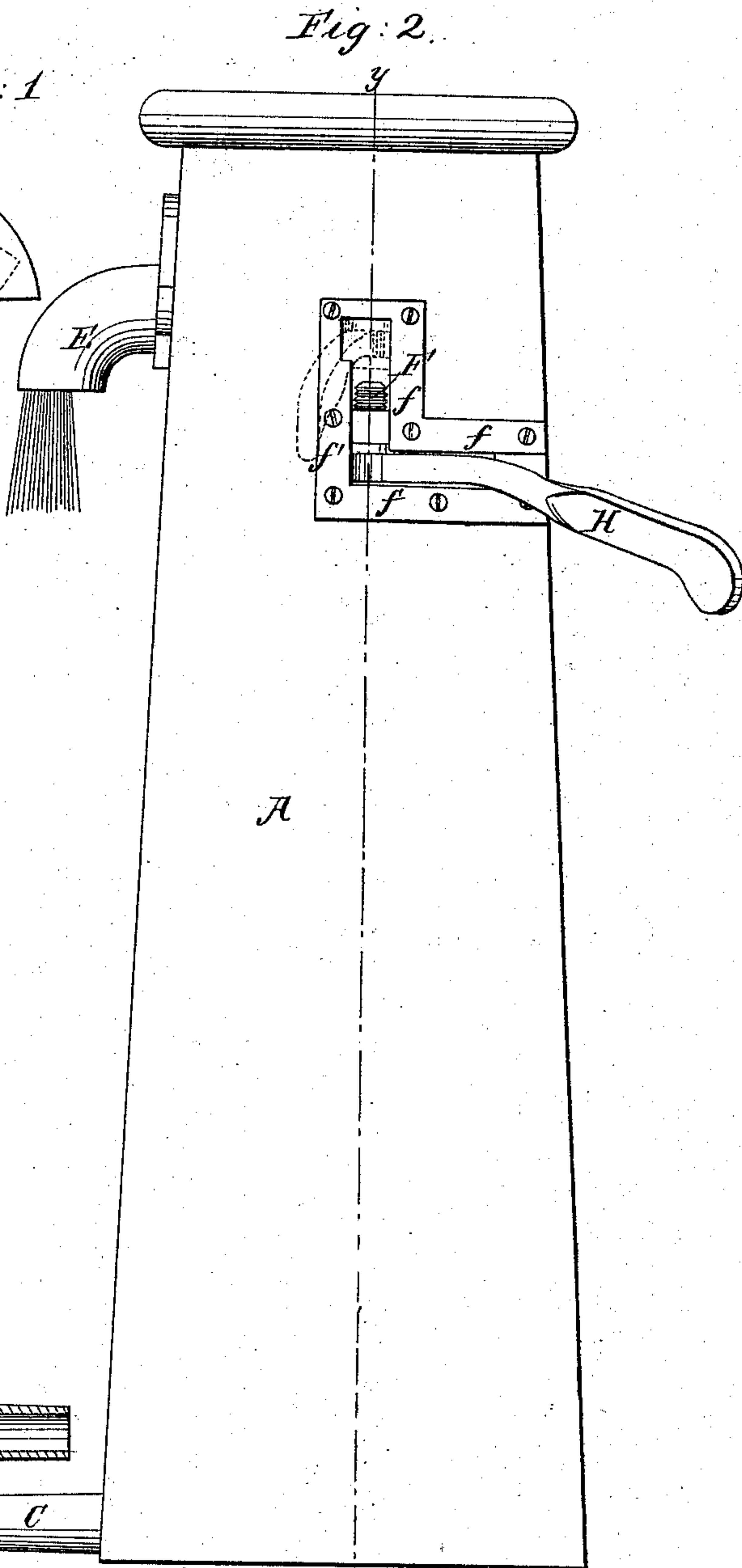
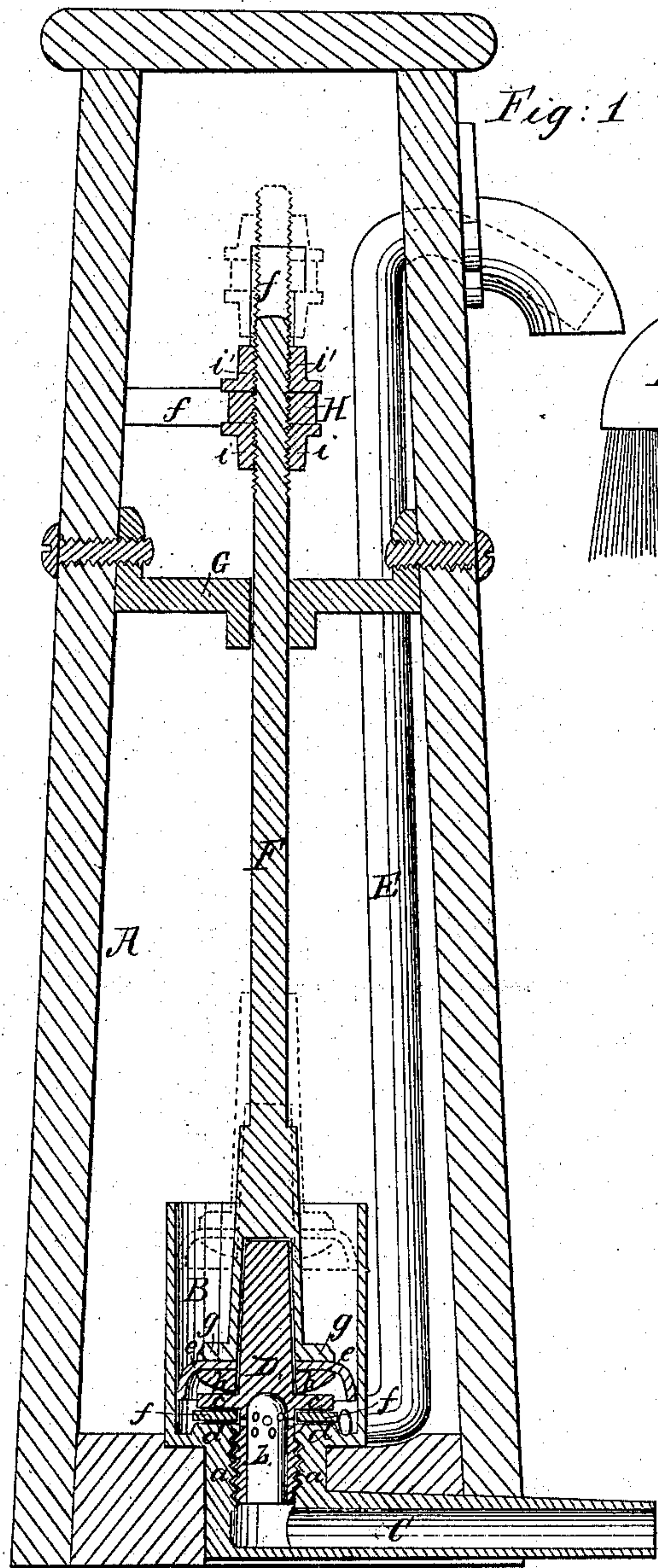


*N. B. Gousha,*

*Hydrant.*

*N<sup>o</sup> 56,927.*

*Patented Aug. 7, 1866.*



*Witnesses;*  
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# UNITED STATES PATENT OFFICE.

NAPOLEON B. GOUSHA, OF BALTIMORE, MARYLAND.

## IMPROVEMENT IN HYDRANTS.

Specification forming part of Letters Patent No. 56,927, dated August 7, 1866.

*To all whom it may concern:*

Be it known that I, NAPOLEON B. GOUSHA, of the city and county of Baltimore, and State of Maryland, have invented a certain new and useful Improvement in Hydrants; and I do hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a vertical sectional elevation of my improved hydrant as indicated by the line *xy* in Fig. 2; Fig. 2, a side elevation of the hydrant complete, showing the different positions of the handle when operated on.

Like letters in both figures of the drawings indicate like parts.

The nature of my invention consists in the construction of a hollow perforated screw-valve, arranged in the ordinary chamber of a hydrant, whereby the water from the street or other place may be introduced through the perforations into the chamber, and thence into the discharge-pipe for use, the said perforations being of such a size as to preclude the entrance therein of any matter or sediment calculated to impede or derange the operation of the hydrant.

To enable any one skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I construct a wooden box, A, of the proper dimensions, with the sides slightly tapering from the bottom to the top, having a suitable cover thereon, the whole forming a complete covering and protection to the hydrant proper from exposure to the weather and other causes, as well as supporting the operating and other parts pertaining thereto.

At the bottom of the box, and resting thereon, is an ordinary cylindrical chamber, B, of the proper capacity for the purpose designed, having a neck, *a*, constructed therewith, and connecting with the supply-pipe C, either by section or in whole, as deemed best. The interior diametrical surface of the neck, as will be observed in Fig. 1, is constructed with female screw-threads extending from the top surface of the bottom of the chamber to the orifice of the supply-pipe, or thereabout.

That part of the bottom surface of the chamber *d* adjacent to the inner edge of the neck is

made slightly higher than the rest, so as to form a shoulder, and thereby enable the leather washer *f* above to fit tightly thereon, so that when pressed down by the flange *c* of the screw-valve, which will be presently described, the water is prevented from reaching the chamber.

The valve D is constructed with a hollow extending a sufficient distance from its bottom end up in the same above the bottom elevated surface, *d*, of the chamber, with perforations therein through and around the entire diameter of the same, to allow the admission of water into the chamber through them when said valve is turned, the water passing through the openings under and above the washer thus made. The perforations are of such a size as to prevent any matter or sediment from entering the chamber, and thus preserve the hydrant from injury or being suspended from a proper operation of it. The valve is provided with male screw-threads, which (this part of it) fit into the neck provided with female screw-threads, as described.

The valve is so constructed as to have formed thereto a flange, *c*, the purpose of which has been herein alluded to. From the flange the valve tapers slightly upward and is made square around, to receive the wrench-rod for operating it.

F is the wrench-rod, a sufficient portion of the lower end of which is made hollow, so as to fit over the tapering end of the screw-valve, (see Fig. 1,) and thereby serve as a wrench in turning the valve in whichever direction desired, and at the same time sufficiently loose thereon and therearound to enable it to be easily raised from and lowered over the same again. The rod has formed at its lower end a flange, *g*, to receive the cup or concave valve *e*, which is held and secured thereto by a screw-nut or other suitable device, *h*. This cup embraces the entire diametrical area of the chamber, and fits sufficiently tight therein and around the same to check the water when let on, and impel it in the direction of the orifice of the discharge-pipe E, where it soon finds its way out, and yet not too tight to prevent its being raised by the rod for the purpose of allowing the water left standing in the discharge-pipe after the valve has been closed to run back into the chamber, to prevent the same freezing in the pipe, and thus permit the hy-



drant to be used in the coldest weather in the winter season.

The rod is kept in a steady perpendicular position by the transverse rod G.

The upper portion of the rod is made with screw-threads, over and on which is placed a screw-nut, *i*; next thereto is placed one end of the handle H, the greater or entire portion of which is seen in Fig. 2. Another screw-nut, *i'*, is placed on the rod and screwed tightly down on the handle, which, being clinched by the two nuts, renders it rigid to the rod, so that it can be operated on.

In order to enable the handle to turn the rod freely, which works laterally, so as to turn the valve and elevate the rod when desired, a rectangular slot, *f*, is made through the side of the box, in which the handle operates. (See Fig. 2.) The edges of the slot are protected from the wear and tear which would otherwise be on the wood from the handle by plates *f'*, screwed thereto. The vertical slot of the rectangle thus formed is notched or let in inwardly at the upper part of it, to form a resting-place for the handle when elevated, as seen in red lines in Fig. 2, and in Fig. 1, the back part of handle and part of rod in which latter figure may be also seen in red lines.

Operation: The handle, before being turned to obtain water, stands out at right angles to the side of the box, and when carried around obliquely or angularly, as seen in Fig. 2, turns the rod, which turns the valve, and thus lets the water in through the perforations to the chamber, which, being checked by the cup or concave valve above, passes into the discharge-pipe and out at the spout. (See blue lines in Fig. 2.)

When the handle is brought back to its original position the valve is closed and the water shut off. To prevent the water freezing in the discharge-pipe, and thereby render the hydrant operative at all times in the winter season, the handle, after a supply of water has been obtained, on each and every operation thereafter is carried up the vertical slot and placed in the inward opening, as described, and there allowed to remain until the next succeeding operation, when it is brought down and carried around in the horizontal slot, the water, by the elevation of the cup with the handle, (see red lines in Fig. 1,) returning from the discharge-pipe to the chamber, which, being below the surface of the ground, where the cold cannot reach it, is thus kept from freezing.

Having thus described my invention, what I claim therein as new, and desire to secure by Letters Patent, is—

1. The perforated hollow screw-valve D, in connection with the flange *c*, leather washer *f*, as constructed and arranged, in combination with the chamber B, neck *a*, and supply-pipe C, substantially in the manner and for the purpose as herein set forth.

2. The combination of the perforated hollow screw-valve D with the wrench-rod F and cup or valve *e*, substantially in the manner and for the purpose as herein set forth.

NAPOLEON B. GOUSHA.

Witnesses:

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CHARLES BAUMAN.