H. H. FISHER.

REMOVING CORES FROM MOLDS.

No. 185,905. Patented Jan. 2, 1877.

Fig. 1.

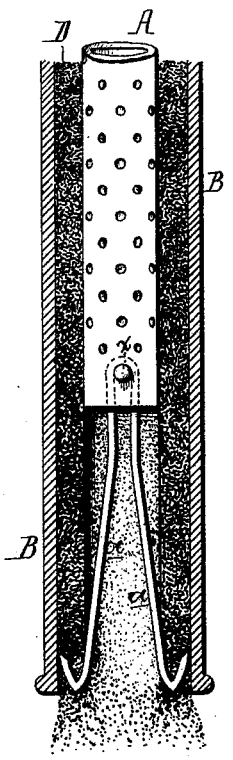
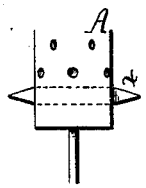


Fig. 2.

Fig. 3.



Witnesses
Harry Howson Jr
Harry Smith

Hiram H. Fisher
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UNITED STATES PATENT OFFICE.

HIRAM H. FISHER, OF ALLENTOWN, PENNSYLVANIA.

IMPROVEMENT IN REMOVING CORES FROM MOLDS.

Specification forming part of Letters Patent No. **185,905**, dated January 2, 1877; application filed June 26, 1876.

To all whom it may concern:

Be it known that I, HIRAM H. FISHER, of Allentown, Lehigh county, Pennsylvania, have invented an Improvement in Removing Cores from Cast-Metal Pipes, of which the following is a specification:

The object of my invention is to facilitate the withdrawal of core-barrels from newly-cast pipes, and to readily remove from the interior of the pipes the linings of baked loam. This object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawing, in which—

Figure 1 represents a section of part of a cast-iron pipe, with the device for facilitating the removal of the lining from the same; Fig. 2, a view drawn to a reduced scale, and illustrating the mode of withdrawing the core-barrel from a newly-cast pipe; and Fig. 3 a view illustrating a modified device for carrying my invention into effect.

Cores for pipes are usually made by first wrapping a perforated pipe or barrel, A, with hay or straw, then coating the latter with loam, and, finally, drying the coating.

After the pipe has been cast it is the common plan to forcibly withdraw the barrel, the loam which adheres to the interior of the pipes being removed by the operation of scraping with long instruments, and hammering the outside of the pipe. I obviate the necessity of resorting to this tedious process by attaching to one end of the core-barrel A a scoring or scraping instrument, which, in the present instance, consists of two elastic arms, *a a*, united at the upper ends, where the said instrument is connected to the core-barrel by a transverse pin, *x*, the arms being hooked at the outer ends, and the ends of the hooks, owing to the elasticity of the said arms, bearing with considerable force against the interior of the pipe B. On withdrawing the core-barrel from the pipe the lining D of baked loam will be severed and disintegrated by the hooked ends of the arms, and will fall in fragments from the lower end of the pipe.

Instead of pulling the core-barrel from the interior of the pipe in the usual manner, I prefer to adopt the following plan in connection with the molding structure for which I filed a separate application for a patent on the 3d day of June, 1876.

The newly-cast pipe, with its core-barrel, having been hoisted from the molding-pit and mold clear of the same, the upper end of the core-barrel is attached to any suitable suspending tackle, (see Fig. 2,) and the pipe itself released from the hoisting appliances, when it will descend to the ground by its own weight.

During its descent the lining of loam will be severed and disintegrated by the instrument described above.

The advantage of this arrangement will be understood when it is borne in mind that it is the practice to coat cast-iron pipes, while they are hot, with gas-tar, both internally and externally.

The usual plan is to reheat the pipes after they have been cleansed by hand in the usual manner, then to immerse them in a bath of tar, but by taking the newly-cast pipe directly from the mold, and permitting it to fall from the core-barrel in the manner described, the cleansing is so thorough and rapid that the pipe will retain sufficient heat to permit it to be subjected to the tar-bath without reheating.

It will be evident to those skilled in the art of pipe-molding that it is not essential to make the severing instrument precisely as shown and described; it may, for instance, consist of three or more elastic arms, or may be otherwise constructed for cutting or scoring the baked lining of loam.

In some cases I so arrange the pin *x* that it will project on both sides of the barrel, the projecting ends being pointed, so as to cut the lining at right angles to the cuts made by the elastic arms.

I claim as my invention—

1. The mode herein described of extracting a core-barrel from a newly-cast pipe—that is to say, by causing the pipe to fall by its own weight from the suspended barrel, as set forth.

2. The mode described of internally cleansing the interior of newly-cast pipes—that is, by severing the internal lining of baked loam while the pipe is falling from the suspended barrel by its own weight.

3. The combination, substantially as described, of a core-barrel with an instrument, substantially as set forth, for cutting the baked lining of loam in the interior of the pipe while the latter is falling from the barrel, or the barrel is being pulled from the pipe.

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

HIRAM H. FISHER.

Witnesses:

HARRY SMITH,

HARRY HOWSON, Jr.