No. 662,671. Patented Nov. 27, 1900.

J. B. GATHRIGHT.

TRACE CARRIER.

(Application filed June 23, 1898.)

(No Model.)

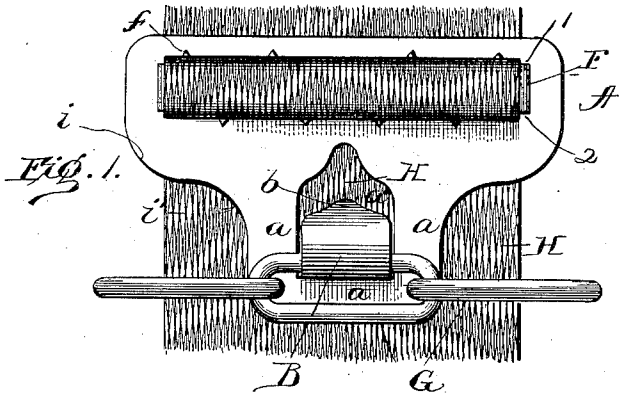


Fig. 1.

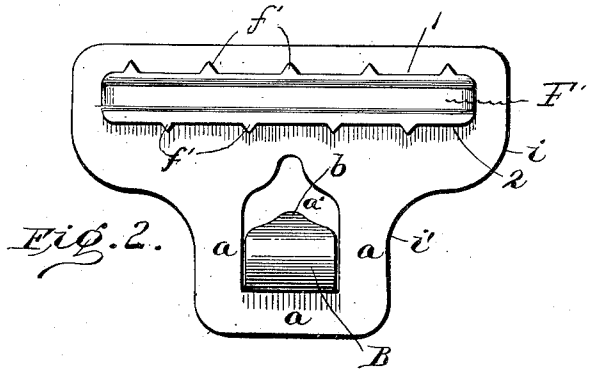


Fig. 2.

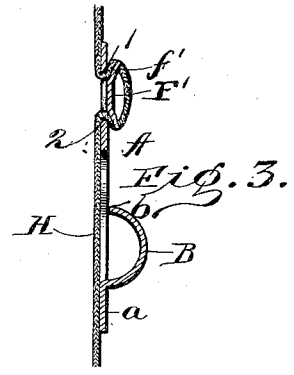


Fig. 3.

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UNITED STATES PATENT OFFICE.

JOSIAH B. GATHRIGHT, OF LOUISVILLE, KENTUCKY, ASSIGNOR TO HERRMANN BROTHERS & CO., OF TELL CITY, INDIANA.

TRACE-CARRIER.

SPECIFICATION forming part of Letters Patent No. 662,671, dated November 27, 1900.

Application filed June 23, 1898. Serial No. 684,252. (No model.)

To all whom it may concern:

Be it known that I, JOSIAH B. GATHRIGHT, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Trace-Carriers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention has relation to that type of trace-carriers which are constructed of sheet metal and are formed at one end with a buckle to engage the back-band and at the other end with a hook to engage the trace-chain; and the invention consists in certain peculiarities in the construction, substantially as hereinafter described, and particularly pointed out in the subjoined claim.

The particular object of the invention is to provide a sheet-metal trace-carrier with a hook of such formation that it will possess maximum strength and durability, will most reliably hold the trace-chain, and will not catch the chain of a horse working alongside. This object is accomplished by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a front view of a trace-carrier containing my improvement with the buckle portion thereof applied to a back-band and a trace-chain engaged with the hook. Fig. 2 is a front view of the trace-carrier alone, and Fig. 3 is an edge view thereof.

A designates the base-plate, preferably having a reduced lower end and a relatively wider upper end. Said base-plate is formed or provided with suitable means for attaching it to a back-band. The means herein shown consist of a bar or tongue F′, having its longitudinal edges bent outward and its intermediate portion nearly in the plane of the base-plate, said tongue or bar being formed by slitting the base-plate and bending the portion of the metal between said slits to the shape and position indicated. The back-band H extends through the slits and around said bar or tongue, and the trace-carrier is held adjustably thereon by the indirection thus obtained. To further aid in securely holding the trace-carrier on the back-band in its adjusted position, the bar or tongue is provided with teeth f' on its edges. Said teeth are cut from the portions of the base-plate above and below the slits therein, respectively, and no metal is removed from the bar in their formation and they are widely separated from each other. These teeth, therefore, overhang the adjacent edges of the base-plate. The advantages arising from this construction are as follows: First, the bar or tongue is provided with a sufficient number of teeth on its bearing edge without forming pointed teeth on the adjacent edge of the base, which latter would render it difficult to adjust the carrier on the back-band and would subject the band to unnecessary tearing or cutting, and, secondly, as the teeth overhang the base the bearing edges of the bar and base occupy the same relative position to each other as they would if the teeth were not present, and consequently the indirection given to the band in passing through the openings between the opposing edges of the base and bar and over the latter is as great as if the teeth were absent, assuming the teeth entered the band their entire length. The teeth, however, rarely penetrate the band, but only indent it, and in such case the indirection is increased by nearly the full length of the teeth, and therefore the friction between the band and carrier caused by this indirection is at a maximum. This construction of attaching means is very advantageous; but the present invention is not restricted thereto in its scope.

The hook B for the trace-chain is stamped out from the metal of the lower end of the base-plate and in its formation no metal is wholly removed. Hitherto in forming trace-carrier hooks out of base-plates of sheet metal it has been the practice to adapt them to receive the trace-chain either by cutting away the metal about the hook or by leaving the point of the hook considerably elevated above the plane of the base-plate. In neither of these constructions is the chain reliably held on the hook, and, furthermore, cutting away of the metal is wasteful and a hook with its point elevated is liable to catch the

chain of a horse working alongside. To obviate these difficulties, I have devised the new form of hook shown, which allows the point to be in the same or approximately the same plane with the base and together with the corresponding shape and size of the opening in the base (no metal except that for the hook being cut away) will admit and securely hold the chain and will not catch the chain of a horse working alongside. The main or base portion of the hook is unusually wide (about one and one-eighth inches being the preferred width) both for greater strength in the hook and to afford a wider opening in the corresponding portion of the base-plate—that is, wider as compared with those heretofore made that had no metal punched out except for the hook. The free end of the hook is not merely tapered to a point in the usual way, but has an elongated narrow portion *b* only about one-third the width of the wide portion and about three-eighths of an inch long. When the hook is bent into proper form, this elongated narrow portion *b* is retracted and stands at substantially a right angle to the base and with its point in the same or approximately the same plane as the base and about midway the length of the opening in the base, thus leaving spaces *a'* between its sides and shoulders and the base-plate sufficient to permit the introduction of a link of the chain, and when it is in position the chain will be supported by the side portion of the hook and will also be securely held by reason of the depressed position of the point of the hook and the narrowness of the spaces *a'*. By "narrowness" I mean as compared with the similar spaces formed by cutting away the metal about the hook, as has hitherto been done. The hook being arranged centrally within the lower portion of the base-plate provides wearing and stiffening plates *a* below the hook and at its sides.

Having thus described the invention, what I claim is—

A sheet-metal trace-carrier, having means for attaching it to a back-band and formed with an integral hook for the trace-chain and with an opening produced by striking said hook from the body of the carrier, said opening being of the same size and shape as the metal forming said hook, and said hook having a wide base portion bent to be engaged by the trace-chain and a narrowed free end portion over which the chain is passed in securing it upon said base, and said free end portion being arranged approximately at right angles with the body of the carrier and terminating at about the center of the wider portion of said opening and approximately in the plane of said body, substantially as described and for the purposes set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOSIAH B. GATHRIGHT.

Witnesses:

E. S. FOOTE,

J. E. MCGRATH.