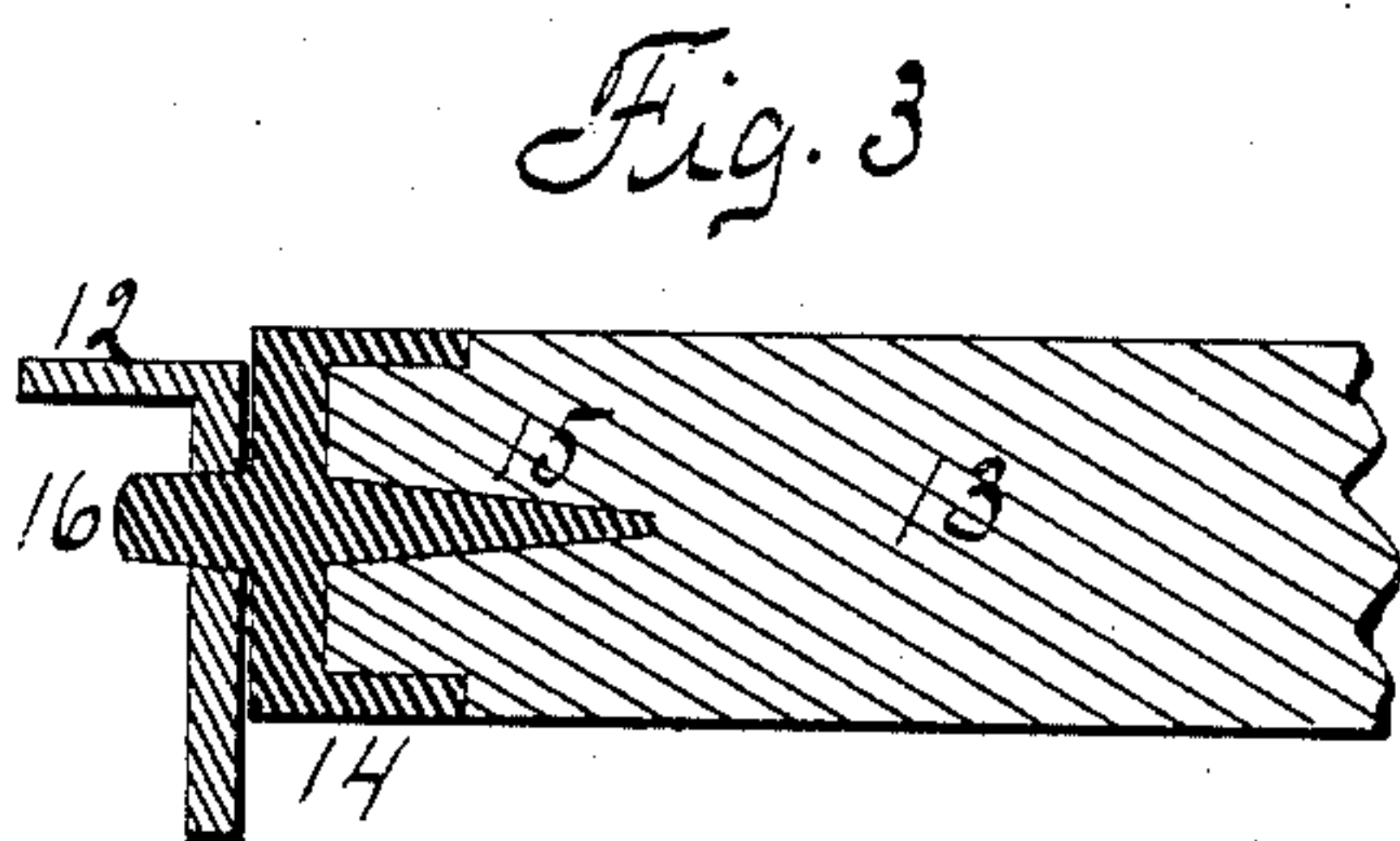
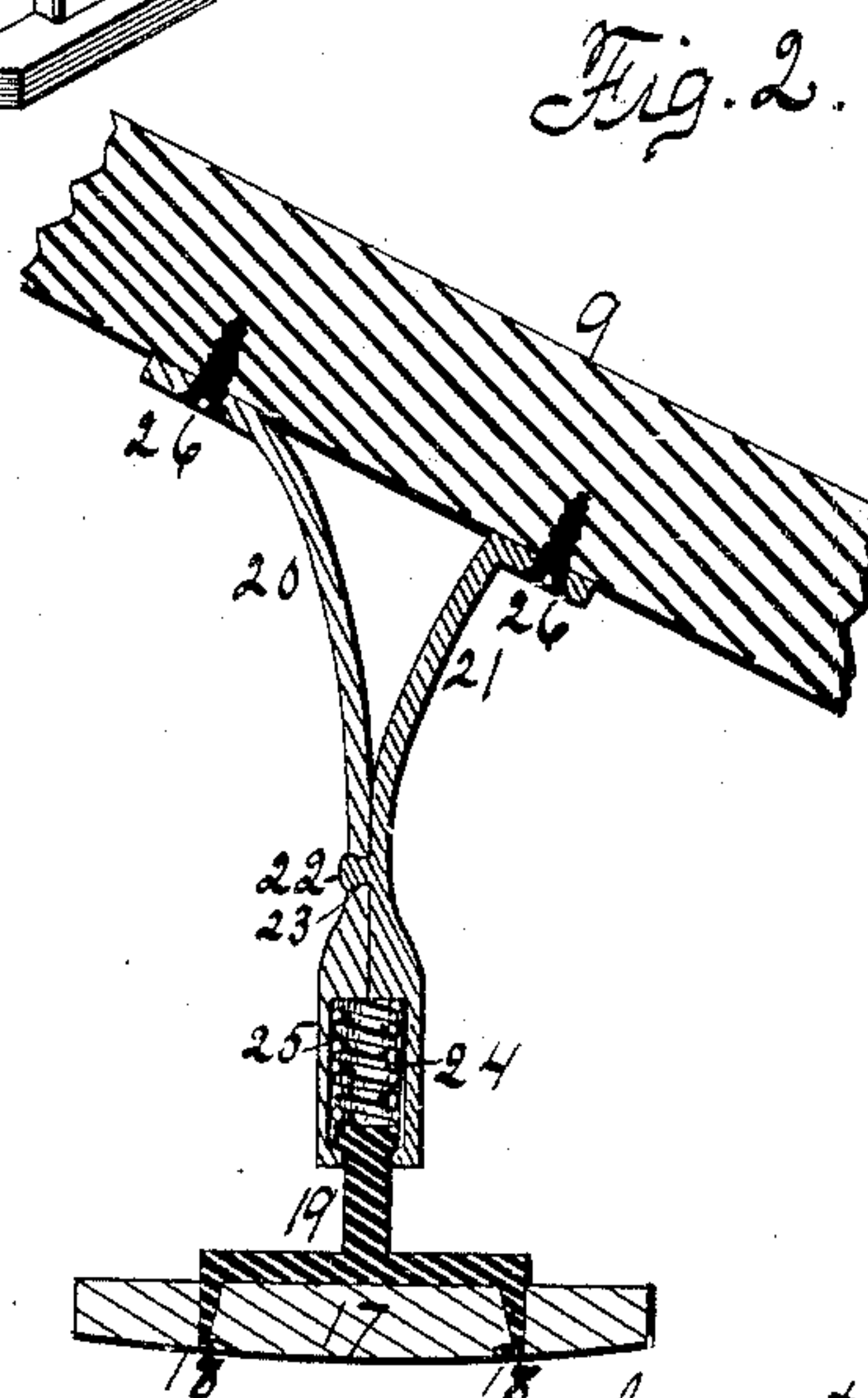
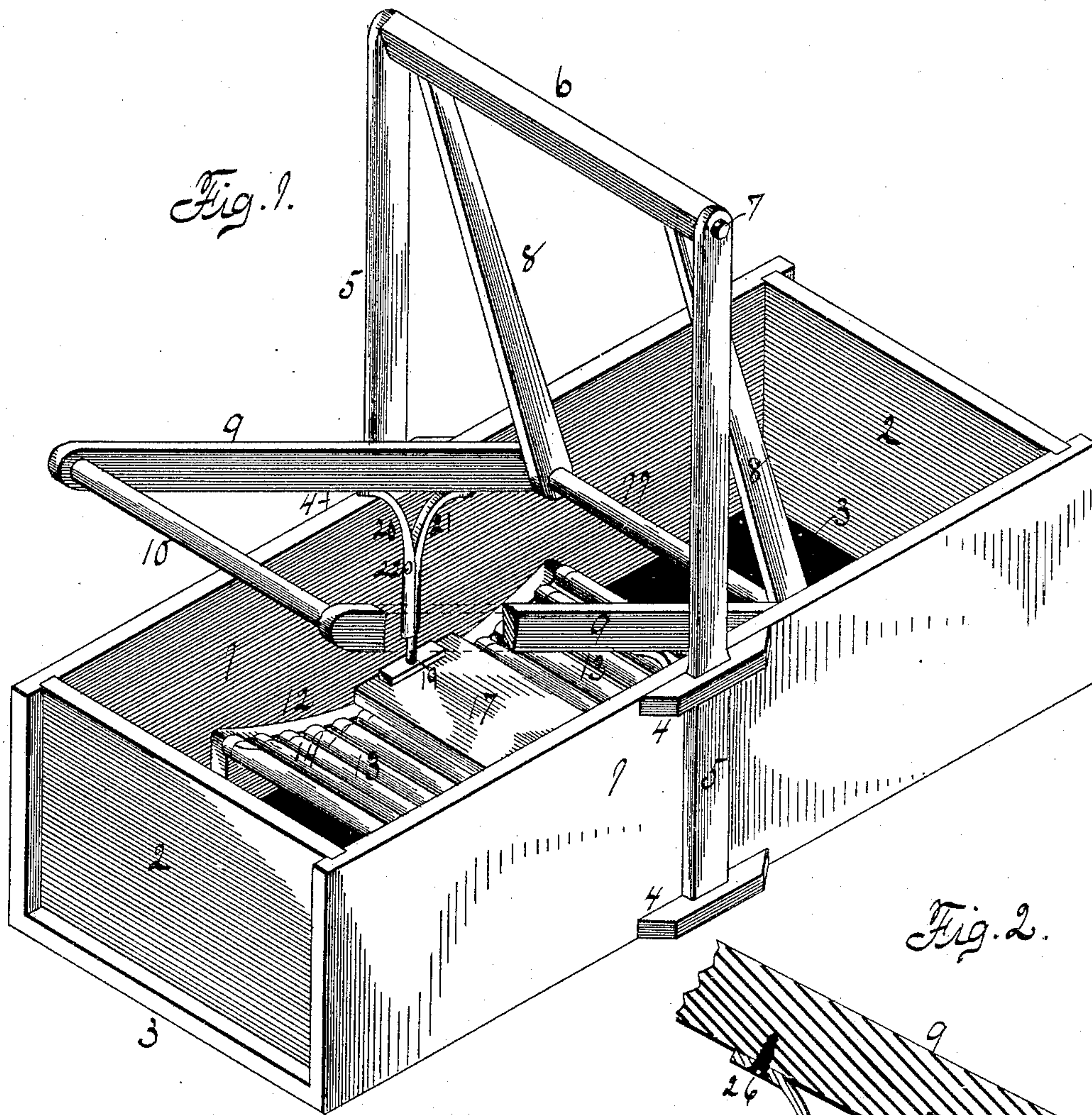


(No Model.)

H. H. & S. D. PALMER.
S. D. PALMER, Administrator of H. H. PALMER, Deceased.
WASHING MACHINE.

No. 473,521.

Patented Apr. 26, 1892.



Witnesses:
Louis Clark.
E. Behel.

Inventors:
Henry H. Palmer
Samuel D. Palmer
By A. O. Behel
Att.

UNITED STATES PATENT OFFICE.

HENRY H. PALMER AND SAMUEL D. PALMER, OF ROCKFORD, ILLINOIS;
SAMUEL D. PALMER ADMINISTRATOR OF SAID HENRY H. PALMER,
DECEASED.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 473,521, dated April 26, 1892.

Application filed July 27, 1889. Serial No. 318,864. (No model.)

To all whom it may concern:

Be it known that we, HENRY H. PALMER and SAMUEL D. PALMER, citizens of the United States, residing at Rockford, in the county of Winnebago and State of Illinois, have invented certain new and useful Improvements in Washing-Machines, of which the following is a specification.

The object of this invention is to form a connection between the rubbing-board and operating-handles by means of a two-part bracket having a socket at its lower end, said socket holding a spring which presses against the rubbing-board, thus holding it in a yielding manner.

In the accompanying drawings, Figure 1 is an isometrical representation of a washing-machine embodying our invention. Fig. 2 is a vertical section of a portion of the operating-handle and its connection with the rubbing-board. Fig. 3 is a section of a portion of one of the rollers comprising the lower rubbing-surface, showing its connection with its support.

The body of the washing-machine in this instance is of rectangular box form, composed of sides 1, ends 2, and bottom 3, secured together so as to make water-tight joints. On each side are secured perforated brackets 4, through the perforations of which pass the vertical supports 5 to the rubbing-board. The upper ends of the supports 5 are perforated, and a transverse bar 6, having stud-journals 7, is supported thereby by the stud-journals entering the perforations.

The swinging frame which supports the rubbing-board consists of the depending arms 8, secured to the transverse bar 6. At the free ends of the depending arms are pivoted levers 8, having a handle 10, connecting their free ends. At the junction of the arm 6 and 9 a transverse bar 11 holds them separated the required distance.

The washing-machine thus far described is old and in public use. Therefore we do not claim such construction.

The lower rubbing-surface is composed of two side bars 12, having a series of holes for the reception of the journals of rollers 13.

The ends of the rollers have a portion of their outer ends of smaller diameter than the main portion of the roller to receive a cap 14. Said cap has a center prong 15, which enters the end of the roller and holds the cap in place. This cap also has a stud-journal 16 projecting from its outer end, which enters the holes in the side bars 12 and revolves therein. By this construction of the rollers a better journal is produced, much more simple in construction, and with less liability of the rollers falling out of position when in use in the machine. The rubbing-board 17 in this instance has its lower face convex to conform to the concave face of the lower rubbing-surface of rollers. To the upper face of this rubbing-board is secured a plate by means of prongs 18, passing through the board. From the upper face of this plate rises a central portion 19, of cylindrical form. Its upper end is somewhat larger than its shank portion.

To the under side of the arms 9 is secured a two-part bracket composed of arms 20 and 21. These two arms are held together by a stud 22, cast integral with one arm and extending through an opening 23 in the other arm and riveted. The lower end of this two-part bracket has a chamber 24 of the diameter of the head end of the portion 19. The outlet of this chamber is of a diameter equal to the shank portion of the portion 19. In placing the parts together the plate is secured to the rubbing-board by the prongs 18. A spring 25 is then placed in one half of the two-part bracket. The spring is sufficiently compressed to permit the head end of the portion 19 to enter the chamber. The two parts of the bracket are then secured together by riveting the stud 22. This bracket, with its attachment, is then secured to the under side of the levers 9 by screws 26, passing through the free ends of the brackets into the levers. By this arrangement of the parts a downward pressure exerted on the operating-handles will press down on the rubbing-board. Through the action of the spring the rubbing-board is free to wobble and adapt itself to the surface of the clothes upon the lower rubbing-surface, and the

endwise movements of the rubbing-board are independent of each other.

We claim as our invention—

5 In a washing-machine, the combination, with an operating-handle, of a lower rubbing-surface, a rubbing-board, plates secured to said rubbing-board and provided with up-rising posts, and a two-part bracket having its lower ends brought together to form sockets,

in which said posts are secured, and having its upper ends connected with the operating-handle, substantially as set forth.

HENRY H. PALMER.
SAMUEL D. PALMER.

Witnesses:

A. O. BEHEL,
E. BEHEL.