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J. R. PFISTER

WOOD PRESERVING SYSTEM

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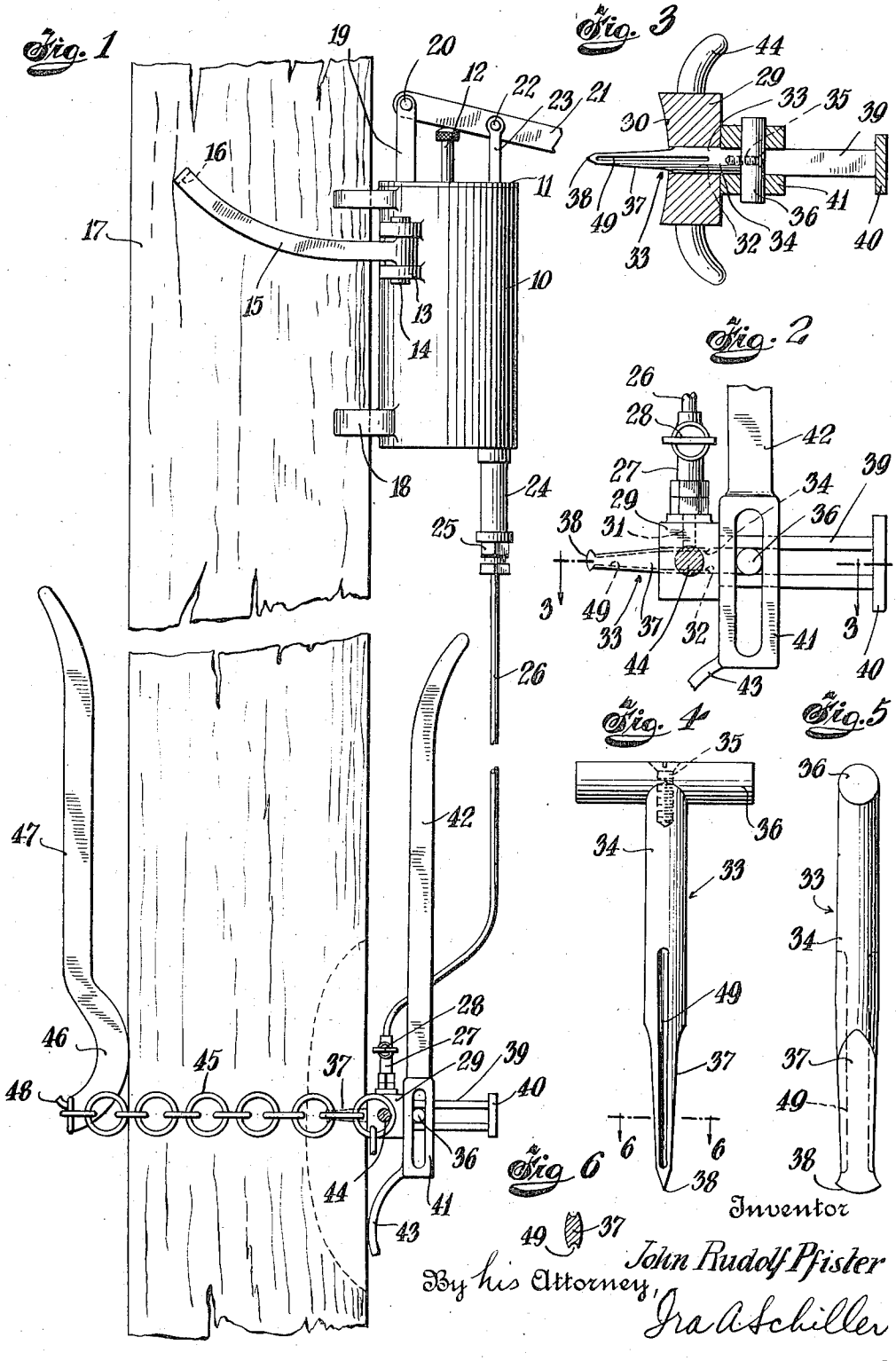

Patented May 17, 1927. 1,629,302

UNITED STATES PATENT OFFICE.

JOHN RUDOLF PFISTER, OF NEW YORK, N. Y., ASSIGNOR OF FIVE PER CENT TO IRVING KAUFMAN AND NINETEEN PER CENT TO ERNEST BRENNER, BOTH OF NEW YORK, N. Y., AND THIRTEEN PER CENT TO MEYER BOSKEY, IRA A. SCHILLER, BENJAMIN MARVIN, AND MAURICE E. SERLING, COPARTNERS, PRACTICING LAW UNDER THE FIRM NAME OF BOSKEY, SCHILLER, MARVIN AND SERLING, OF NEW YORK, N. Y.

WOOD-PRESERVING SYSTEM.

Application filed December 17, 1926. Serial No. 155,377.

This invention relates to wood preserving systems with particular reference to the process thereof and apparatus therefor.

Heretofore such systems have been found lacking and wholly inadequate for several logical reasons.

Probably the oldest of these systems is impregnating by dipping. Obviously, this is a long drawn out method requiring elaborate vats and incurring tremendous expense. In addition, it is found that the material used in the process does not penetrate very deeply into the wood so that the effect is not lasting and furthermore, this operation can not be performed without interfering with the function of the article to be impregnated, such for instance as telegraph poles, mine props, railroad ties, etc.

The next system was the use of pressure. In this method injurious holes are drilled into the subject into which impregnating substances are forced. However, aside from harming the wood fibres, this process, like its predecessor, is expensive because of the time required in drilling the openings.

The last system was the Cobra system, in which a hollow, tubular needle is inserted into the wood through which preserving fluid is forced.

Devices of such character readily clog and as a result, it has often occurred that a considerable part of a pole or pillar, though having been treated, will receive no benefit, since it is not possible to detect such clogging. Another disadvantage of this method is the incapability thereof to measure the amount of impregnating material being injected into the wood, the objections to which are obvious.

It is therefore one of the objects of the present invention to overcome the above disadvantages by providing a light, handy device capable of operation without interfering with the functions of the subject to be preserved.

A further object is in the provision of apparatus which may be utilized without injurious effect upon the wood whether in fresh or dry condition and which is a lasting method, operating without an elaborate outlay, thus materially reducing the cost of this important conservation method.

These and other important objects, which will become apparent as the description progresses, are accomplished by the novel construction, and arrangement of parts together with the processes as hereinafter described and illustrated in the accompanying drawing, forming a material part of this disclosure, and in which:—

Figure 1 is a general side elevational view showing an application of the invention to a wooden beam.

Figure 2 is an enlarged, fragmentary, side view of the injecting device support.

Figure 3 is a partial transverse sectional view taken on line 3—3 of Figure 2.

Figure 4 is a plan view of the injector drawn to an increased scale.

Figure 5 is an edge view of the same, taken at right angles thereto.

Figure 6 is a transverse sectional view taken on line 6—6 of Figure 4.

In the drawing, the numeral 10 designates a cylindrical container having a cover 11 above which projects a set or stop screw 12.

Projecting outwardly from the casing are pairs of lugs 13 carrying therebetween on pintles 14 on which are pivoted arms 15 curved upwardly at their outer ends and provided with inreaching prongs 16 adapted to engage the log 17 or like object to be treated, these arms being pressed into operative engagement by springs, not shown, the container being further supported by fingers 18 extending from and integral with the same.

Fixed on the cover 11 is a pair of lugs 19 at the top 20 of which is fulcrumed a lever 21, pivoted at 22 to a piston rod 23 extending into the casing 10 containing any desired impregnating fluid (such as tar and creosote oil, etc.) the piston rod connecting with a piston (not shown).

Extending downwardly from the bottom of the container is a stem 24 to which is attached, through a packing nut 25, a flexible tube 26, connected in a stem 27 provided with a valve 28, the stem being fixed on the

top of a substantially rectangular block 29 having an arcuate face 30 to conform substantially with the shape of circular objects to be preserved. The face 30 is preferably provided with a rubber pad or facing to constitute an impervious joint and prevent loss of the impregnating fluid.

The block is provided with a vertical bore 31 leading downwardly from the stem 27 and bisecting a horizontal bore 32 in which is slidable an injector 33 comprising a cylindrical shank 34 having fixed at one end, by a screw 35, a cross-piece 36, the other end 37 being flattened and gradually decreasing to an arcuate chisel edge 38.

The cross-piece 36 is guided intermediate a pair of guides 39 connected by a yoke 40 formed on the rear of the block 29, the cross-piece also engaging the slotted forks 41 of a hand lever 42 having a curved fulcrum 43 at its lower end to abut the object to be operated on.

Projecting outwardly from the sides of the block 29 is a pair of curved grips 44 engaging a chain 45 passing around the beam 17, the block being positively held in operative position by tension of the chain caused by the abutting of the arcuate lower portion 46, of a lever 47, against the beam 17, the chain engaging a hook 48 formed on the arcuate section 46.

Part of the shank 34 and the edges of the flattened portion 37 of the injector are provided with oppositely disposed longitudinal grooves 49.

In operation the container 10 is suspended from the beam 17 by the arms 15 and the chain 45 tightened by the lever 47 hugging the injector head tightly to the log, whereupon the injector is inserted into the beam between the fibres by pushing the lever 47 nto operative position to press the chisel nto the wood fibres.

Thus, by actuating the pump lever 21 up and down, the fluid in the container 10 will pass through the tube 26 into the bore 32 and hence into the object to be treated through the grooves 49, the liquid covering a territory indicated by the dotted line in Figure 1.

This operation may be performed by superficial injection at spaced intervals so that the entire object may be covered thus protecting the beam, pole or tie from weather, insects, foreign growth, etc.

From the foregoing, it may be seen that a system of impregnating wood has been disclosed that is lasting, will not injure the object, interfere with its function even when in use, and is carried out by the use of a simple, light and handy apparatus.

Although I have described my improvements with considerable detail, I do not desire to be limited to such details since many changes and modifications may well be made without departing from the spirit and scope of the invention as recited.

I claim:

1. An apparatus for impregnating wood comprising a pump, means on said pump for attaching the same to an object to be impregnated, an injector, a connection between said pump and injector, and means to insert said injector intermediate the fibres of the object to be treated.

2. An apparatus for impregnating wood comprising a pump, means on said pump for attaching the same to an object to be impregnated, means adjustable on said pump to limit the stroke thereof, a block, a flexible connection between said block and said pump, and means in said block to inject the contents of said pump into an object to be treated.

3. An apparatus for impregnating wood comprising a pump, means pivoted on said pump for suspending the same, a stop set screw on said pump to limit the stroke thereof, a block, a flexible tube intermediate said pump and block, and a grooved chisel-like injector slidable in said block.

4. An apparatus for impregnating wood comprising a pump, means on said pump for attaching the same to an object to be impregnated, means adjustable on said pump to limit the stroke thereof, a block, a tubular connection between said pump and block, an injector slidable in said block, said injector including a longitudinally grooved, chisel-like shank and a cross-piece fixed on the larger end of the shank, and means removably secured on said block to insert said injector into the object to be treated.

5. An apparatus for impregnating wood comprising a pump, a rectangular block, a tube connecting said pump and block, an injector in said block and means on said block to secure said injector intermediate the fibres of the object to be treated.

Signed at New York city, in the county of New York, and State of New York, this 15th day of December, A. D. 1926.

JOHN RUDOLF PFISTER.