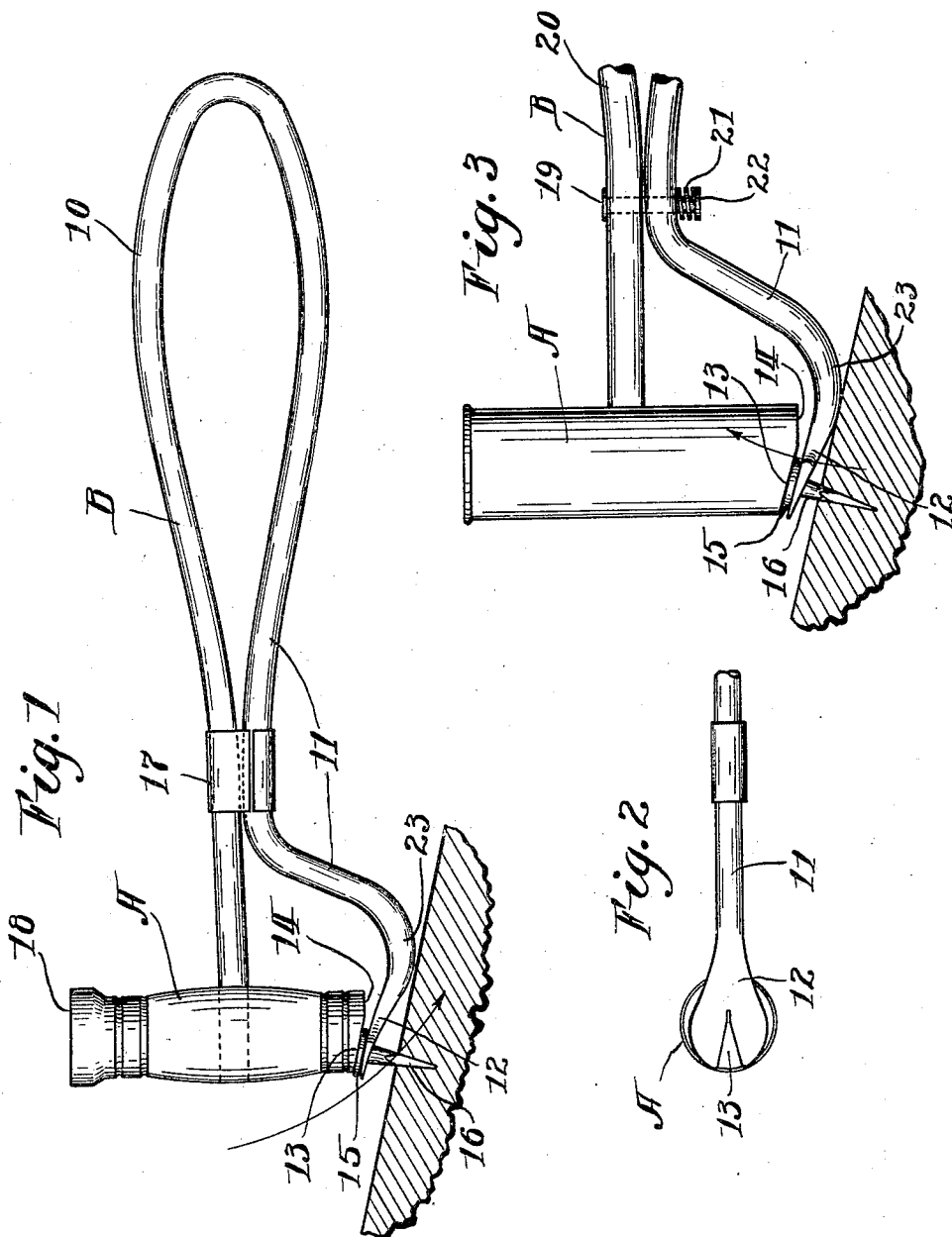


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TACK PULLER AND DRIVER.
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TACK PULLER AND DRIVER.

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To all whom it may concern:

Be it known that I, ANDREW ERICKSON, a citizen of the United States, residing at Invergrove, in the county of Dakota and State of Minnesota, have invented a new and useful Improvement in Tack Pullers and Drivers, of which the following is a specification.

My invention relates to a tack puller, holder and driver, the primary object of which is to provide means whereby tacks may be quickly and easily pulled, especially from freight cars, but may be similarly used wherever there is need for a device of this kind. In the use of the ordinary freight box cars instruction cards are usually tacked on the side of the same and after a car has been in use for a short time it will be found to be literally covered, so as to speak, with tacks at and about the place where the cards are usually tacked. Thus by providing a suitable device for pulling, holding and driving a tack the railroads could save to a large extent the purchase of new tacks for the purpose of holding these cards and the tacks now remaining in the cars could be readily used for this purpose.

A feature of my invention is a spring means for holding the tack which is about to be driven into a surface under spring tension with its head against an angular surface on the driving head of the device in such a position that the ordinary stroke of the device to set the tack will allow the tack to be driven or set straight in place and simultaneously at the end of the stroke withdraw the tack from the spring holding means so that the device can be quickly inserted and the hammer head used to drive the tack home. It is an essential feature to hold the tack to the device under spring tension until it is set to obviate the necessity of one holding the tack in their fingers while it is being driven into place and my device fully accomplishes this feature so that in cold weather when mittens are necessary the tacks can be set and driven into place just as readily and in fact quicker, without any danger to the fingers by the use of my device. The automatic releasing of the tack at the end of the natural down stroke of my device is also very important in the practical use of the same.

In the drawings forming part of this specification:

Figure 1 is a side view of my device as it

would appear in the act of setting a tack at approximately the end of the down stroke.

Figure 2 is a bottom view of the hammer head and spring tack holding claw, the handle portion of the device being broken away.

Figure 3 is a side elevation of a portion of an alternative construction of my device, illustrating the same in the act of withdrawing a tack.

The device consists of a hammer head A having a handle B formed of spring material and bent to form a hand engaging loop 10, from which forwardly extends, in line with the handle B, a spring arm 11 having a tack receiving and holding claw 12.

The spring arm 11 of the handle B holds the claw 12 under spring tension against the angularly disposed surface 13 extending from the surface 14 of the hammer head A. The sharp engaging ends of the claw 12 project slightly beyond the hammer head and surface 13 so as to be readily forced into engagement with the flat head 15 of the ordinary tack 16.

The loop 10 of the handle B is brought together at the forward end and is connected by a spring steel band 17, which assists in urging the spring arm 11 into contact with the surface 13 normally, and also provides means for holding the spring arm 11 against lateral movement to cause the claw 12 to line up centrally with the surfaces 13 and 14 of the hammer head A at all times. It is obvious that the band 17 can be of any suitable spring material.

The hammer head A is formed with a driving surface 18, which is oppositely disposed on the head to the surfaces 13 and 14 and is for the purpose of driving the tack 16 into place after it has been set and automatically released from the claw 12.

In the use of my tack setting device the tack 16 is engaged by the claw 12 and held firmly in place with its flat head 15 against the surface 13 by the spring arm 11, ready to be set in a card on a railroad box car, or for any other purpose. The angular surface 13, together with the spring arm 11, holds the tack 16 at such an angle in relation to the handle B that in the act of the down stroke of the device to set the tack, as indicated by the arrow in Figure 1, pressure of the driving head A is directed square against the flat head 15 to set the tack straight upright and to automatically release the tack setter and holder from the tack at the end of the down

stroke after it has been firmly set in place. Then by a simple operation the surface 18 of the hammer head A can be used to drive the tack home. However, in many instances the tack will often be fully set in place and the device automatically withdrawn from the same in one complete stroke. This could only be accomplished by the functions performed by the spring arm 11 in holding the tack under spring tension firmly in place while being set.

The spring arm 11 in holding the tack is also essential in withdrawing a tack, as it tends to prevent the tack from slipping out of the claw 12 and immediately sets it in place against the surface 13 as it is withdrawn.

The alternative construction in Figure 3 illustrates the hammer head A connected to the handle B while the spring arm 11 is held in alinement with the handle B by the rivet 19, which extends through the portion 20 of the handle B and freely through the spring arm 11. A coil spring 21 is positioned to engage against the spring arm 11 and is held in place by the head 22 formed on the rivet 19 to assist in urging the spring action of the arm 11 to hold a tack under spring tension against the surface 13. To prevent bending or breaking, and to assist in withdrawing a tack, it is essential that the spring arm 11 be somewhat free to move away from the portion 20 of the handle B and particularly for the purpose of allowing the head 15 of the tack to be inserted in the claw 12. The bolt or rivet 19 tends to hold the spring arm 11 against lateral movement and thus holds the claw 12 in alinement with the head or angular surface 13 of the hammer head A. Figure 3 illustrates a portion of the device as it would appear in the act of withdrawing a tack, the arm 11 being shaped with an outwardly curved portion 23, which bears against the surface from which the tack is being withdrawn to form a fulcrum point for the handle which serves as a lever in removing the tack. The shape of the outer curved portion 23 of the arm 11 does not interfere with the setting of the tack when held in the claw 12, owing particularly to the angularly disposed surface 13 and the downward stroke of the device in setting the tack. The spring arm 11 extends from and forms a portion of the handle 10 and thus provides sufficient resiliency to form a practical, inexpensive device.

In accordance with the patent statutes I have described the principles of operation of my invention, together with the apparatus which I now consider to represent the best embodiment thereof, but I desire to have it understood that the construction shown is only illustrative and that the invention can be carried out by other means and applied

to uses other than those above set forth within the scope of the following claims:

1. A combined tack setter and puller comprising a head, a handle extending outwardly from said head, a tack engaging member formed integral with said handle, means on said head adapted to hold a tack against said tack engaging member and means formed on said tack engaging member for engaging the object from which a tack is drawn.

2. A device of the class described having a driving head, a handle having a spring arm with a claw on its free end adapted to hold a tack to the face of said head to set the tack when the device is swung to strike a blow, a shoulder formed on said claw adapted to form a fulcrum point for said arm in withdrawing a tack.

3. A combined tack setter and puller comprising a head, a looped handle secured at one end to said head and formed at its other end with a tack engaging member, means on said head adapted to hold a tack against said tack engaging member and means formed on said tack engaging member for engaging the object from which a tack is drawn.

4. A tack setter and puller comprising a head, a handle secured at one end to said head and extending outwardly therefrom, a loop portion on said handle spreading away from the same at the looped end thereof and returning towards said handle near the head, outwardly extending portion connected with said loop portion having a claw adapted to engage one end of said head for holding the tack in place upon said head, said outwardly extending portion of said handle forming a fulcrum for drawing a tack.

5. A tack setter and puller including a tack holding and pulling spring claw, a striking head against which said claw is adapted to be held under spring tension when the tack is being set and a shoulder formed on said claw adapted to engage the object from which the tack is drawn when the tack is being removed.

6. A tack setting and pulling device, including a tack holding spring claw arm, a striking head and a shoulder formed on said claw arm adapted to form a fulcrum point for said arm in pulling a tack.

7. A tack setting and pulling device including a tack holding spring arm having a claw, a striking head and means for holding said arm in alinement with said head to hold the tack centrally against the surface of said head to drive and set the tack, and means on said claw for engaging the object from which the tack is drawn when the claw is used for pulling a tack.

8. A device of the class set forth, including a striking head, a handle, a spring arm

having a claw formed on its free end, a shoulder formed on said claw adapted to form a fulcrum point for said arm in withdrawing a tack, means for holding said arm in alinement with said handle and striking head to cause the claw to aline itself with said head and spring means adapted to urge the spring action of said arm in holding a tack in position under spring tension against said head.

9. A device of the class set forth comprising a head, a looped shaped handle secured at one end to said head, the other end thereof being bent away from said first end and caused to over-lap one end of said head, a claw formed on said over-lapping end and a hump formed on said second end adjacent said claw to serve as a fulcrum in removing a tack by means of said claw.

10. A combined tack setter and puller comprising a tack engaging member, a head adapted to hold a tack in place against said

tack engaging member, a shoulder formed on said tack engaging member for removing a tack and a spring handle connecting said head and tack engaging member.

11. A combined tack setter and puller comprising a head, a handle issuing outwardly from the central portion of said head at right angles thereto, said handle being looped back upon itself to lie parallel with a portion thereof issuing immediately outwardly from said head, an outwardly turned portion on said handle extending outwardly beyond one end of said head to form a fulcrum for removing a tack, an inclined portion formed on said handle issuing from said outwardly extending portion and extending towards the head, a claw formed on said last named portion and an inclined face formed on said head adapted to engage said inclined claw to hold the tack in place between the same.

ANDREW ERICKSON.