(No Model.)

W. B. SANDFORD.

PIPE DRAWING TOOL.

No. 537,485. Patented Apr. 16, 1895.

Fig. 1.

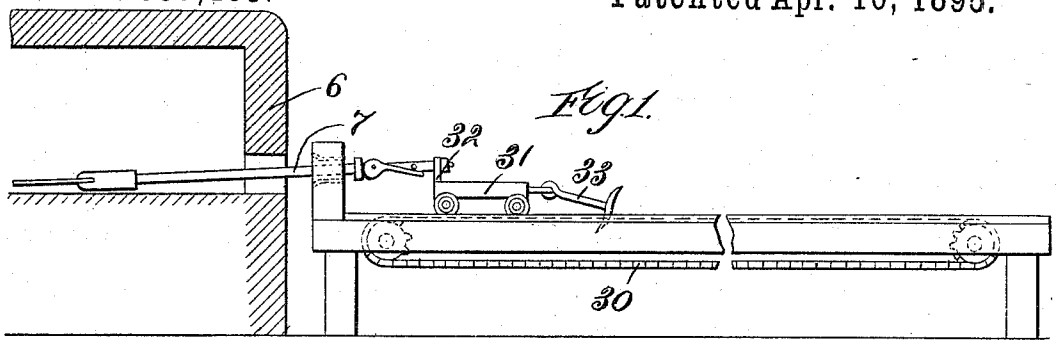

Fig. 2.

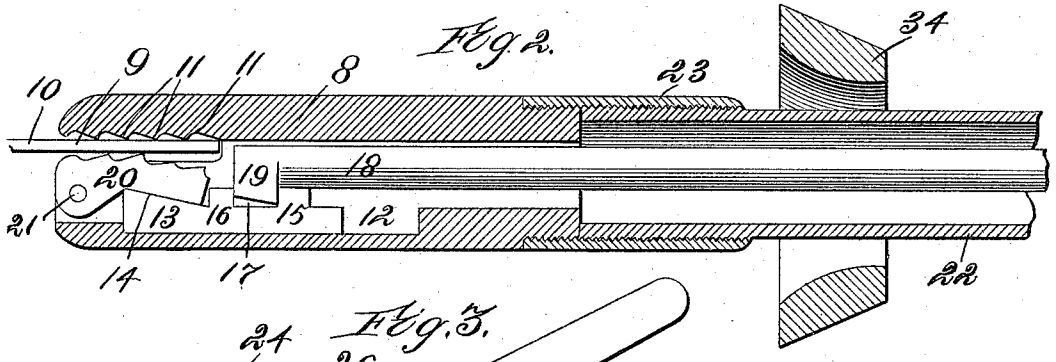

Fig. 3.

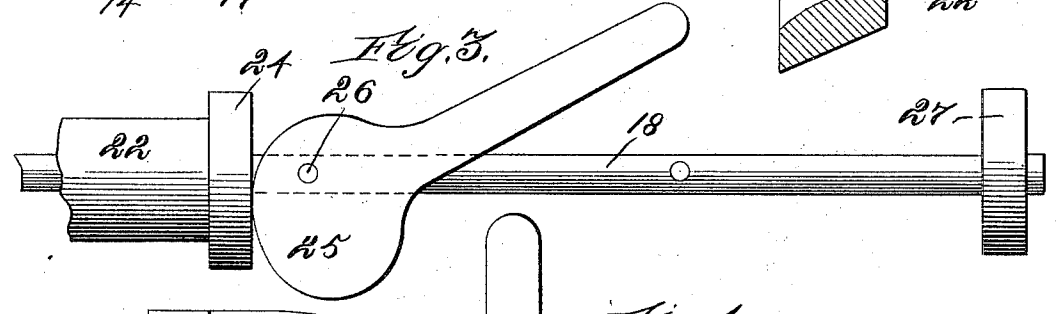

Fig. 4.

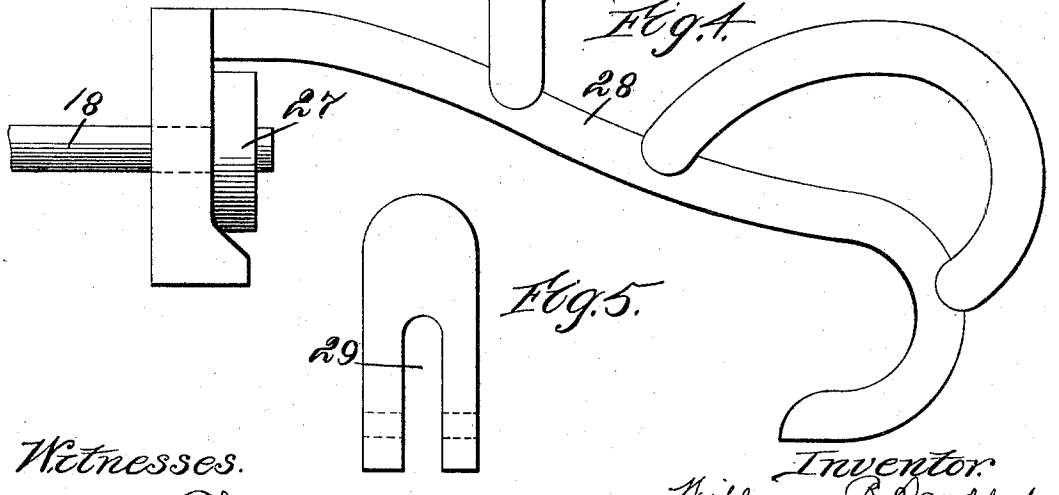

Fig. 5.

Witnesses.
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UNITED STATES PATENT OFFICE.

WILLIAM B. SANDFORD, OF KEWANEE, ILLINOIS.

PIPE-DRAWING TOOL.

SPECIFICATION forming part of Letters Patent No. 537,485, dated April 16, 1895.

Application filed April 24, 1894. Serial No. 508,885. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. SANDFORD, a citizen of the United States, residing at Kewanee, Henry county, Illinois, have invented certain new and useful Improvements in Pipe-Drawing Tools, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a longitudinal section of a furnace, showing the manner in which my improved pipe-drawing tool is used. Fig. 2 is a longitudinal vertical section of one end of my improved tool. Fig. 3 is a detail, being a side elevation of the other end of the tool. Fig. 4 is a view of the hook by means of which the tool is secured to the endless belt. Fig. 5 is an end view of the fork of said hook.

My invention relates to tools used in the manufacture of butt weld pipe by drawing a skelp through a bell, and has for its object to provide an improved tool or tongs by means of which the skelp may be gripped after it has been heated and be drawn through the bell. I accomplish this object as hereinafter specified and as illustrated in the drawings.

That which I regard as new will be set forth in the claims.

In the drawings, 6 indicates a furnace, and 7 indicates my improved pipe-drawing tool.

8 indicates the head of the tool, which is circular in cross section and has a slot 9 at its forward end, as shown in Fig. 2, such slot being of sufficient size to receive the end of the skelp 10. That portion of the head 8 which is above the slot 9 is provided with teeth or corrugations 11, as shown in Fig. 2, forming a stationary upper jaw.

12 indicates a chamber formed within the head 8, in which chamber is a sliding block 13. The forward end of the block 13 is wedge shaped, having an inclined upper surface 14, as shown.

15 indicates a shoulder on the upper side of the block 13 near its rear end.

16 indicates a second shoulder formed between the incline 14 and the shoulder 15, the shoulders 15 and 16 thereby forming a recess 17 between them.

18 indicates an operating rod, which carries a shoulder 19 on its forward end, which shoulder is adapted to fit into the recess 17, as shown. By moving the rod 18 longitudinally the block 13 may be moved back and forth in the chamber 12.

20 indicates a jaw which is pivotally mounted in the forward end of the head 8 by a pivot 21. The under surface of the jaw 20 is adapted to rest upon the incline 14, and when the block 13 is in its forward position the jaw 20 will be at its greatest distance from the teeth 11 which lie immediately above it. When the rod 18 is drawn backward the sliding block 13 will also be moved backward, and the incline 14 will cause the jaw 20 to move upward, and consequently the skelp will be firmly gripped between the opposing jaws. The jaw 20 is provided with suitable teeth, as shown. It will be seen that by this construction the greater the pull upon the rod 18 the greater will be the force with which the jaw 20 is moved toward the opposite portion of the head.

In order to provide for operating the rod 18 at a distance of several feet from the head 8, as is necessary owing to the intense heat of the furnace, I provide a sleeve 22, which is fitted upon the rod 18 and is connected at its forward end to the head 8 by a pipe-coupling 23, as shown in Fig. 2. The rear end of the sleeve 22 is preferably provided with a collar 24, as shown in Fig. 3.

25 indicates a cam lever, which is pivoted upon the rod 18 by a pivot 26. The cam lever is adapted to bear against the rear end of the sleeve 22, and the arrangement is such that by operating said lever in one direction the sleeve 22 will be moved forward upon the rod 18, thereby moving the block 13 backward, as above described.

27 indicates a collar which is secured upon the rear end of the rod 18, as shown in Figs. 3 and 4.

28 indicates a hook, having a fork 29, which fork is adapted to receive the rod 18, as shown in Fig. 4. The hook is adapted to be secured to an endless belt 30. The arrangement is such that when the hook 28 is secured in the belt 30 the tool will be drawn backward by means of the rod 18, and consequently the force of the pull will be transmitted through the block 13 to the jaw 20; and therefore the greater the resistance the greater will be the force by which the jaw 20 is caused to grip the skelp.

In Fig. 1 I have shown a substitute for the hook 28, consisting of a carriage 31 of the usual form, provided with a fork 32 at its forward end similar to the fork 29. The carriage 31 is secured to the endless belt by a hook 33.

34 indicates the welding bell through which the skelp is drawn.

It should be understood that the word skelp is herein used to apply to the strip of metal which is to be drawn through the bell regardless of whether or not such strip has been previously treated to make it adapt itself more readily to tubular form.

That which I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination with a head 8, and swinging jaw 20, of a block 13, having an incline 14, a rod 18 for operating said block, a sleeve 22 connected to said head, and a cam lever 25 pivoted upon said rod 18 and bearing against the rear end of said sleeve 22, substantially as described.

2. A pipe-maker's tool consisting of a head having a stationary jaw, and a movable jaw pivoted at its front end in said head and movable toward and from said stationary jaw, a wedge block adapted to move longitudinally in said head for operating said pivoted jaw, a rod connected to said wedge block, and a lever for moving said rod longitudinally in said head for the purpose of closing said jaws, substantially as described.

3. In a pipe-maker's tool the combination with a head, and a sleeve connected thereto, said head having a stationary jaw, of a jaw pivoted in said head, a wedge block for operating said pivoted jaw, a rod connected to said wedge block, and a cam lever pivoted to said rod and adapted to bear against said sleeve, substantially as described.

WILLIAM B. SANDFORD.

Witnesses:
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