

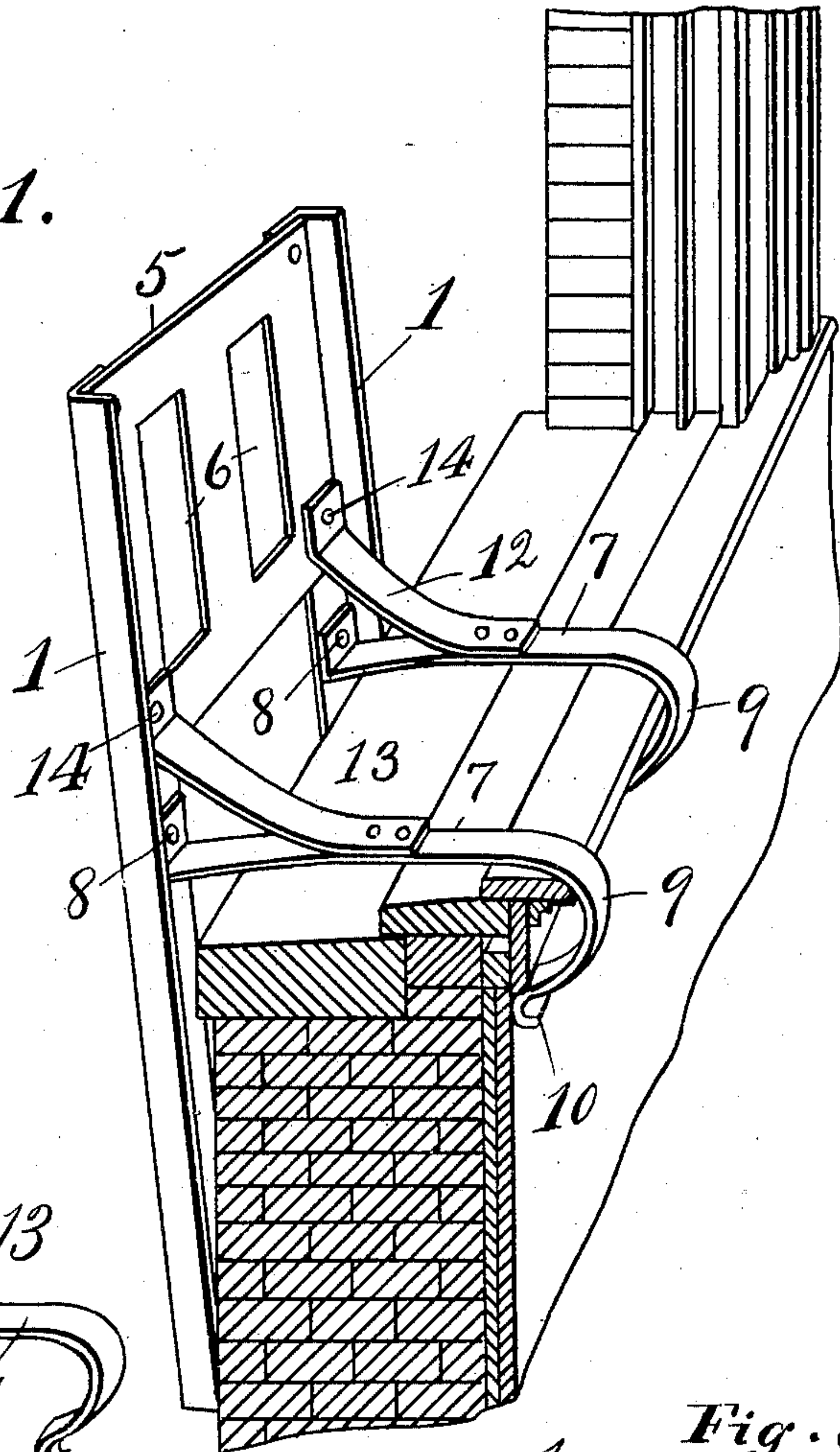
No. 737,924.

PATENTED SEPT. 1, 1903.

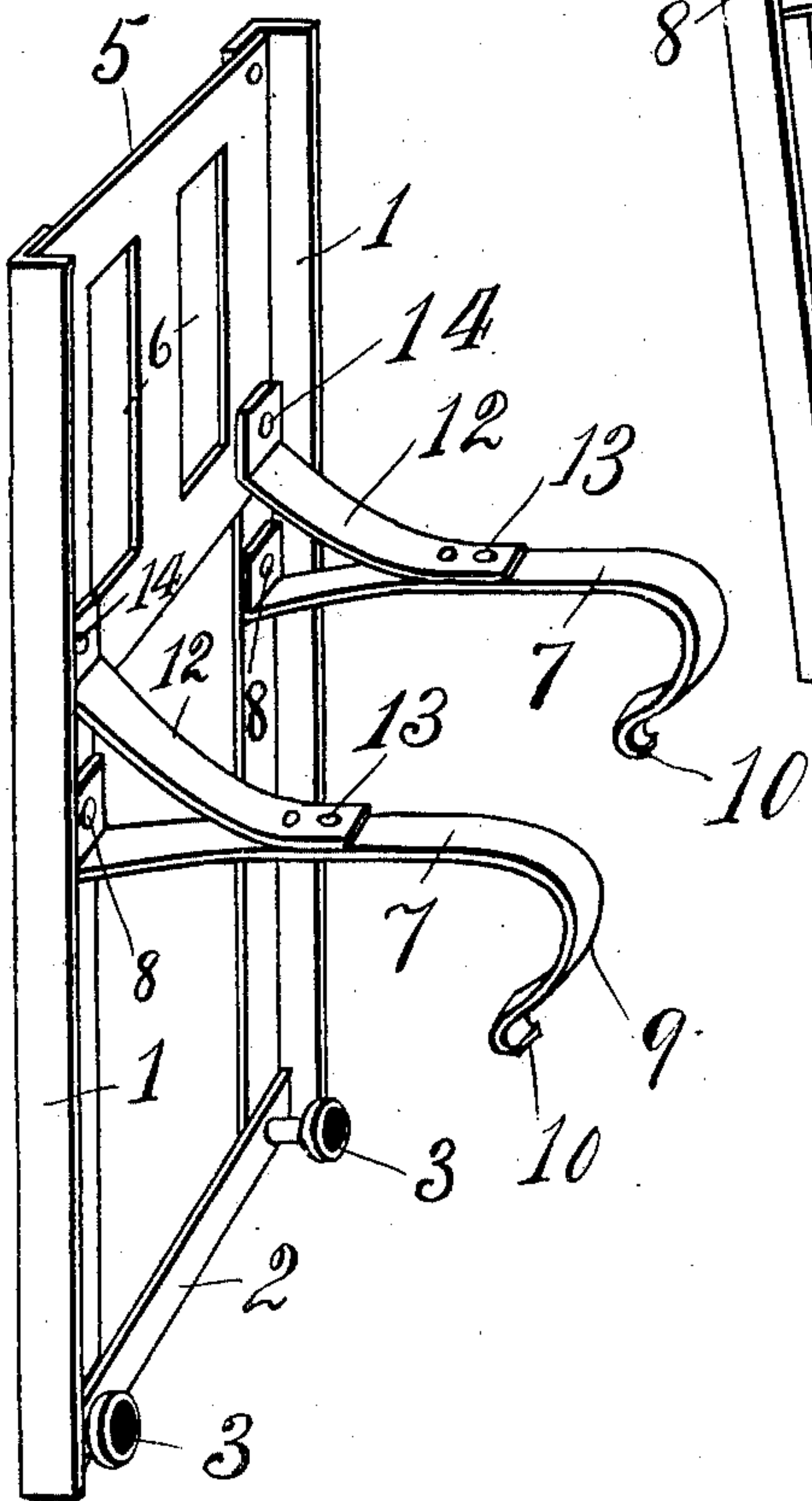
J. H. HANAVAN.  
WINDOW CLEANING CHAIR.  
APPLICATION FILED JUNE 17, 1903.

NO MODEL.

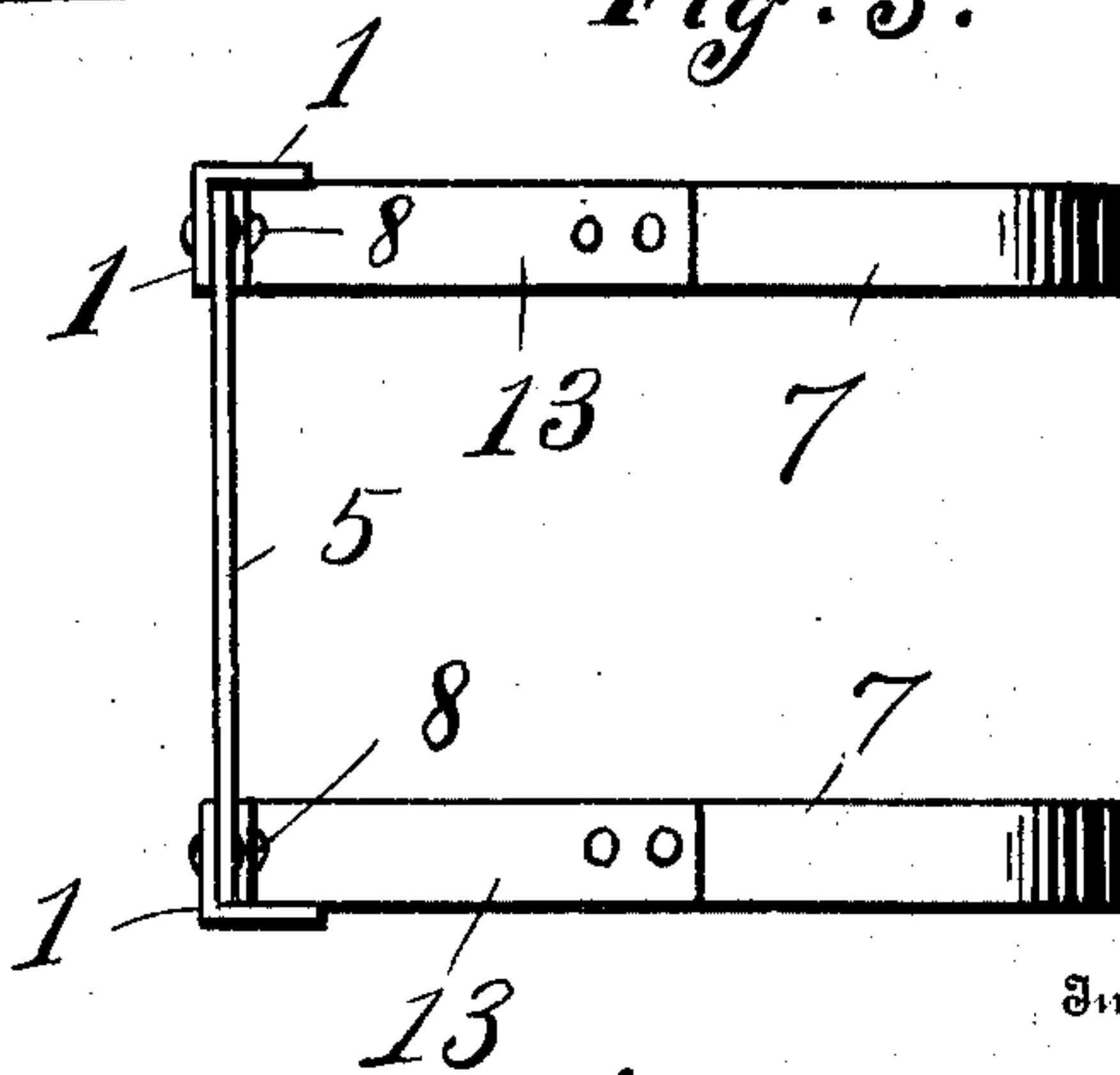
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses  
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## UNITED STATES PATENT OFFICE.

JOHN H. HANAVAN, OF SAN FRANCISCO, CALIFORNIA.

## WINDOW-CLEANING CHAIR.

SPECIFICATION forming part of Letters Patent No. 737,924, dated September 1, 1903.

Application filed June 17, 1903. Serial No. 161,847. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN H. HANAVAN, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Back-Supports for Cleaning Windows, of which the following is a specification.

My invention relates to improvements in window-cleaning chairs, the object of my invention being to provide a device of this character which while effective for the purpose intended shall be composed of the fewest possible parts and in general construction shall be as cheap and simple as possible.

My invention therefore resides in the novel construction, combination, and arrangement of parts for the above ends hereinafter fully specified, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of the window-cleaning chair in position on a window-seat. Fig. 2 is a similar view of the chair detached from the window-seat. Fig. 3 is a plan view of the chair.

Referring to the drawings, 1 represents the sides of the chair, which are made of angle-iron and are straight their whole length. Near the bottom they are connected by a tie 2, and the extreme ends are provided with knobs 3, of hard wood and faced with rubber to prevent the abrasion or removal of paint from the outside of the house. At the top said sides are connected by a plate 5, of sheet metal, cut away, as shown at 6, for the purpose of lightness. At a point nearly two-thirds of the height from the bottom arms 7 are connected to the sides 1 by rivets 8. Said arms are bent around at their front ends, as shown at 9, to form hooks which engage the inner edge of the window-sill. Oblique ties 12 are also pivotally attached, as shown at 13, to said arms and at 14 to the plate above the points of attachment of the arms to said sides. On account of the sides extending to a considerable distance below the level of the point

of engagement with the window-sill the strain upon the window-chair is a direct outward pull upon the hooked portions 9. By reason of the sides being made of angle-iron and on account of the oblique ties the whole device may be made very light and yet of sufficient strength to support a person cleaning the window. Also the arms will lie flat upon the window-sill and will not interfere with the comfort of the person cleaning the window, who will sit directly upon the window-sill and not upon the chair. It will be understood, however, that in use a small piece of carpet or mat will be placed between the device and window-sill to prevent the latter from abrasion.

I claim—

1. A window-cleaning chair composed of sides formed of angle-irons, arms having their outer ends bent and riveted to said angle-irons, their inner ends being hooked to engage the inner edge of the window-sill, a sheet-metal plate cut out, as shown, having its edges riveted to said sides, a tie connecting the lower ends of said sides, and knobs at said lower ends having yielding surfaces to engage the wall of the house, substantially as described.

2. A window-cleaning chair composed of sides formed of angle-irons, arms having their outer ends riveted to said angle-irons, their inner ends being hooked to engage the inner edge of the window-sill, a sheet-metal plate cut out, as shown, having its edges riveted to said sides, a tie connecting the lower ends of said sides, knobs at said lower ends having yielding surfaces to engage the wall of the house, and oblique ties riveted to said arms and to the sheet-metal back, substantially as described.

In witness whereof I have hereunto set my hand in the presence of two subscribing witnesses.

J. H. HANAVAN.

Witnesses:

FRANCIS M. WRIGHT,  
M. STUART.