

No. 744,150.

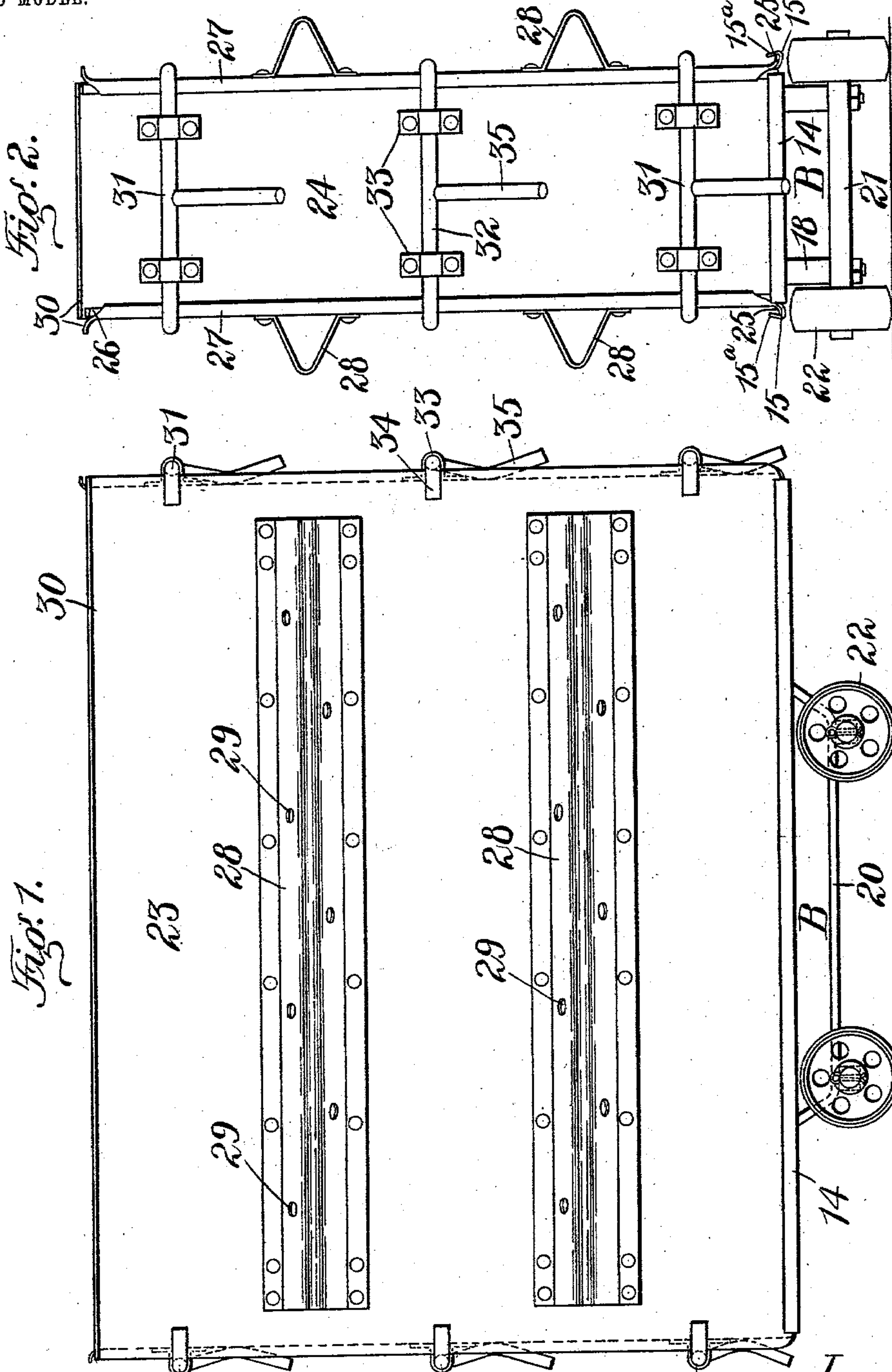
PATENTED NOV. 17, 1903.

H. D. WINTON.  
SOAP FRAME.

APPLICATION FILED JULY 8, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



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Inventor:  
Henry D. Winton.  
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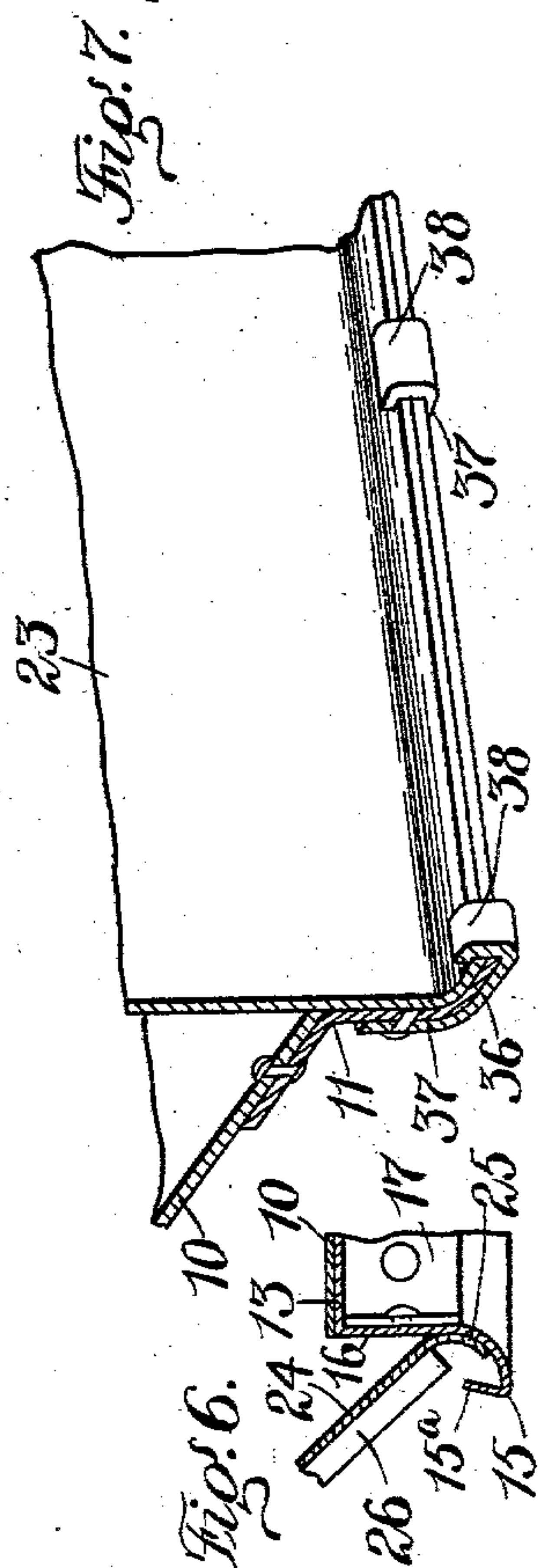
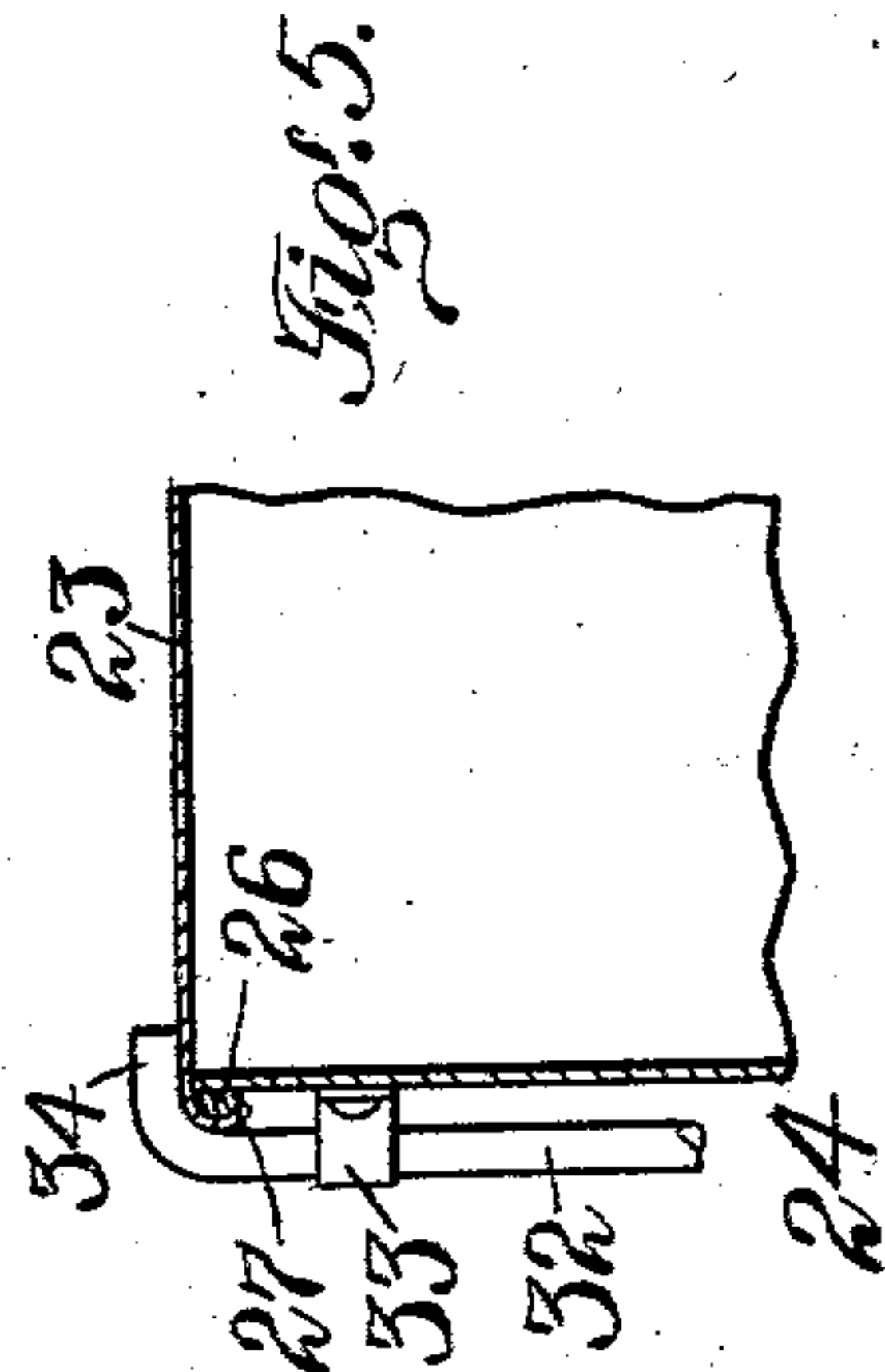
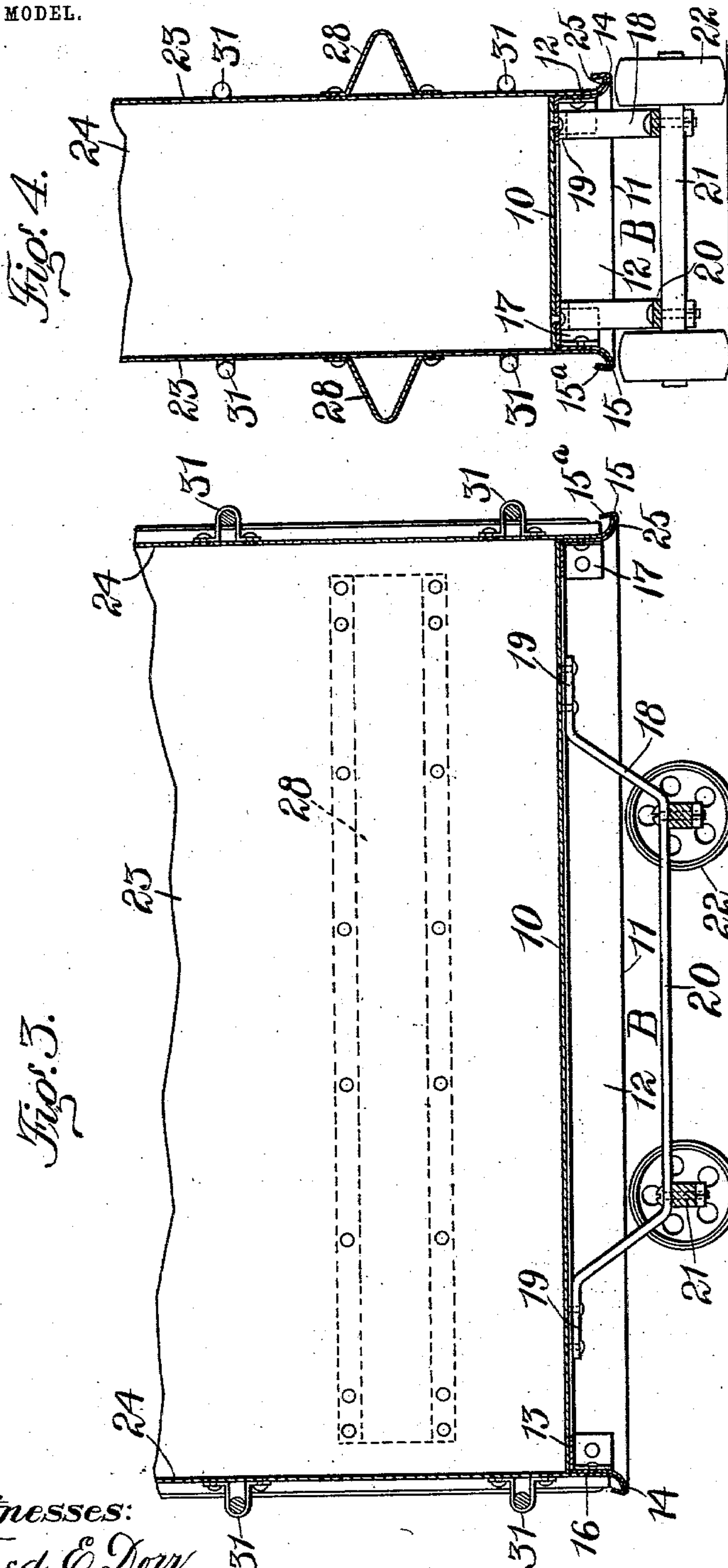
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NO MODEL.

2 SHEETS—SHEET 2.



*Fig. 7.*

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# UNITED STATES PATENT OFFICE.

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## SOAP-FRAME.

SPECIFICATION forming part of Letters Patent No. 744,150, dated November 17, 1903.

Application filed July 8, 1903. Serial No. 164,642. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY D. WINTON, a citizen of the United States, residing at Wellesley Hills, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Soap-Frames, of which the following is a specification.

My invention relates to frames in which soap in a fluid state during its manufacture is poured to permit it to solidify into blocks; and it consists in the features hereinafter described and more particularly claimed.

In the accompanying drawings, Figure 1 is a side elevation of one embodiment of my invention. Fig. 2 is an end elevation thereof. Figs. 3 and 4 are respectively partial central vertical longitudinal and transverse sections. Fig. 5 is an enlarged detail in horizontal section, illustrating the joint at a corner of the frame. Fig. 6 is an enlarged detail in vertical section, illustrating the joint between the base and side plates with the parts slightly separated and occupying a position as in assembling and disassembling; and Fig. 7 is a detail in perspective of another form of base projection.

Similar characters indicate like parts throughout the several figures of the drawings.

The letter B designates a base, which may consist of a plate 10, preferably of sheet metal, to the under side of which, near each edge, are secured bars 11, extending substantially the entire length. As here illustrated, each bar is formed of metal in what may be termed a "Z" shape, having an intermediate vertical member or web 12, from which extend in opposite directions upper and lower members or flanges 13 and 14, respectively, the former of which projects inwardly under the base-plate and is preferably secured thereto at suitable intervals by rivets or the like. The flange 14, which furnishes a lateral base projection, (shown in Figs. 1 to 6 as integral and continuous throughout,) is preferably curved outward from the web and at its outer end is bent upward at 15 and finally inward at 15<sup>a</sup>, furnishing supporting and locking portions for the purpose to be hereinafter described.

The outer face of each web furnishes a side wall 16 for the base, which is in substantial alinement with the edge of the plate. At the corners of the base the webs may be connected by stays or angle-irons 17, secured thereto to strengthen the structure, and it will be evident that a base reinforced by bars formed and stayed in the manner just described will offer very great resistance to springing or bending, while still presenting over the most of its surface a single thickness of comparatively thin metal.

Beneath the base at opposite sides are attached frames, here shown as consisting of bars 18, bent twice at each end to form horizontal end portions 19 19, by which they may be attached to the base at points considerably separated, conveniently by riveting through the flange 13 of the bars and through the base-plate and a horizontal intermediate portion 20, depending below the Z-bars. At or near the ends of this portion 20 are secured by bolts or the like transverse bars 21 21, connecting the two frames. These bars 21 may serve as axles for wheels 22, which permit the whole frame and its contents to be conveniently moved about. At the same time the axle-frames and connecting axle-bars increase the strength and rigidity of the base without adding greatly to its weight.

From the base rise pairs of longitudinal and transverse removable side plates 23 23 and 24 24, respectively, preferably of sheet metal and forming with the base the receptacle or frame. Each side plate has at its lower edge a flange 25, preferably continuous and bent in a curve similar to that of the supporting portion of the base projection 14 on which it rests, this flange being of such length that when the side plate is in a vertical position and in contact with the side wall of the base its end will contact with the upwardly-bent portion 15 of the base projection and be held against upward movement of any extent by its inner end 15<sup>a</sup>.

At each vertical edge the transverse side plates 24 are preferably provided with a strip or bead 26, suitably secured thereto and having its outer wall curved. The side plates



23 may have their edges bent or flanged at 27 to conform with the curve of the strip 26 and extend over and contact with the same, both flange and strip serving to stiffen the plate as well as to furnish a joint. The side plates 23 are usually reinforced by longitudinal ribs 28, preferably formed of bent strips of sheet metal secured at their edges and perforated at 29, this form allowing a free circulation of air to facilitate cooling. The upper edges of the side plates may be bent or flanged at 30 to stiffen them.

To separately fasten the sides together and force them into contact with the side walls of the base, locking devices 31 are provided, which may consist of rods 32, mounted to turn in straps or brackets 33 across each side plate 24 and having fingers 34 34 coacting with the side plates 23. Levers 35 permit convenient operation of the locking devices.

In use the side plates are assembled with the base by hooking the ends of the flanges 25 under the ends 15<sup>a</sup> of the base projection, as is illustrated in Fig. 6, and turning their curved surfaces over said projections or flanges until the ends of the plate-flanges contact with the bend 15 of the base projections and the lower side edges of the plates with the side walls 16 of the base. When all the side plates are so placed, and with the strips 26 within the flanges 27, the parts are secured in place by the locking devices, with all the contacting portions drawn firmly together. The fluid soap is now poured into the frame, and its escape therefrom is effectually prevented by the large and perfect surface of contact at the joints, particularly between the side plates and base, where leakage is most liable to occur. Here it is left to solidify, this process being hastened by the fact that on all sides it is in contact with thin metal only. When properly hardened, the side plates are laterally separated and removed by reversing the operations above described, whereupon the block may be cut or otherwise treated.

Fig. 7 illustrates another form of attachment between the side plates and base, in which instead of bending the Z-bars to form the locking portions they terminate in a supporting portion 36, and to them are secured separate pieces of angle-iron 37, which provide at 38 the upwardly and inwardly extending locking portions; otherwise the construction may be the same as has just been described.

It will be seen that in addition to avoiding the use of such thick base-plates as those of wood, which have been heretofore commonly used and which are becoming difficult to secure at a reasonable price, a soap-frame is produced which may not only be readily manufactured and in such a way as to be quickly and securely assembled, but that a highly desirable increase in the speed of cooling is secured thereby without the sacrifice of lightness or strength.

Having thus described my invention, I claim—

1. The combination with a base having lateral projections, of side plates having continuous flanges coacting throughout their length with the base projections.

2. The combination with a base having curved lateral projections, of side plates having correspondingly-curved flanges coacting with the base projections.

3. The combination with a base having side walls and lateral projections, of side plates having flanges resting upon the base projections, and means for forcing the side plates inwardly into contact with the side walls of the base.

4. The combination with a base having projections comprising a supporting portion and a locking portion, of side plates having flanges resting upon the supporting portion and extending under the locking portion of the base projections.

5. The combination with a base having side walls and projections therefrom comprising a portion extending outwardly from the side walls and a portion extending back toward the side walls, of side plates having flanges coacting with the projections.

6. The combination with a base having side walls and projections therefrom comprising a portion extending outwardly from the side walls and a portion extending upwardly therefrom, of side plates having flanges contacting at their ends with the upward extension when the plates contact with the side walls.

7. The combination with a base having at each side a continuous flange, of side plates having continuous flanges coacting with the base-flanges.

8. The combination with a base having at each side a continuous flange bent outwardly and then inwardly, of side plates having continuous flanges resting against the outward extension and projecting under the inward extension of the base-flange.

9. In a soap-frame, a base comprising a plate, and a Z-bar secured to the under side of the plate near each edge.

10. In a soap-frame, a base comprising a comparatively thin metal plate and reinforcing-bars having a member secured to the under side of the plate near each edge and a member extending downwardly therefrom.

11. In a soap-frame, a base comprising a plate and a Z-bar secured to the under side of the plate near each edge, the outer member of said Z-bars being curved.

12. In a soap-frame, a base comprising a plate, and a Z-bar secured to the under side of the plate near each edge, the outer members of said Z-bars being bent back toward the base.

13. In a soap-frame, a base comprising a plate, bars secured to the under side of the plate near each edge, and stays connecting the adjacent ends of the bars.

14. The combination with a base comprising



5 a plate and bars secured to the under side of the plate, of frames attached to the base at opposite sides, being secured thereto near their ends at points considerably separated, and axle-bars connecting the frames.

10 15. The combination with a base comprising a plate and bars secured to the under side of the plate, of frames attached to the bars at opposite sides of the base, and axle-bars connecting the frames.

15 16. The combination with a base comprising a plate and Z-bars secured to the under side of the plate, of frames attached to the base at opposite sides and extending below the Z-bars, and axle-bars connecting the frames.

17. The combination with a base comprising a plate and Z-bars secured to the under side of the plate near each edge, of side plates having flanges coacting with the Z-bars.

20 18. The combination with a base comprising a plate and Z-bars secured to the under side of the plate near each edge, the outer member of said Z-bars being curved, of side plates

having curved flanges coacting with the curved member of the Z-bars.

25 19. The combination with a base comprising a plate and Z-bars secured to the under side of the plate near each edge, the outer member of said Z-bars being bent back toward the base, of side plates having flanges extending under the bent portion of the Z-bars.

30 20. The combination with a base, of pairs of laterally-separable side plates, one of said pairs having strips provided with curved outer walls secured near opposite edges of each plate and the other pair having curved flanges fitting over said curved strips, and means for forcing the flanges into contact with the strips.

35 Signed at Boston, in the county of Suffolk and State of Massachusetts, this 6th day of July, 1903.

HENRY D. WINTON.

Witnesses:

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