the same over the outer end of the spring D, then passing the apex and upper part of the blade through the slot *e* which is at the top part of the holder and next moving the blade outwardly until its blunt outer edge rests on the bent over projection d^2, and against the outer end of the slot *e*, as shown in Figs. 7 and 8. The modified form of sheet metal holder attached by its slotted inner end or shank by brazing or otherwise to the recessed end of the pile wire in the same manner as when the holder is closed at the bottom and open at the top.

My improved construction of pile wire has the advantage that all the old pile wires in use instead of being cast aside can be used with my removable cutting blade by simply cutting off the outer end of the pile-wire and attaching the sheet metal holder to the same; secondly, that the holder being stamped from suitable sheet metal can be readily bent into shape by machinery and supplied independently of the pile wires, so as to be ready for attachment to the same whenever required; thirdly, that the holder and the cutting blade can be furnished with the pile wire at less expense than the pilewires heretofore in use in which the retaining devices for the cutting blade are arranged in the outer end of the pile wire which takes longer time, is more expensive than the manufacture of the separate holder for the blade and its attachment to the pile wire, and lastly, that owing to the high temper that can be imparted to the separate blade a greater number of yards can be cut by one and the same blade and in an even and uniform manner, as the yarn being level with the top of the wire, is drawn tightly over the blade when the cutting takes place.

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

1. The combination, with a pile wire provided with a projecting tongue at its end and recesses at both sides of said tongue, of a sheet metal holder attached to the recessed end of the pile-wire, a cutting blade in said holder, and means for retaining the blade in said holder, substantially as set forth.

2. The combination, with a sheet metal holder provided with a heel or abutment at the outer end, said heel or abutment being made integral with the holder, of a cutting blade, having a blunt outer edge and a sharpened and tapering inner edge and a spring attached to the inner end or shank of the holder for retaining the tapering end of the blade, substantially as set forth.

3. A holder for the cutting blade of a pile-wire, made of sheet metal and provided with a lug or guard at the outer end said lug or guard being bent at an inclination to the longitudinal plane of the holder, substantially as set forth.

4. A holder for the cutting blades of pile-wires, made of sheet metal and provided with a recess at one side of the outer end, a lug or projection at the opposite side of the holder, said projection taking into said recess, and a longitudinal slot at the inner end or shank for attachment to the recessed end of the pile-wire, substantially as set forth.

5. A holder for the cutting blades of pile-wires, made of a sheet-metal blank, provided with a longitudinal slot at the inner end, a curved lug or guard at the outer end of the blank, a recess at one side of the outer end of the blank, and a projection at the other side of the outer end of the blank, said projection being bent over so as to engage said recess, 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:
HENRY J. PECK,
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