

No. 708,183.

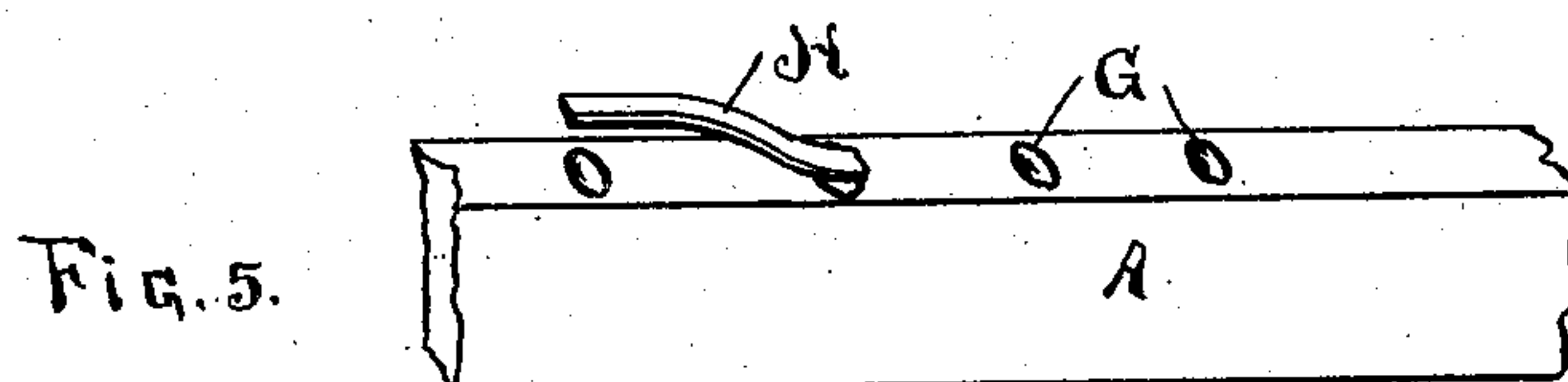
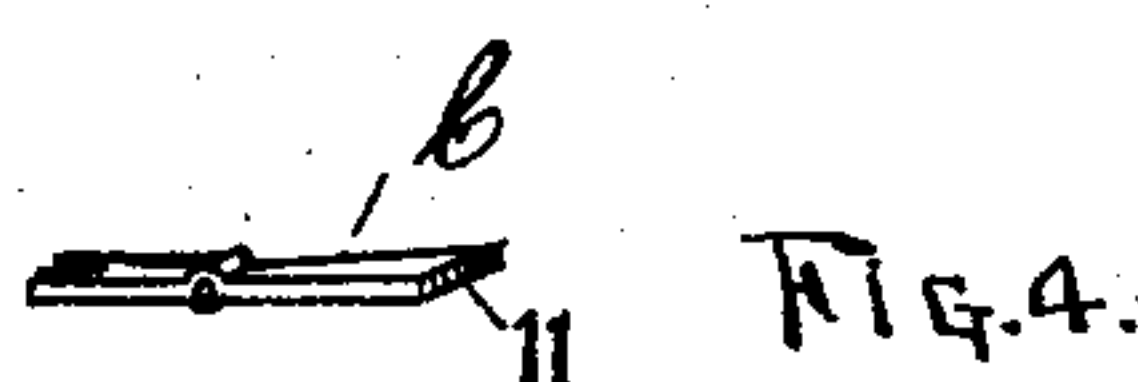
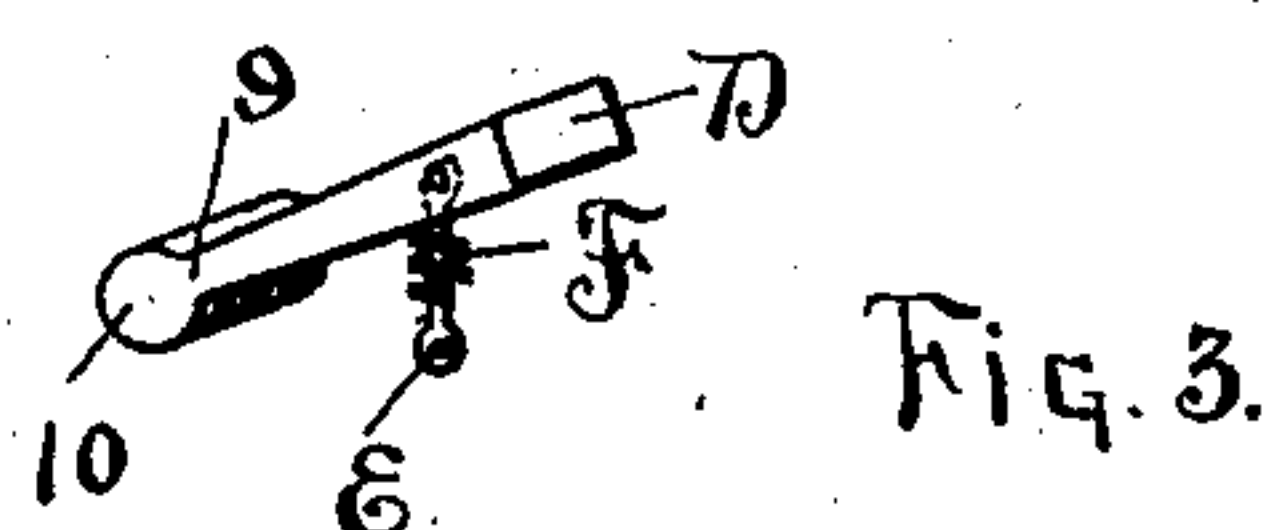
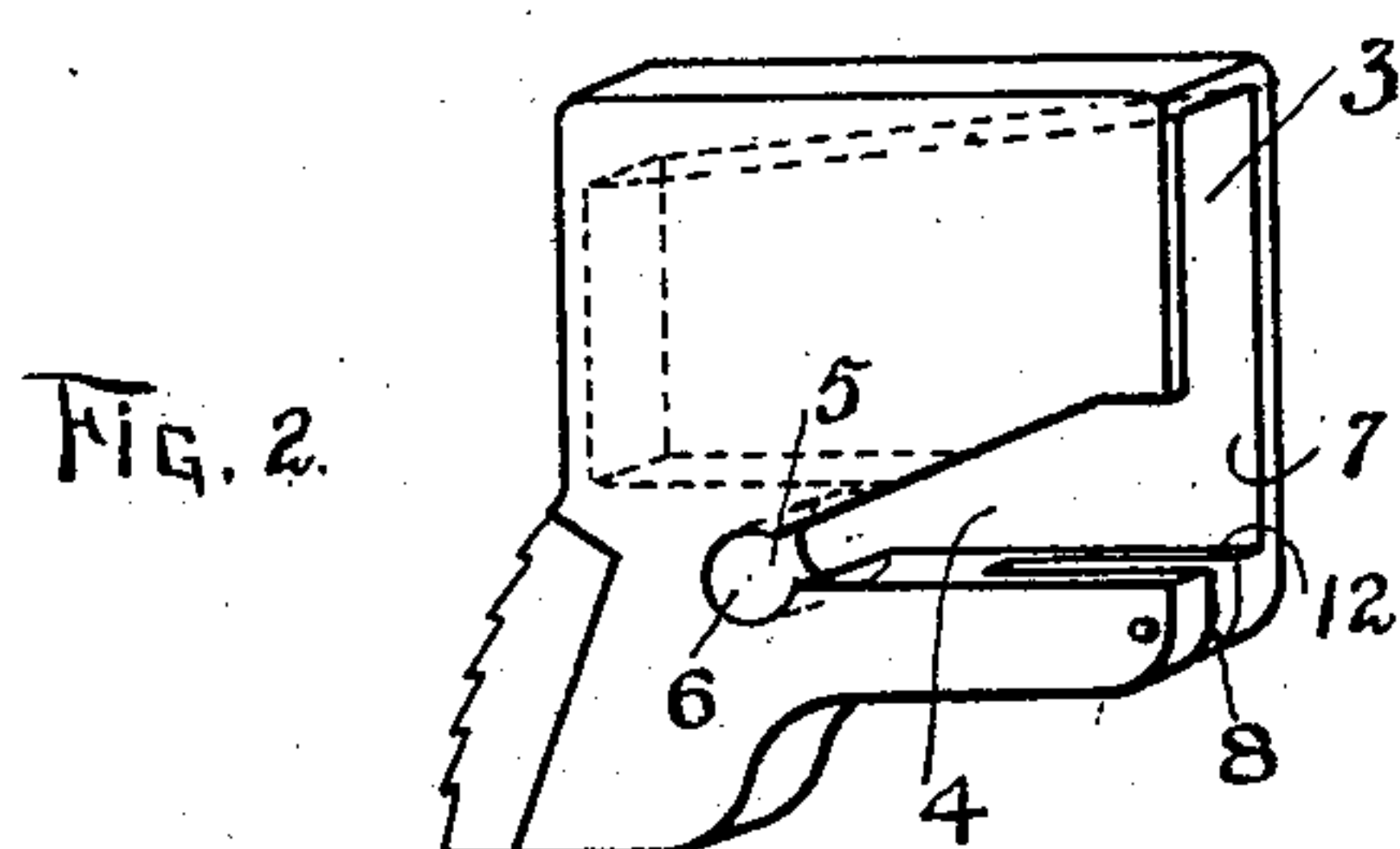
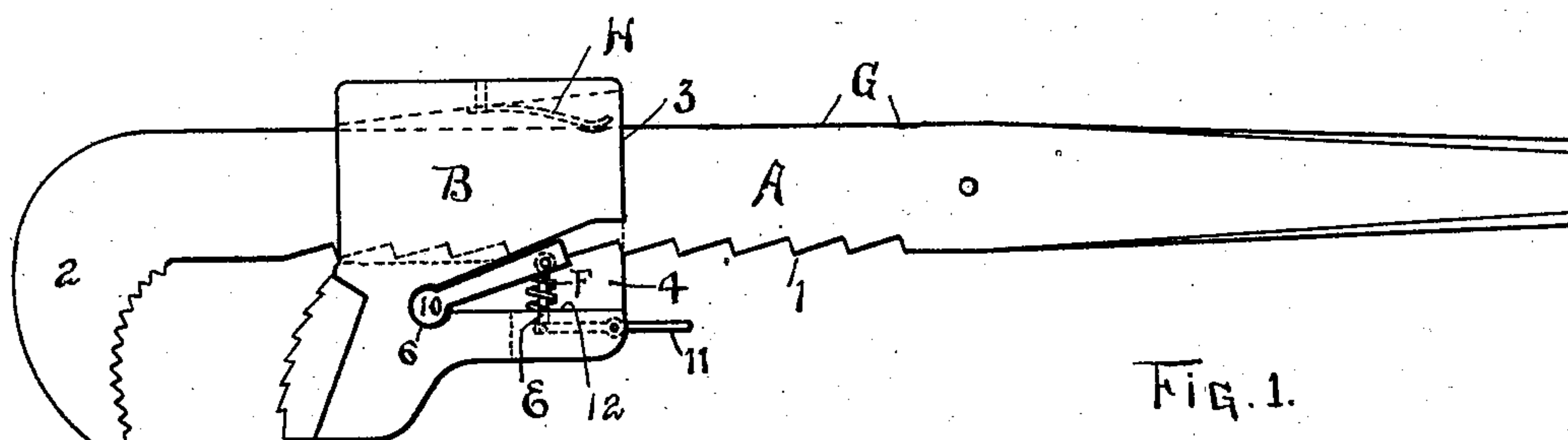
Patented Sept. 2, 1902.

M. WALSH & J. N. ANGERS.

WRENCH.

(Application filed Jan. 24, 1902.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

MICHAEL WALSH AND JOSEPH N. ANGERS, OF BAY CITY, MICHIGAN.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 708,183, dated September 2, 1902.

Application filed January 24, 1902. Serial No. 91,055. (No model.)

To all whom it may concern:

Be it known that we, MICHAEL WALSH and JOSEPH N. ANGERS, citizens of the United States, residing at Bay City, in the county of Bay and State of Michigan, have invented certain new and useful Improvements in Wrenches; and we do hereby 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.

This invention relates to improvements in pipe-wrenches, the object of the invention being to provide simple means for holding the jaw-locking mechanism in place and means to facilitate adjusting the wrench to various sizes of pipe and to produce these results by constructions requiring only a small amount of machine-work or hand-fitting in adjusting and assembling the various parts of the wrench.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a side view illustrating a wrench embodying our improvements. Fig. 2 is a perspective detail of the movable jaw. Fig. 3 is a perspective detail of the dog or pawl and the link and spring by which it is operated. Fig. 4 is a detail of the pivoted lever. Fig. 5 is a detail showing the presser-spring and its position relatively to the depressions in the shank of the wrench.

A represents the shank of the wrench, having teeth 1 on its lower edge and carrying the outer jaw 2.

B represents the movable jaw, having an opening 3, through which the shank A slides.

4 is a wedge-shaped opening through one side of the jaw B. 5 is the contracted lower end or neck of said opening, and 6 is a transverse part-cylindrical recess extending from the outer face of the jaw B to the inner face of the opposite wall 7.

8 is a central vertical slot, in which the pivoted lever C is mounted.

D is a dog or pawl having a contracted lower portion 9 and terminating in the large cylindrical portion 10, adapted to fit the open-

ing 6 of the jaw B. The cylindrical part 10 of the pawl D is inserted sidewise into the opening 6 and can only be removed therefrom by withdrawing it sidewise.

The link E is pivoted at its upper end to the pawl D and extends down into the slot 8, where its lower end is pivoted to the end of the lever C. This lever has a projecting thumb-piece 11. A coiled spring F is mounted on the link E between the pawl D and the face 12 of the opening 4 and operates to press the pawl normally upward. When the end 11 of the lever C is pressed upward, the pawl is drawn down and disengaged from the teeth 1, so that the jaw B may be slid back along the shank A.

On the upper face of the shank A are shallow depressions G, into which the lower end of the presser-spring H drops, with a slight tendency to retard the sliding of the jaw B as it is slid along the shank. The upper end of the spring H is secured to the top of the jaw B and is covered thereby. In practice we prefer to space the depressions G so that the spring H will drop in when the jaws 2 and B are properly set to take a standard size of pipe, thus aiding the operator in quickly adjusting the wrench.

It will be noted that the thrust of the inner jaw is transmitted through the dog D to the teeth 1 direct without any intermediate pins or pivots; also, that our construction permits the pawl to be quickly removed and replaced and that the intermediate link E between the pawl and the lever C prevents any strain being brought upon the pivot of that lever.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. In combination with the movable jaw, the wedge-shaped opening in one side thereof, said opening having a contracted lower end; the transverse part-cylindrical recess; the central vertical slot; the pivoted lever mounted therein; the upwardly-extending link; the spring on said link; the pawl having a cylindrical lower end and pivotally connected near its upper end with the upper end of the link, all arranged substantially as described and for the purposes set forth.

2. In a wrench of the class described, the combination of the shank having shallow depressions in its face, with the sliding jaw;

and a spring mounted within said jaw and having its end adapted to slightly engage said depressions when the jaw is slid along the shank, for the purpose set forth.

- 5 3. In a wrench of the class described, the combination of a sliding jaw having a part-cylindrical transverse recess; a pawl; a link and lever for depressing said pawl; a wrench-shank having shallow depressions in its face;
10 and a spring carried by the sliding jaw, the

end of said spring being arranged to engage said depressions, all arranged for the purposes set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

MICHAEL WALSH.
JOSEPH N. ANGERS.

Witnesses:

I. GOULD,
JAMES C. HANSON.