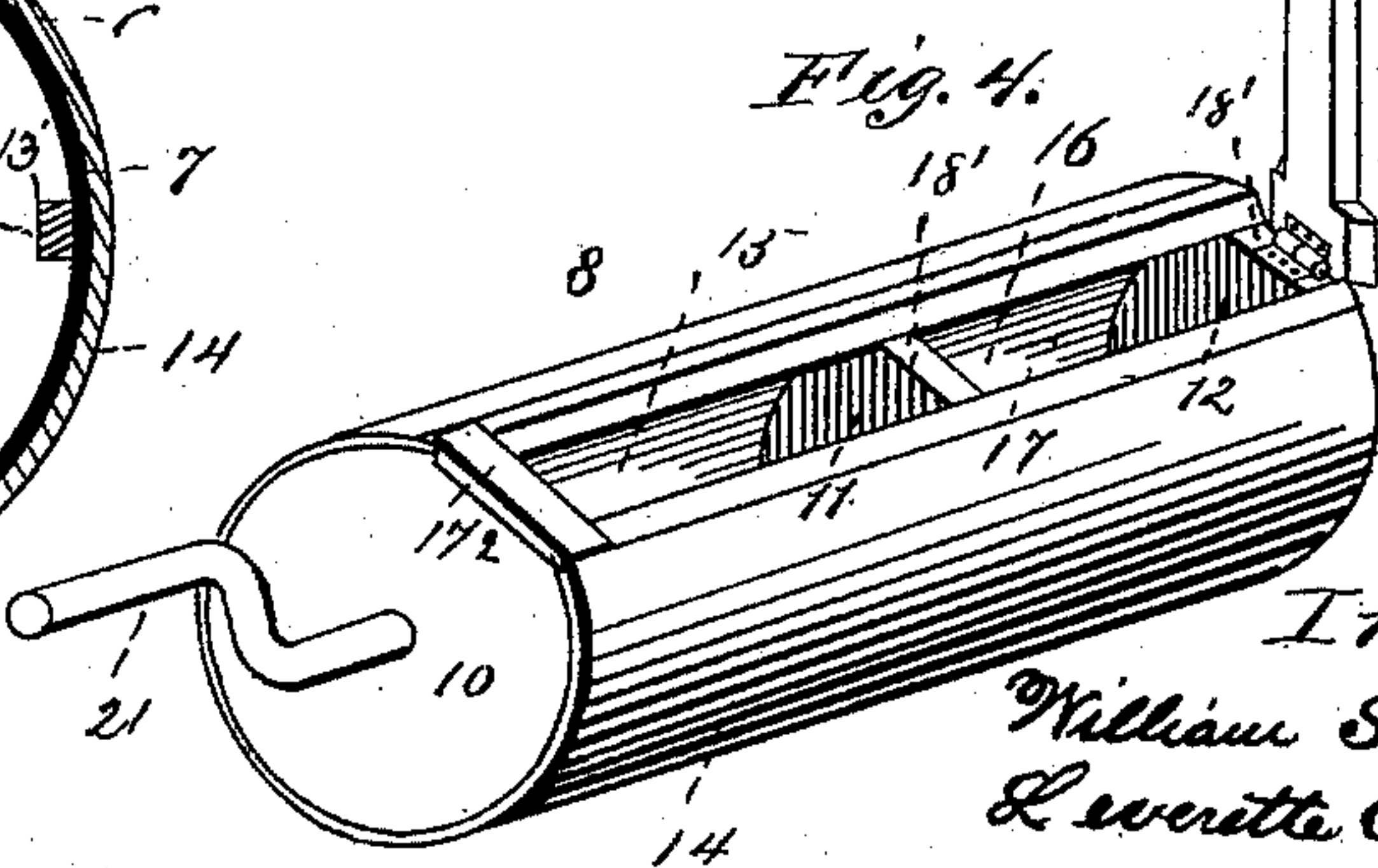
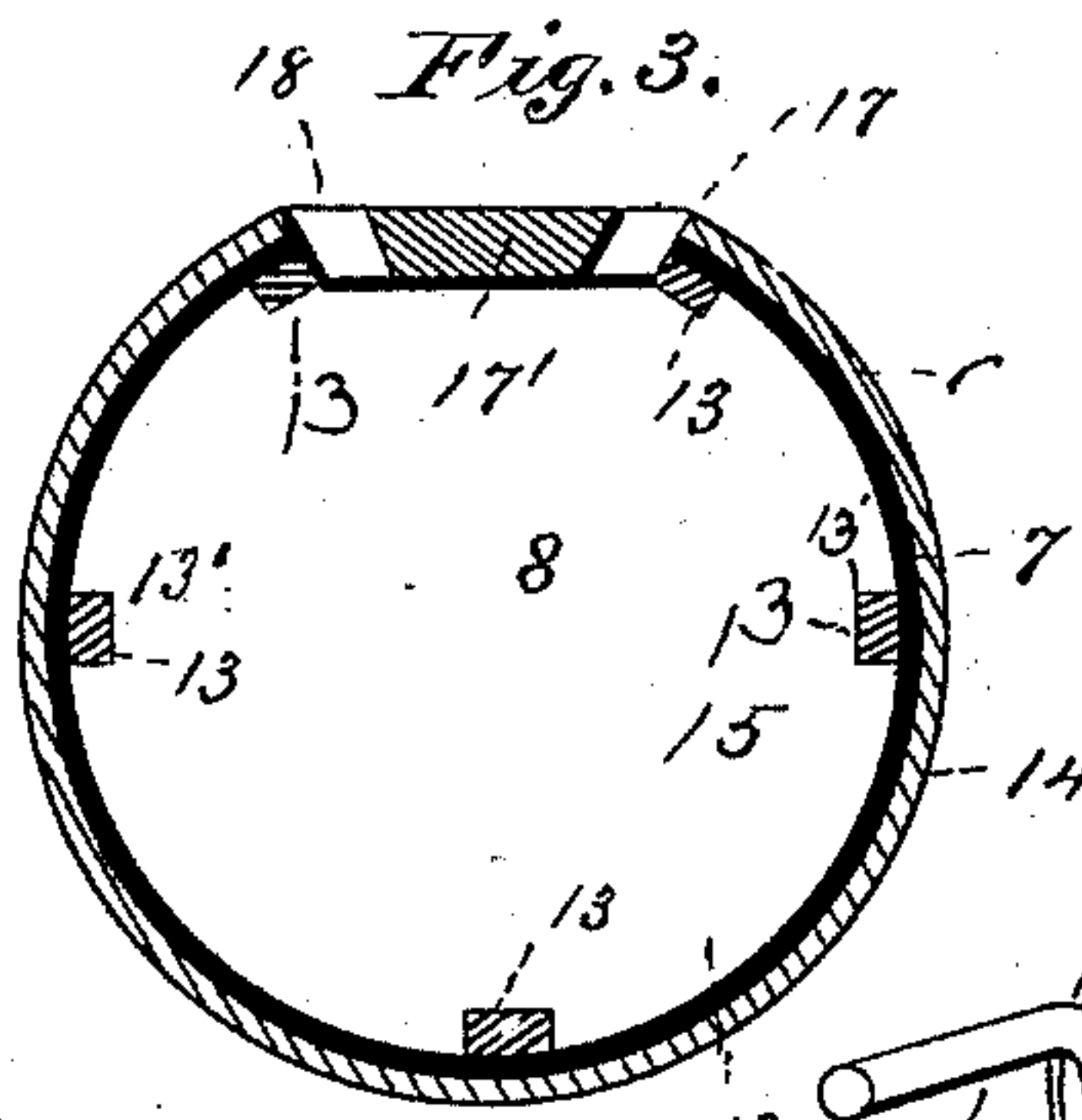
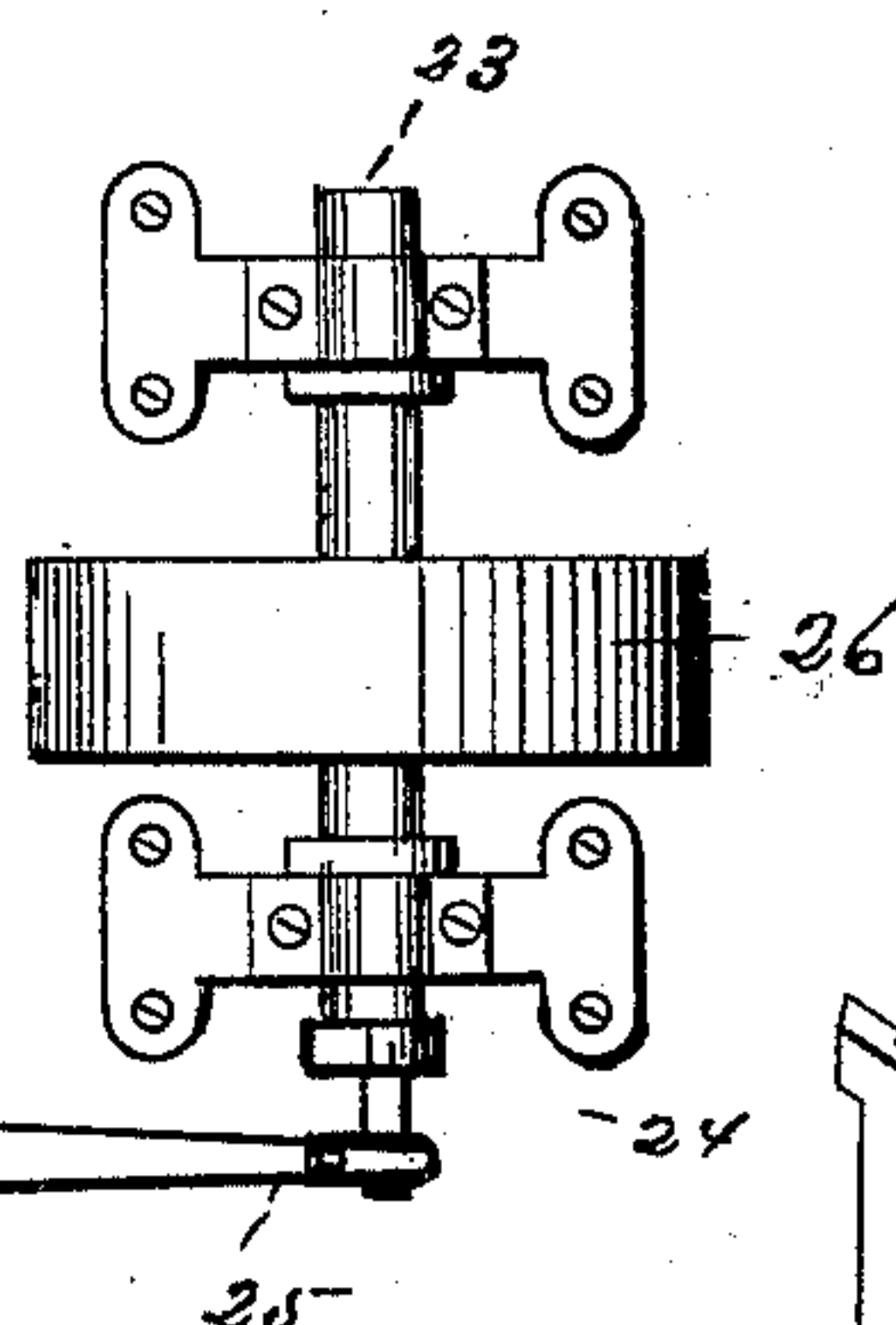
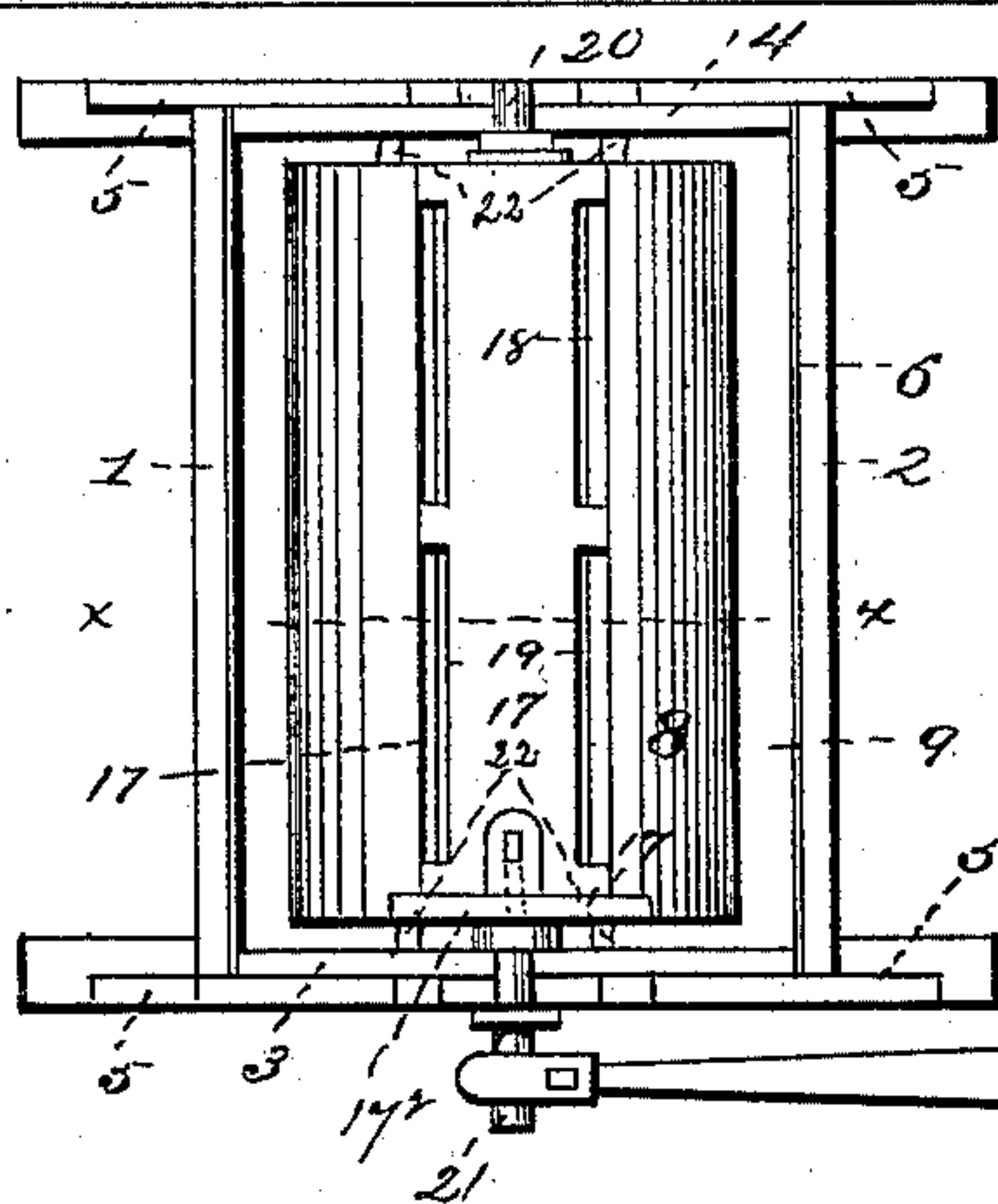
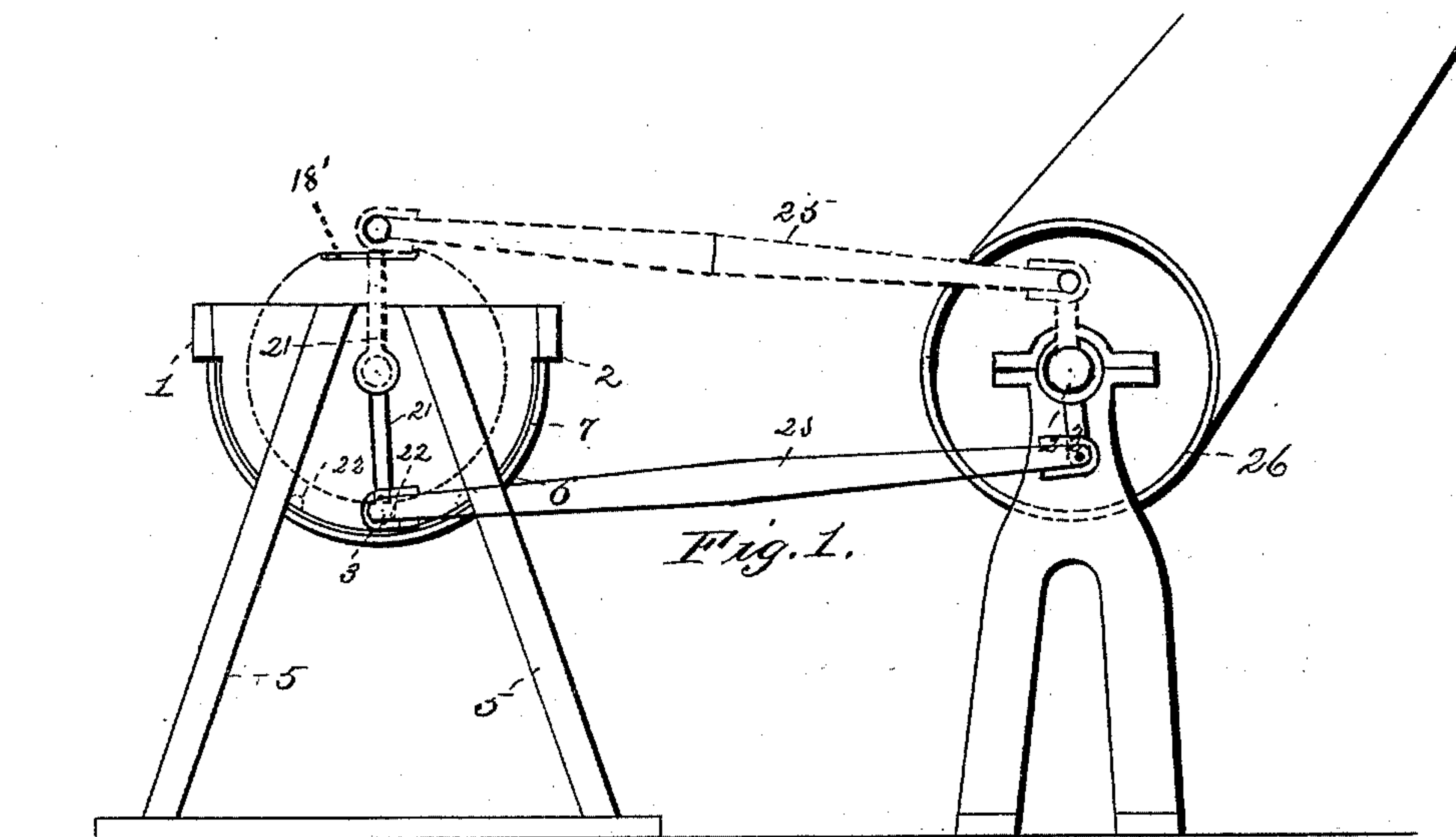


(No Model.)

W. S. HERNDON & L. C. BUCKLAND.  
SHIRT STARCHING MACHINE.

No. 448,715.

Patented Mar. 24, 1891.



Witnesses  
M. A. Harris  
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# UNITED STATES PATENT OFFICE.

WILLIAM S. HERNDON AND LEVERETTE C. BUCKLAND, OF TYLER, TEXAS.

## SHIRT-STARCHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 448,715, dated March 24, 1891.

Application filed May 1, 1890. Serial No. 350,163. (No model.)

*To all whom it may concern:*

Be it known that we, WILLIAM S. HERNDON and LEVERETTE C. BUCKLAND, citizens of the United States, residing at Tyler, in the county of Smith and State of Texas, have invented certain new and useful Improvements in Shirt-Starching Machines; 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.

Our invention has relation to starching-machines, and is designed more especially for starching bosoms and wristbands of shirts, although it will be readily understood that other garments may be starched with this machine; and it consists in the construction and novel arrangement of parts, as will be hereinafter more fully described, illustrated in the accompanying drawings, and pointed out in the appended claims.

The object of our invention is to provide a simple and inexpensive starching-machine for starching the bosoms and wristbands of shirts, and to so construct our machine that from thirty to forty shirts may be starched at one time.

In the drawings, Figure 1 is a side view of our improved machine; Fig. 2, a plan view of the same; Fig. 3, a vertical section on the line *x x*, Fig. 2; Fig. 4, a detail view of the shirt-holding device.

Referring to the accompanying drawings, in which like numerals indicate corresponding parts in all the figures, 1 and 2 designate parallel strips of wood, having secured between them near their ends the semicircular pieces 3 and 4, to which are rigidly secured suitable legs 5.

6 indicates a piece of polished brass, secured in any desired manner to the strips 1 2 and the semicircular pieces 3 4, as shown, and forms the starch-receptacle, and in order that a perfect joint may be formed between these parts a gasket 7 is employed, made of rubber or the like.

8 designates the shirt-holding device, which is made cylindrical and constructed as follows: As will be noticed, the shirt-holding device is somewhat smaller than the starch-receptacle, and a space 9 is left between the two for a purpose hereinafter explained.

10 11 12 indicate three circular pieces of wood flattened at one side, as at 18', to engage the door, and are provided with rectangular mortises 13', in which are secured the longitudinal strips 13, said strips firmly holding the circular pieces of wood in position, and a piece of polished brass 14 is then secured on the outside of the circular pieces 10 and 12, which forms two compartments 15 and 16. An opening 17 is left between two of the longitudinal strips, closed by a door 17', hinged at one end to the circular piece 12, and provided at its opposite end with a suitable catch designed to enter a keeper 17<sup>2</sup> on the circular piece 10, and, as will be noticed, the door is cut away to form the longitudinal recesses 18 and 19, for a purpose hereinafter explained.

The shirt-holding device is provided at one end with a short shaft 20, and at its opposite end with a crank 21, designed to fit in bearings formed in the end pieces of the starch-receptacle.

22 indicates half-round strips of wood secured in any desired manner on the inside of the starch-receptacle and form rubbers for the shirts to rub against, so that the starch may be thoroughly worked into the bosoms and wristbands of the shirts.

Having thus described our starching-machine, and as it is intended that the shirt-holding device shall have an oscillatory motion for about one-fourth of a full revolution, we will now proceed to describe the mechanism we prefer to employ, in order that such motion may be imparted to the shirt-holder.

23 indicates a counter-shaft journaled in suitable bearings and having secured at one end a crank 24, to which is pivoted one end of a connecting-rod 25, its opposite end pivoted to the crank 21. A belt-pulley 26 is also secured on the counter-shaft, and through the medium of a belt motion is taken from the main line of shafting.

The operation of our starching-machine, taken in connection with the above description, may be briefly described as follows: The shirt-holder is turned until the door is in position shown in Fig. 1, the connecting-rod 25 being detached and the door opened. The shirts to be starched are turned wrong side out and crowded into the compartments, with the bosoms and wristbands hanging outside.



The door is then closed. Starch to the depth of two or three inches is then poured in the receptacle. The shirt-holder is then given a half-turn and connected with the pitman.  
5 Power is then applied and the shirt-holder caused to oscillate until the shirt-bosoms and wristbands are thoroughly starched. They are then removed from the holder and the surplus starch scraped from them.

10 Having thus fully described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In a shirt-starching machine, the combination, with the starch-holding receptacle provided in its bottom with longitudinal rubbers, of the shirt-holder journaled in bearings formed on the starch-holding receptacle and provided with an opening closed by a hinged door having recesses formed in its edges, and  
20 means, substantially as described, for imparting an oscillatory motion to the shirt-holder, substantially as described.

2. In a shirt-starching machine, the combination, with the semi-cylindrical starch-holder provided in its bottom with longitudinal rubbers and mounted upon suitable legs, of the cylindrical shirt-holder flattened upon one of its sides to engage the door, divided into compartments, and journaled in bearings formed in the starch-holder, provided with a longitudinal opening closed by a hinged door having recesses formed in its edges, and mechanism, substantially as shown and described, for imparting an oscillatory motion to the shirt-holder, substantially as specified. 35

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

WILLIAM S. HERNDON.  
LEVERETTE C. BUCKLAND.

Witnesses:

WILLIAM J. TASKER,  
M. A. BUCKLAND.