No. 740,921. PATENTED OCT. 6, 1903.

T. H. REES & J. McDONNELL.

AWNING.

APPLICATION FILED NOV. 3, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

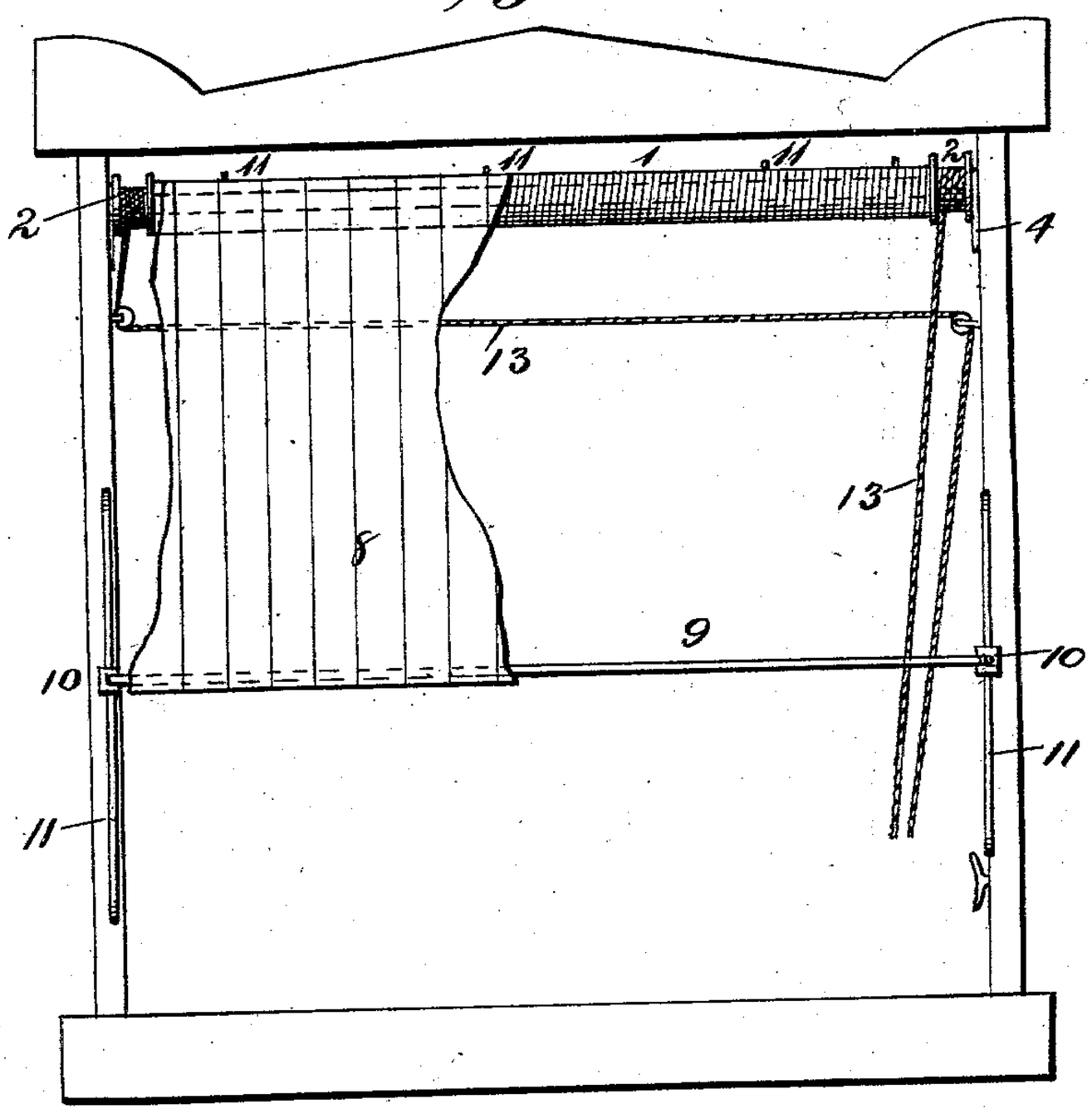


Fig. 2.

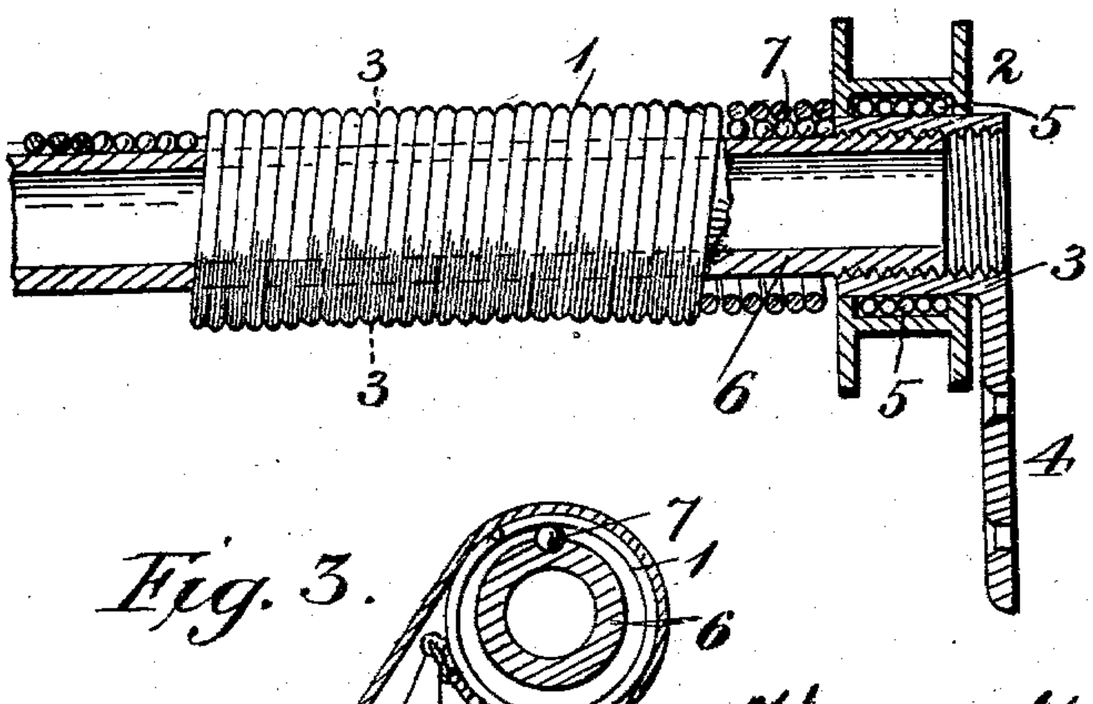
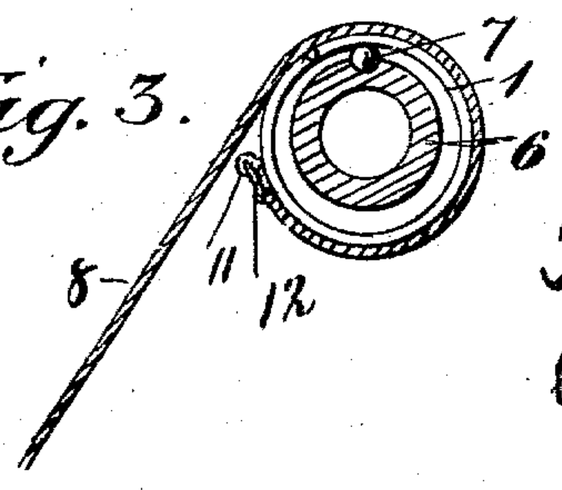


Fig. 3.



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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 4.

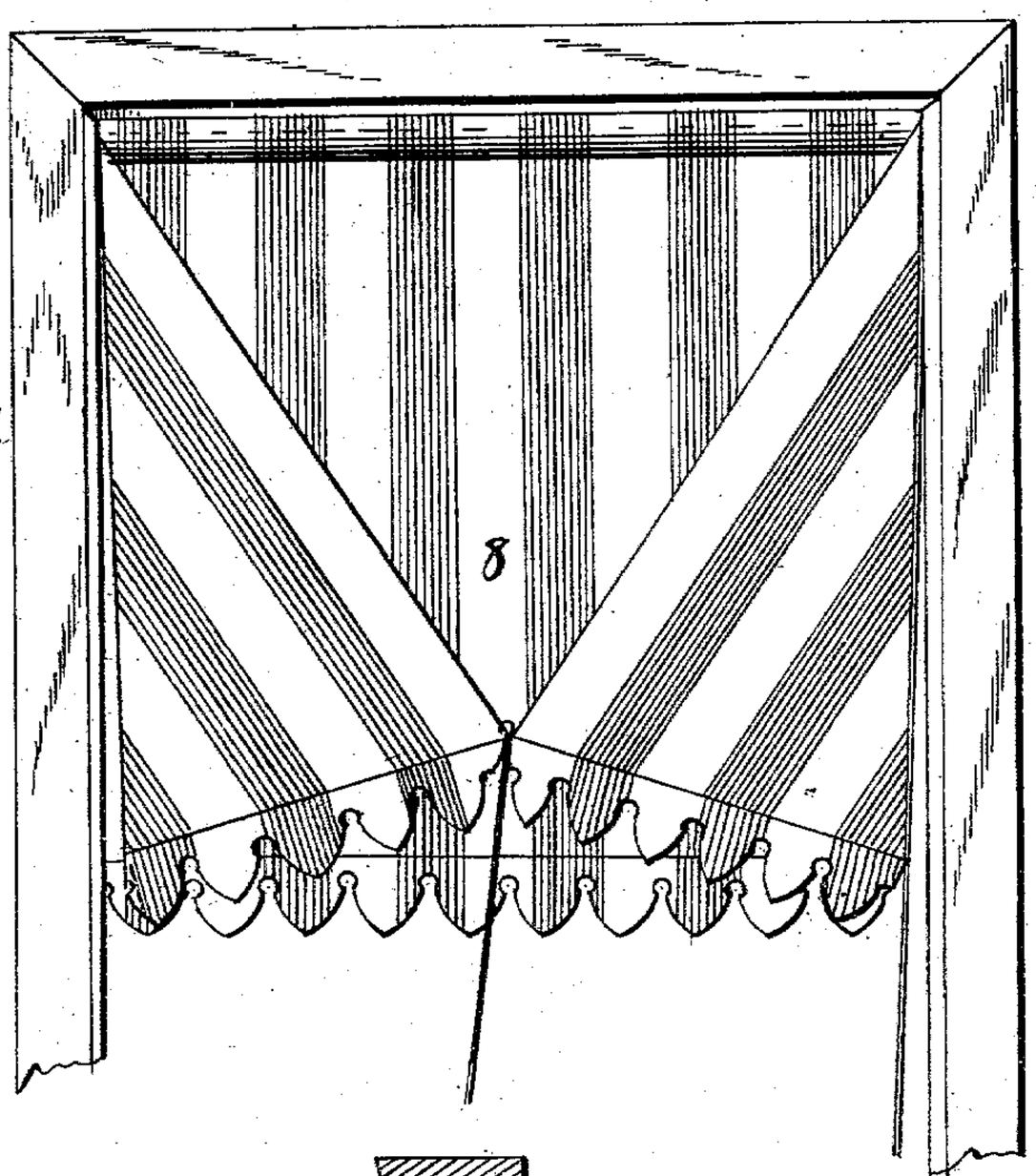


Fig. 5.

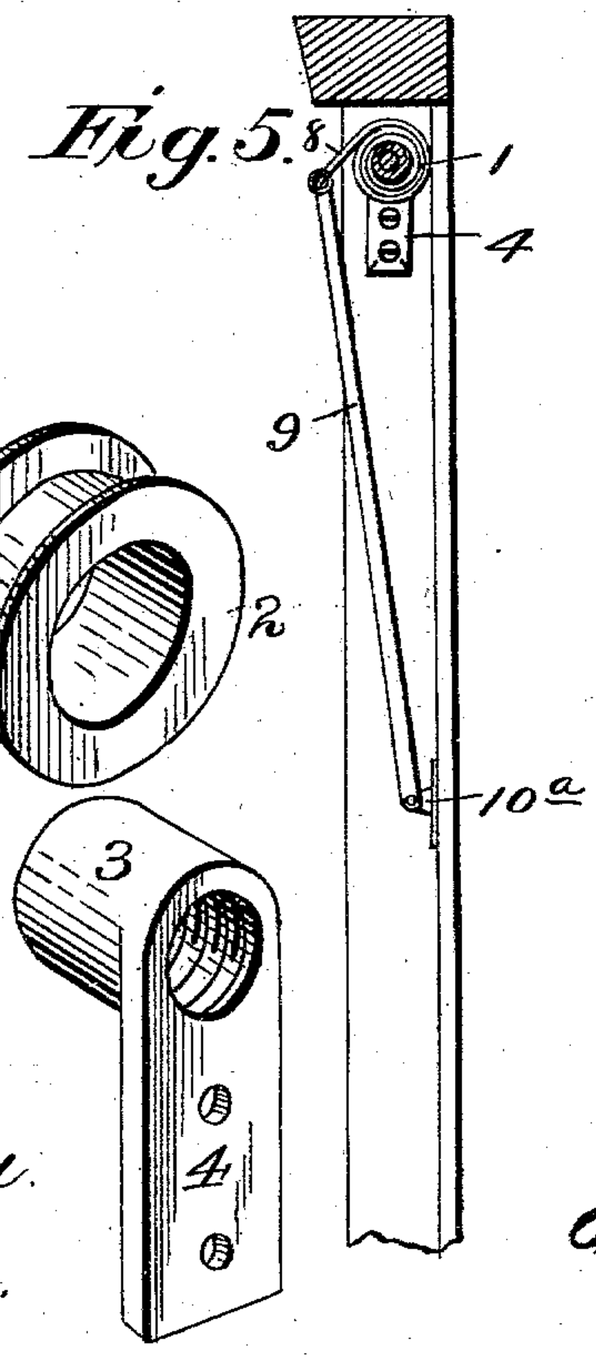
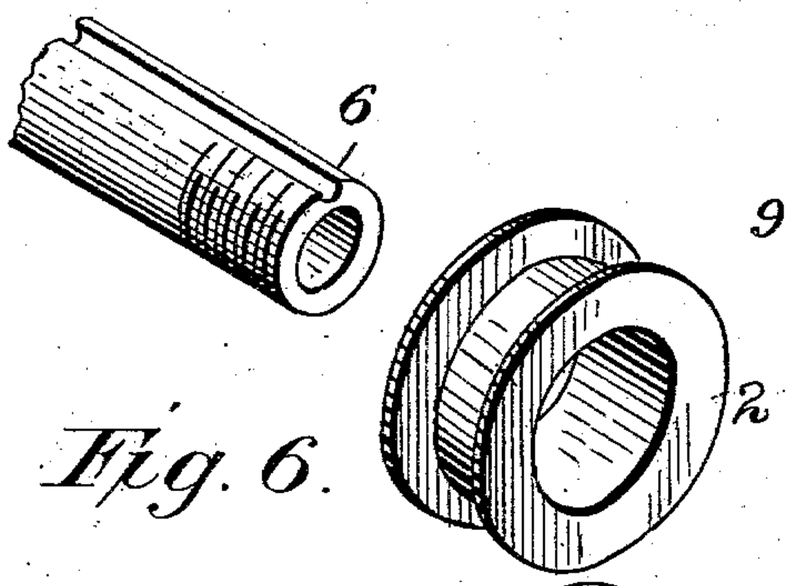


Fig. 6.



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No. 740,921. Patented October 6, 1903.

UNITED STATES PATENT OFFICE.

THOMAS H. REES AND JOHN McDONNELL, OF LOUISVILLE, KENTUCKY;
SAID McDONNELL ASSIGNOR TO SAID REES.

AWNING.

SPECIFICATION forming part of Letters Patent No. 740,921, dated October 6, 1903.

Application filed November 3, 1902. Serial No. 129,994. (No model.)

To all whom it may concern:

Be it known that we, THOMAS H. REES and JOHN McDONNELL, citizens of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Awnings; and we do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to certain improvements in awnings of that type wherein the awning-cloth is rolled instead of being folded when up; and it consists in certain peculiarities in the construction of parts and in certain novel combinations of elements, substantially as hereinafter described, and particularly pointed out in the subjoined claims.

The object of the invention is to produce an awning of the type stated which will be of simple, durable, and inexpensive construction and which may be raised and lowered with a minimum expenditure of force. This object is well accomplished by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a front view of an awning embodying our improvements. Fig. 2 is a sectional view through one end of the roller and its supporting means. Fig. 3 is a section on the line 3 3 of Fig. 2, showing also a part of the awning-cloth. Fig. 4 is a rear side elevation showing the side wings of the cloth folded in. Fig. 5 is a vertical section showing the awning raised. Fig. 6 is a detail view in perspective of parts of the awning roller and support detached.

Awning-rollers hitherto provided are usually or invariably constructed of wood. It is found in practice that such rollers warp, and when warped the awning-cloth may not be rolled properly thereon. To overcome this disadvantage, we purpose to construct the roller of metal, and to the end that said metal roller may be most easily operated it is tubular and mounted on balls or other suitable rotative antifriction devices. Moreover, in order that the roller may be of light construction and yet be capable of sustaining the weight which it must support in practice a line of rotative bearing devices is provided which are located within the roller and extend longitudinally from end to end of the body thereon. By this construction tendency of the roller to bend under the weight of the awning to an extent which will cause or tend to cause the awning-cloth to be improperly rolled thereon will be prevented without requiring the use of a heavy roller. It is furthermore preferred that the roller be made of coiled wire, for the reason that such a roller may be of light and inexpensive construction and the rounded surfaces of the wire being in engagement with the rounded surfaces of the balls will cause the roller to rotate with maximum ease.

The construction shown in the accompanying drawings is considered to be the best embodiment of our invention; but we do not wish to be understood as being limited to the detail construction thereof shown therein.

In said drawings, 1 designates the roller, which is tubular and preferably composed of a spirally-coiled strip of wire provided with end pieces 2, suitably fixed thereto. Said end pieces are mounted to rotate on suitable bearings, herein shown as bosses or heads 3, projecting from brackets 4, and preferably interposed between said end pieces and bosses are balls or other suitable friction-reducing bearing devices 5. In order that the tubular roller 1 need not be made of heavy construction, a shaft 6 is provided to extend longitudinally through the same and serve as supports for a line of balls 7 or other suitable rotative bearing devices which engage the inner surface of the roller. Preferably this shaft is hollow to prevent warping thereof. The balls may be supported thereon in any suitable way. In the construction shown the shaft is grooved longitudinally, and the balls are inserted in said groove and project therefrom into engagement with the inner surface of the roller. The ends of this shaft are preferably threaded into the bosses or heads 3, whereby the device may be most readily assembled and taken apart.

8 designates the awning-cloth, and 9 the

awning-frame. Said awning-frame may be of any suitable construction, and it may be mounted to have pivotal movement only or it may be mounted to have both pivotal and bodily movement, according to the requirements of the particular door or window being equipped with the awning. When mounted to have bodily and pivotal movement, the ends of the frame may be pivoted to sleeves 10, adjustable vertically on guide-rods 11, as shown in Fig. 1, and when mounted to turn pivotally only the ends of said frame may be journaled in brackets 10^a, as shown in Fig. 5. The awning-cloth is secured at one end to the roller by any suitable means, such as the eyes 11 on said roller and the hooks 12 on the cloth. The lower end of said cloth is secured to the frame by any suitable means.

The roller 1 is preferably rotated by ropes 13, which are wrapped around the end pieces 2 and extend thence to within convenient reach of the user.

Having thus described the invention, what we believe to be new, and desire to secure by Letters Patent, is—

1. In an awning, the combination with the cloth, and a pivoted frame with which one end of said cloth is connected, of a tubular roller which carries said cloth, said roller composed of a spirally-coiled strip of metal and end pieces secured to the ends of said strip, bearings in which said end pieces are journaled, a shaft extending through said roller, and rotative bearing devices interposed between said shaft and roller.

2. In an awning, the combination with the cloth and pivoted frame, of a tubular roller which carries said cloth and is provided with journals at the ends thereof, brackets engaging said journals and supporting the ends of said roller, a shaft movably secured to said brackets and extending through said roller, rotative bearing devices carried by said shaft and engaging said roller along the length thereof to thereby coöperate with the shaft in supporting the roller between its ends, and means for rotating said roller to thereby wind the awning-cloth thereon.

3. In an awning, the combination with the cloth and frame, of a tubular roller which carries said cloth, said roller having a spirally-coiled strip of metal and end pieces forming journals therefor, brackets having bearings for said journals and supporting the ends of said roller, a shaft carried by said brackets and extending longitudinally through said roller, rotative bearing devices carried by said shaft and engaging said spirally-coiled roller along the length thereof and supporting the same between its ends and means for rotating said spirally-coiled roller to wind said cloth thereon.

4. In an awning, the combination with the cloth and a pivoted frame with which one end of the cloth is connected, of a tubular roller which carries said cloth, said roller composed of a spirally-coiled strip of metal and end pieces secured to the ends of said strip, bearings in which said end pieces are journaled, a shaft extending through said roller, rotative bearing devices interposed between said shaft and end pieces, and rotative bearing devices engaging said strip along the length thereof to thereby coöperate with said shaft in supporting the coiled portion of the roller.

5. In an awning, the combination with the cloth and frame, of a tubular roller which carries said cloth, said roller composed of a spirally-coiled strip of metal and end pieces forming journals therefor, brackets within which said end pieces are journaled, a shaft removably secured to said brackets and extending through said roller, and rotative bearing devices engaging said roller along the length thereof to thereby coöperate with said shaft in supporting the coiled portion of the same.

6. In an awning, the combination with the cloth and pivoted frame, of a tubular roller which carries said cloth, said roller composed of a spirally-coiled strip of metal and end pieces forming journals therefor, brackets within which said end pieces are journaled, bearing devices interposed between said brackets and end pieces, means within the coiled portion of said roller for supporting the same, and operating ropes or cords connected with said end pieces.

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

THOMAS H. REES.
JOHN McDONNELL.

Witnesses:
HENRY H. BOHMER,
JOHN KNABESCHUH.