(No Model.)

T. S. WILKIN.

DEVICE FOR KEEPING JOURNALS COOL.

No. 290,159. Patented Dec. 11, 1883.

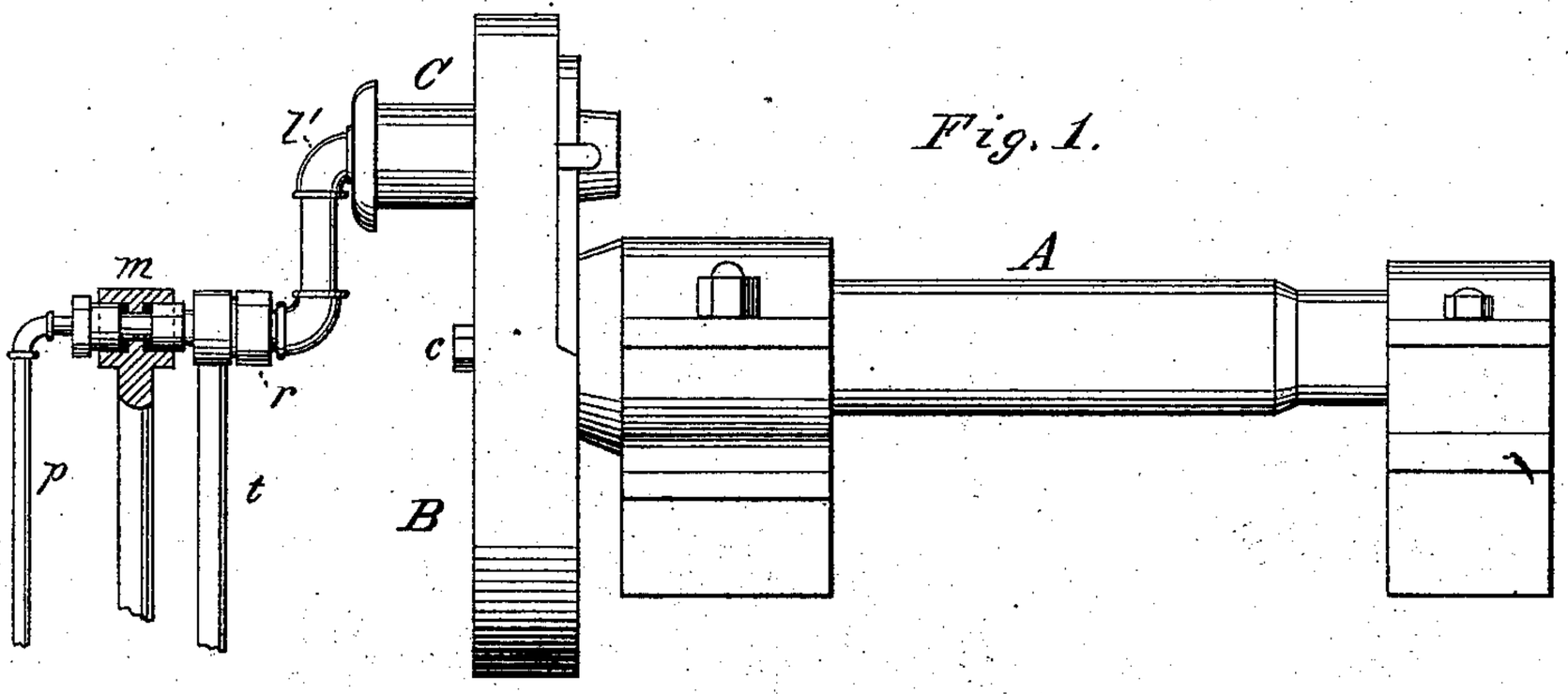

Fig. 1.

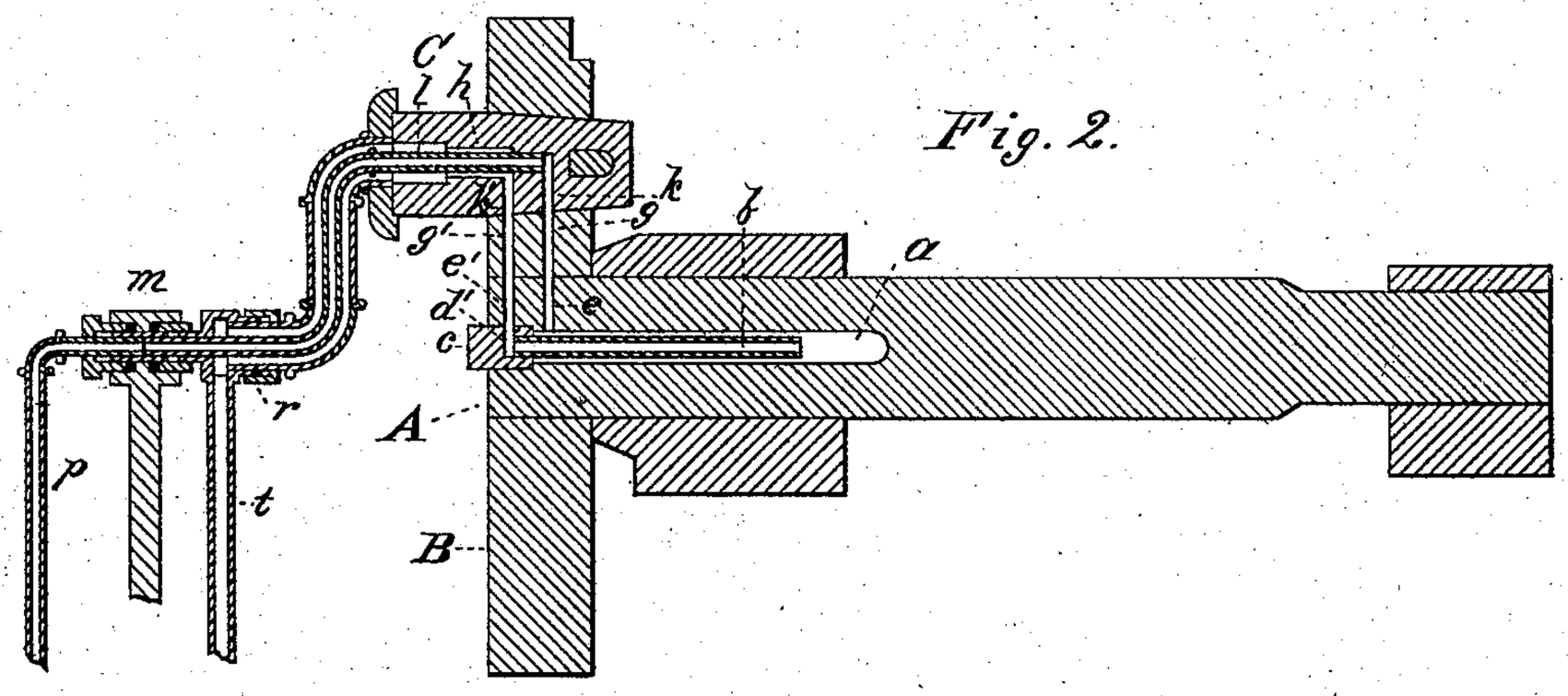

Fig. 2.

WITNESSES

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THEODORE S. WILKIN, OF EAST SAGINAW, MICHIGAN.

DEVICE FOR KEEPING JOURNALS COOL.

SPECIFICATION forming part of Letters Patent No. 290,159, dated December 11, 1883.

Application filed May 12, 1883. (No model.)

To all whom it may concern:

Be it known that I, THEODORE S. WILKIN, a citizen of the United States, residing at East Saginaw, in the county of Saginaw and State of Michigan, have invented certain new and useful Improvements in Devices for Keeping Journals Cool; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of this invention in a side view. Fig. 2 is a vertical section.

This invention has relation to devices for keeping journals cool by passing water into the journal through the wrist-pin; and it consists in the construction and novel arrangement of the bent pipe having a centered end connected to the water-supply and a perforated wrist-pin, to which the other end of the pipe is attached, the perforated crank-arm and the hollow journal having lateral perforations communicating with the perforations of the crank-arm.

The invention also consists, in connection with the devices hereinbefore referred to, of the water-pipes in the wrist-pin, around the supply-pipe, and in the hollow journal, all as hereinafter set forth.

In the accompanying drawings, the letter A designates a journal, to which is secured a crank arm or wheel, B, which is provided with a wrist-pin, C, securely keyed in position. The journal A is formed with a central hollow or axial chamber, *a*, in which is arranged a pipe, *b*, of small diameter, which is not designed to touch the wall of the chamber, said pipe being held in position by means of a plug, *c*, which is inserted into the end of the chamber *a*, as shown in the drawings.

From the pipe *b* a lateral way, *d'*, is made through the side of the plug, said way *d'* communicating with a lateral perforation, *e'*, which is made in the journal, and which in turn communicates with a perforation, *g'*, in the crank-arm. In the wrist-pin an angular perforation, *h*, is formed, the axial portion of which is of somewhat larger diameter than the lateral branches *k* and *k'*, which extend through the side of the wrist-pin, the latter communicating with the perforation *g'* in the crank-arm. The branch perforation *k* of the wrist-pin, on the other hand, communicates with the perforation or way *g* in the crank-arm, which in turn communicates with the passage *e* in the journal leading directly into the hollow chamber *a*.

In the wrist-pin is inserted the end of the bent pipe *l*, which is of smaller diameter than the chamber *h*, which it traverses from end to end. The outer end of the bent pipe *l* is centered in the prolongation of the journal-axis, and is journaled in a bearing, *m*, having a stuffing-box at each end. Through the bearing *m* the pipe *l* communicates with the supply-pipe at *p*.

Around the bent pipe *l* is a larger bent pipe, *l'*, which is connected to the end of the chamber in the wrist-pin, with which it communicates. The other end of the pipe *l'* turns in a bearing, *r*, to which the discharge-pipe *t* is connected. Suitable stuffing-boxes are also provided for this bearing.

The construction described above is preferred, it being designed to carry the water through the wrist-pin and crank to the journal and back therefrom out through the crank. In the construction illustrated the water passes from the supply *p*, through the bent pipe *l*, to the perforation *k* of the wrist-pin, and thence to the chamber in the journal, which it traverses, passing on the outside of the pipe *b* therein. The water then returns by the pipe *b* and perforations *d'*, *e'*, *g'*, and *k'* to the chamber *h* of the wrist-pin, whence it passes by the outer bent pipe, *l'*, to the discharge *t*.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with a bent pipe having a centered end connected to the water-supply and a chambered wrist-pin, to which the other end of the pipe is attached, of a hollow journal having lateral perforations communicating with perforations of the crank-arm and wrist-pin, whereby a current of water is car-

ried through the wrist-pin and crank into the journal and discharged therefrom, substantially as specified.

2. The combination, with the hollow journal, perforated crank, and chambered wrist-pin, of the water-pipes in the wrist-pin, around the supply-pipe, and in the hollow journal, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

THEODORE S. WILKIN.

Witnesses:
GEORGE DAVIES,
WILL H. BRISTOL.