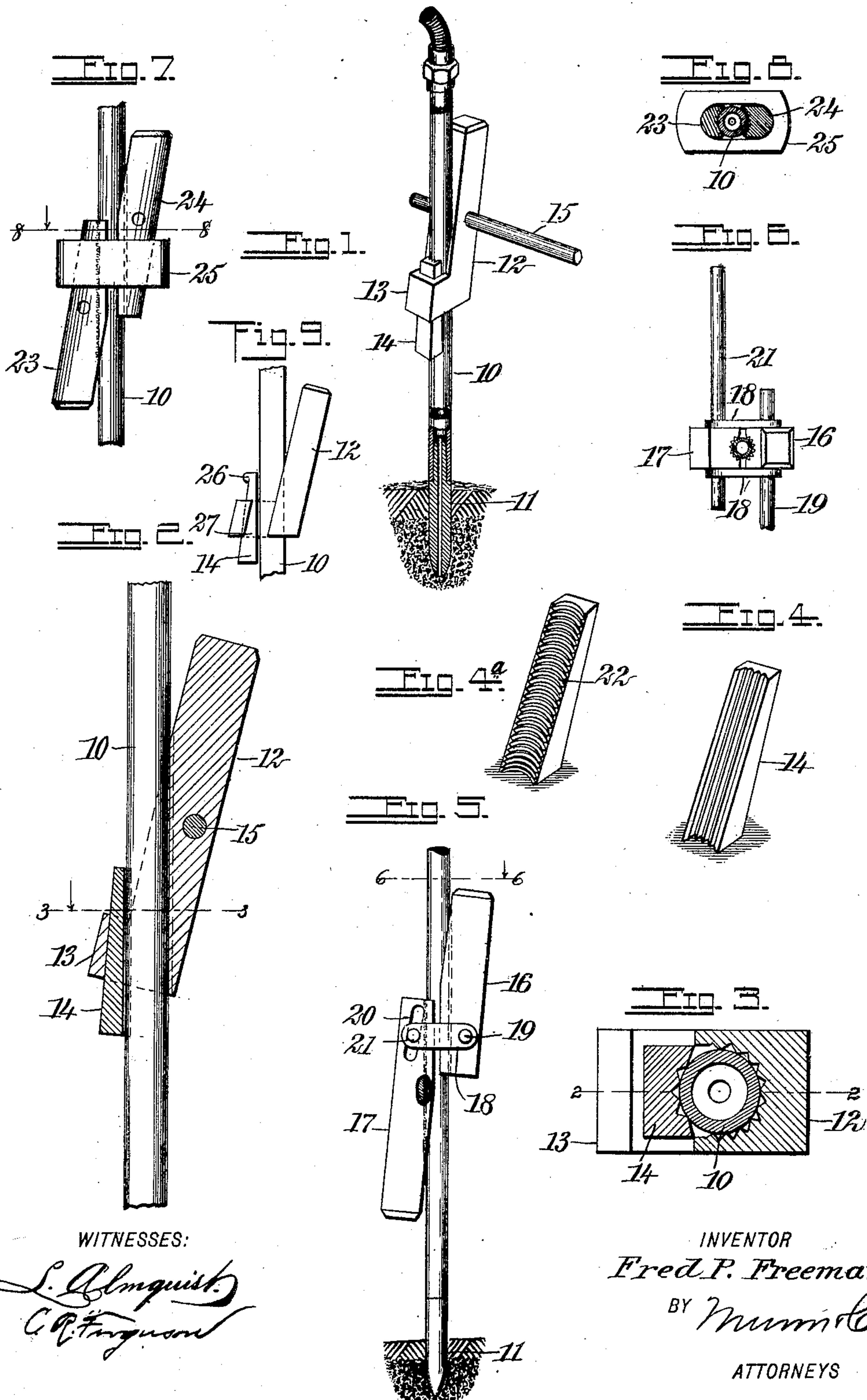


No. 891,157

PATENTED JUNE 16, 1908.

F. P. FREEMAN.
DRIVING HEAD.

APPLICATION FILED JUNE 9, 1906. RENEWED MAY 6, 1908.



WITNESSES:

L. Olmquist
C. R. Ferguson

INVENTOR

Fred P. Freeman

BY *Mumford*

ATTORNEYS

UNITED STATES PATENT OFFICE.

FRED PRENTISS FREEMAN, OF DOMINION, YUKON, CANADA.

DRIVING-HEAD.

No. 891,157.

Specification of Letters Patent.

Patented June 16, 1908.

Application filed June 9, 1906, Serial No. 321,037. Renewed May 6, 1908. Serial No. 431,161.

To all whom it may concern:

Be it known that I, FRED PRENTISS FREEMAN, a citizen of the United States, and a resident of Dominion, Yukon Territory, Dominion of Canada, have invented a new and Improved Driving-Head, of which the following is a full, clear, and exact description.

This invention relates to improvements in driving heads for tubes or pipes, particularly pipes employed in mining operations and driven into the ground to admit steam for thawing frozen earth, gravel and the like, the object being to provide a driving head that may be removably and adjustably placed on a pipe and that when in position will rigidly engage the pipe during the driving.

Other objects of the invention will appear in the general description.

I will describe a driving head embodying my invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of a driving head embodying my invention; Fig. 2 is a longitudinal section thereof, on the line 2—2 of Fig. 3; Fig. 3 is a section on the line 3—3 of Fig. 2; Fig. 4 is a perspective view of a clamping jaw or wedge employed in connection with the form of the device shown in Figs. 1, 2 and 3; Fig. 4^a shows a modified form of clamping jaw or wedge; Fig. 5 is an elevation showing a modification; Fig. 6 is a section on the line 6—6 of Fig. 5; Fig. 7 is an elevation showing another modification, Fig. 8 is a section on the line 8—8 of Fig. 7, and Fig. 9 shows a modification.

Referring first to the example of my improvement illustrated in Fig. 1, 10 indicates the usual steam pipe having connection at its upper end with a flexible pipe leading from the source of steam supply. A novel feature of this pipe however, resides in the detachable driving point 11. The upper end of the driving point is reduced in diameter, the diameter being slightly smaller than the interior diameter of the pipe, and this reduced portion is tapered so that when the pipe is forced downward by driving, a steam-tight joint will be formed between the pipe and the

point. The driving head consists of a block 12 of suitable metal, such for instance as steel, and this head has an opening at its lower end, a portion of which is arranged in an offset 13, and through this opening the pipe 10 is designed to pass. The block or head extends upward and at a slightly outward angle with relation to the pipe, so that the head may be readily struck by the driving tool. The lower portion of the block or head 12 is slightly concaved to receive the pipe and the wall thereof may be serrated if desired. When the block 12 is on the pipe it is rigidly clamped thereto by means as here shown of a wedge-like jaw 14, concaved and serrated at its inner side. This jaw is designed to be forced between the outer wall of the offset 13 and the pipe, and driven upward, the larger end being downward. When the jaw is first inserted it is possible that the driving head will not be tightly clamped to the pipe; by one or two blows however, upon the upper end of the block 12, it will be forced downward relatively to the wedge so that the serrations of the wedge and block will engage slightly in the metal. The driving head is provided with a bar 15 which passes through it, this bar being designed as a handle by means of which the pipe may be rotated when necessary to loosen it in the ground. In the example shown in Figs. 5 and 6 the driving head consists of two blocks 16 and 17, which are concaved and serrated at their inner sides as clearly indicated in Fig. 6. The adjacent ends of the blocks 16 and 17 are connected by links 18; the links as here shown having swinging connection with a rod 19 passing through the head block 16 and the other block 17 is provided with a slot 20 which extends longitudinally of said block and at a slight angle downward and outward, and passing through this slot is a bar 21 which also passes through the links 18. The object in making the construction shown in Fig. 5 is so that when one of the heads or blocks becomes battered or worn the parts may be reversed and the other head or block used for the striking. When the driving head comprising the blocks 16 and 17 is used, it is placed over the pipe and the links 18 at first will be substantially at right angles to the pipe, but after a blow or two upon the head block 16 it will be forced downward, in-

clining the links, so that the links will draw the two blocks into tight connection with the pipe. It is obvious that a driving head embodying my invention may be quickly adjusted to a pipe and will be comparatively inexpensive, for the reason that it may be used in connection with one pipe after another, while in the old manner of driving pipe the driving head is fixedly attached thereto by welding or the like and when such head becomes battered a new one must be placed in position by a blacksmith.

While I have shown the serrations as extended longitudinally of the jaws, so far described, the serrations of at least one of the jaws may extend transversely as indicated at 22, in Fig. 4^a.

In Figs. 7 and 8, I show two independent jaws 23, 24, which are practically in the form of wedges, and are engaged within a collar 25, the operation being substantially the same as that shown in Fig. 5.

As indicated in Fig. 9, the upper or small end of the wedge may be provided with a rib 26, to prevent its falling out when loosened on a vertical pipe; and to permit the driving head to be applied to a pipe or removed therefrom laterally, the block or head may have one of its side walls provided with an opening 27, through which the pipe may pass.

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

1. A driving head for a pipe, comprising two clamping members having sliding connection one with the other and concaved on their inner sides, one of the said members being inclined with relation to the other member.

2. A driving head for a pipe, comprising a block having an offset at its lower portion and an opening extended through said offset, the said block having a concavity for receiving the pipe and a concaved wedge-like jaw for engaging into the offset and against the pipe.

3. A driving head for a pipe comprising a block having an opening in its lower portion, such block when in position being at an upward and slightly outward angle with relation to the pipe, and a wedging jaw engaging in said opening and with the pipe.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRED PRENTISS FREEMAN.

Witnesses:

M. H. BAKER,
G. C. WATT.