

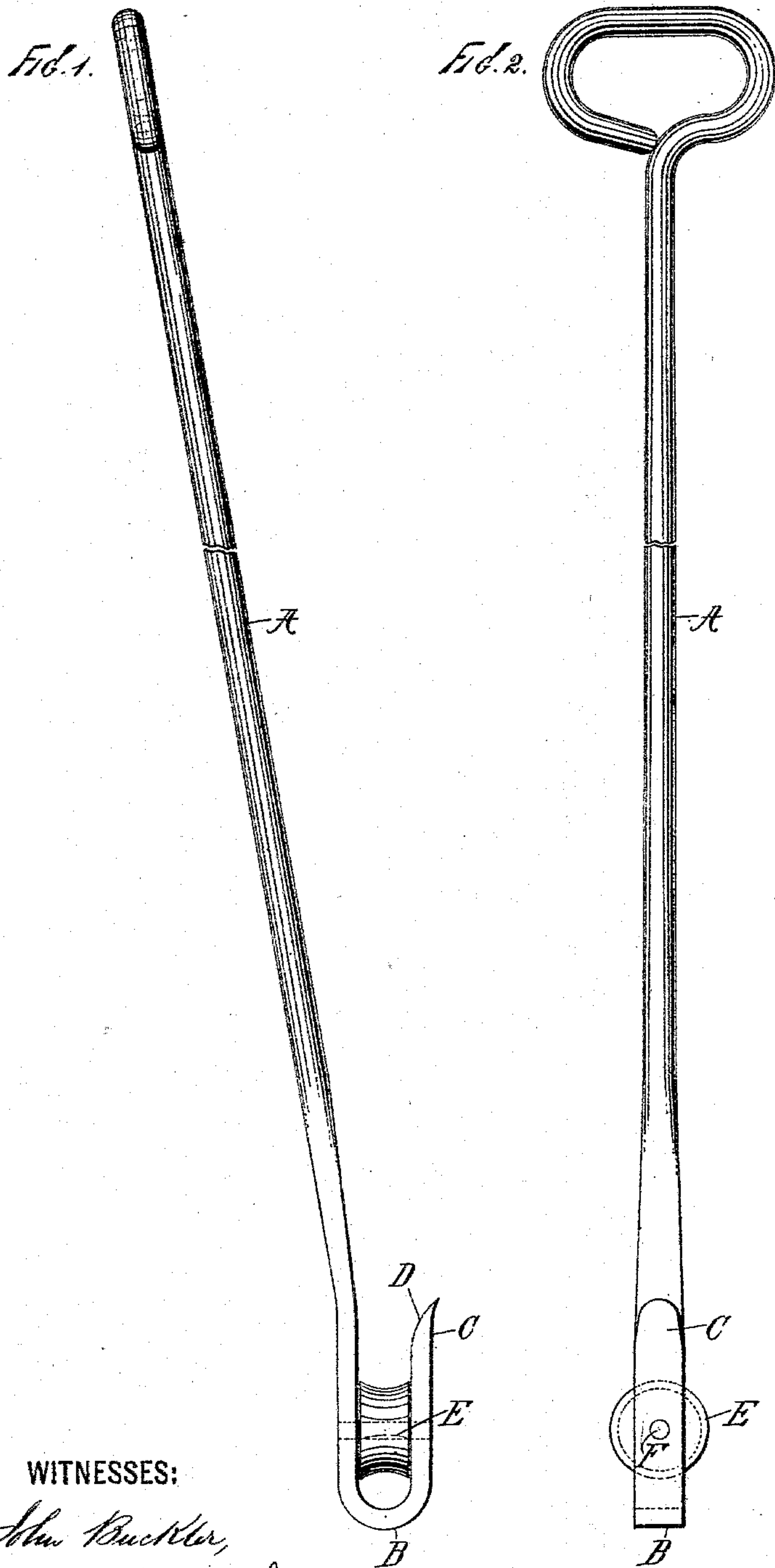
(No Model.)

W. WALLACE.

TOOL FOR MANIPULATING THE OVERFEED OF ROLLING MILLS.

No. 494,945.

Patented Apr. 4, 1893.



WITNESSES:

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TOOL FOR MANIPULATING THE OVERFEED OF ROLLING-MILLS.

SPECIFICATION forming part of Letters Patent No. 494,945, dated April 4, 1893.

Application filed September 22, 1892. Serial No. 446,525. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM WALLACE, a citizen of the United States, residing at Ansonia, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Tools for Manipulating the Overfeed of Rolling-Mills, of which the following is a specification, reference being had to the drawings accompanying and forming a part of the same.

In the manufacture of wire and wire rods, by rolling the same down from a billet or bar of metal, the wire is successively passed through a series of reducing rolls and by such passes is reduced in diameter and correspondingly increased in length. As the end of the wire issues from one set of rolls it is at once seized and entered between another set, and the loop thus formed extends laterally from the rolls to a greater or less distance, depending, of course, upon the difference of reduction between the two sets of rolls then acting upon it. In the case of wire or other like rolling mills this loop or "overfeed" comes to be of such length that it is likely, under the high speed of rolling to twist or become kinked or knotted as also to tangle with other loops running to and from adjacent rolls. Accordingly, it has been common to guide such loops by hand, to keep them running steadily in proper direction. In doing this, the loop is engaged by a hook in the hands of a workman, who retreats from the rolls as the loop issues, and properly guides it during its extension and prevents its end when freed from flying aside. In thus managing and controlling the overfeed loops of wire or rods, the common form of workman's hook is an uncertain, and in particular respects, inefficient tool. The metal being soft and ductile, especially so when heated, there is danger that it become abraded or indented during its passage through the hook in the workman's hands, and so tend to engage or take hold upon the hook, in which event the hook may be pulled from the workman's hands and his function wholly frustrated. Tangling or knotting of the wire may be thus brought about, resulting in spoiling the wire and sometimes in injuring the rolling machinery.

The purpose of my present invention is to improve the common workman's loop hook,

so that it can be safely relied upon to permit the free passage of the wire through its jaw when the same is being reduced by rolling, as explained.

The invention consists in a hook of the kind described, which hook is provided with a friction wheel or roll so located in the jaw of the same that when the hook engages an overfeed loop the hook will bear wholly upon the roll, which by its revolution will permit the free passage of the loop through the hook without frictional obstruction, the loop passing around the roll as does a belt over a pulley, by peripheral travel therewith and not by sliding or dragging thereon.

In the drawings, the Figure 1 represents in side elevation a hook embodying my invention, Fig. 2 being a front elevation of the same.

A is the handle of the hook, which is of any suitable length and size, being usually constructed of round iron or steel.

B is the bend or jaw of the hook, which is of flattened or strap-like form, and is set at a slight angle to the handle, as shown in Fig. 1.

C is the point of the hook, which is suitably reduced or brought to a rounded edge at its end, as by the curved bevel D inclining from the opening of the jaw of the hook outwardly.

E is the roll located in the jaw of the hook, the same being mounted to rotate freely on the pivot F, preferably passing through the handle and point parts of the hook. This roll is grooved peripherally, and is of such size, or the length of the point C is such, that the upper edge face of the roll is considerably below the end of the point. Thus, the loop can be picked up by the hook point, when the groove of the roll would not serve therefor, and the point will direct the loop to within the jaws of the hook and into the groove of the roll. Also this projection of the point above the roll, acts to prevent the loop leaving the jaws of the hook when, for any reason, it leaves the roll slightly. It is to be noted that the handle of the hook is at an angle to the jaws, or to the line passing parallel to the parts of the jaw. This is for the purpose of giving clearance to the jaws; also by this form the jaws will be horizontally positioned, so as to readily engage a loop on the floor when the tool is held in the hands of a standing workman.

In operation, the workman hooks the loop as it issues from the reducing rolls, pulling it taut, or nearly so, and holding the hook firmly in hand retreats laterally from the reducing rolls. The loop passes freely through his hook, with slight resistance and without any tendency to engage the same. The labor of manipulating the loops is thus rendered lighter, and is practically freed of all danger to the workman, and there is no waste of product because of the inefficient hold of the workman's hook upon the wire and consequent tangling or knotting, especially in the case of manipulating wire of ductile and soft metal.

The construction of the loop hook, and the arrangement of the roll thereon may be variously different from that shown, but it is essential that the loop bear wholly on the roll

when in the jaws of the hook, and it is desirable that the point of the hook extend well beyond the roll and be shaped so as to readily engage the loop and direct it upon the roll as well as to prevent the loop leaving the hook jaw.

What is claimed as new is—

A tool of the character herein described, consisting of a handle inclined as described, and having its lower end formed into a hook, leaving an open and unobstructed throat and a roller mounted in the jaw of the hook below the point C, of said hook, substantially as and for the purposes hereinbefore described.

WM. WALLACE.

Witnesses:

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