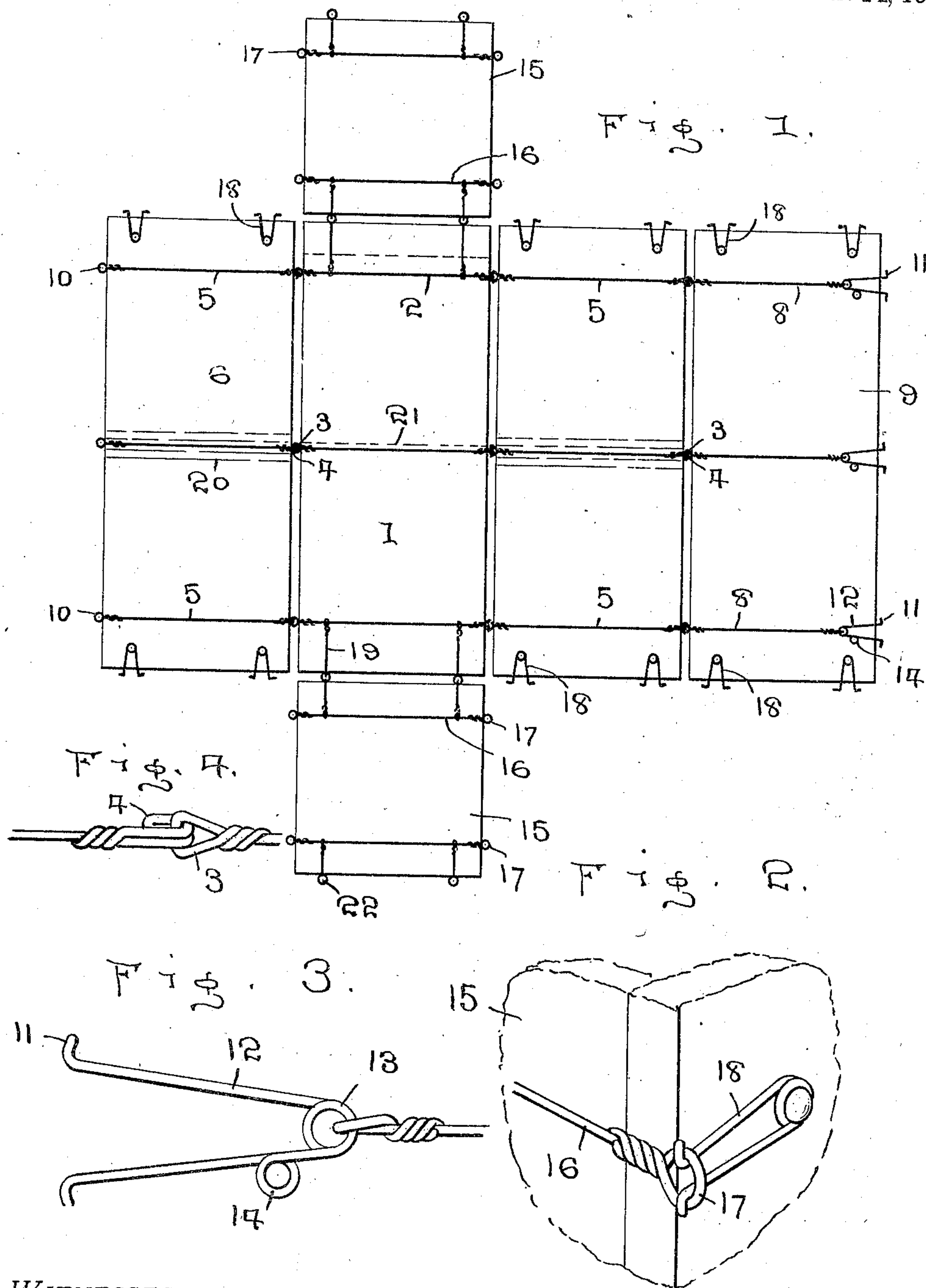


RICHARD MUEHR & RUDOLPH MUEHR.
SHIPPING CRATE.

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986,587.

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RICHARD MUEHR AND RUDOLPH MUEHR, OF WEIMAR, TEXAS.

SHIPPING-CRATE.

986,587.

Specification of Letters Patent.

Patented Mar. 14, 1911.

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To all whom it may concern:

Be it known that we, RICHARD MUEHR and RUDOLPH MUEHR, citizens of the United States, residing at Weimar, in the county of Colorado and State of Texas, have invented certain new and useful Improvements in Shipping-Crates; 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 relates to new and useful improvements in shipping crates and our object is to provide means for securely holding the parts of the crate in an assembled position.

A further object is to provide means for disengaging portions of the crate from the base thereof when the crate is in its knocked down position, and, a further object is to provide means whereby the end walls of the crate may be folded over other parts of the crate when in a knocked down position.

Other objects and advantages will be hereinafter referred to and more particularly pointed out in the specification and claim.

In the accompanying drawings which are made a part of this application, Figure 1 is a plan view of a crate showing the walls thereof connected together and in a knocked state. Fig. 2 is a detail perspective view showing the manner of locking the parts of the crate together. Fig. 3 is a detail elevation of one of the locking mechanisms, and, Fig. 4 is a detail perspective view showing the manner of attaching the side walls of the crate to the base section thereof.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the several views, 1 indicates the base of the crate, which is preferably rectangular in general outline and extending across the bottom face thereof are wires 2, said wires being secured to the base in any suitable manner. The wires 2 are provided with loops 3 at their ends, with which engage hooks 4 of wires 5, said wires 5 extending across the outer faces of the side walls 6 and 7 of the crate. The wires 5 extending across the side wall 7 are looped into engagement with similar wires 8 extending across a cover 9, so that when the side walls 6 and 7 are swung upwardly or to their assembled positions, the cover 9 may be swung over and rested on the upper edges

thereof. The wires 5 extending across the wall 6 terminate at their free ends in eyes 10, with which engage the fingers 11 of locking members 12, which locking members are attached to the ends of the wires 8 and when the fingers are introduced through the eyes 10, the parts of the crate will be securely locked together.

The locking members 12 are formed from a single section of wire, which is coiled substantially at its longitudinal center to form an eye 13, with which the ends of the wires 8 engage, one arm of the locking member having a coiled portion 14, through which any suitable form of securing device is introduced to fasten the locking member to the cover. The arms of the locking member are slightly at an outward incline and are bent at right angles to form the fingers 11 at their free ends. When introducing the locking members into engagement with the eyes 10, the sections of the locking members carrying the fingers are pressed together. After the ends of the locking members are introduced through the eyes, the pressure thereon is released, whereupon the spring tension of the coiled portions forming the eyes will separate the sections carrying the fingers and position the fingers to engage the outer faces of the eyes, thereby holding the eyes against casual disengagement from the locking members.

The end walls 15 have wires 16 extended transversely thereacross, which wires terminate at both ends in eyes 17, which are adapted to be engaged by spring locking members 18 carried at the ends of the side walls 6 and 7, said spring members being formed similar to the members 12, except that the coiled portion 14 is dispensed with and the securing means introduced through the eyes formed by the coil of the locking member. The end walls 15 are hingedly secured to the base 1 by attaching links 19 to the outer wires 2 and the lowermost wires 16, said links being looped together at the ends of the base 1, so that said end walls may be readily thrown upwardly to assemble the same or swung in the opposite direction and positioned over the base 1 when in its knocked down position.

The inner faces of the side walls 6 and 7 may be provided with cleats 20, between which is adapted to be positioned a partition board 21, as shown by dotted lines in Fig. 1, the partition when the crate is in its

knocked position resting flat on the face of the base. The ends of the cover 9 may also be provided with the locking members 18, which are adapted to engage eyes 22 on the upper edges of the end walls 15.

In assembling the crate, the hooks 4 are first engaged with the loops 3 and the side and end walls swung to a vertical position, when the locking members 18 are depressed and entered through the eyes 17 on the end walls. The cover 9 is then swung over the upper edges of the side and end walls and the locking members 12 engaged with the eyes 10 and the locking members 18 with the eyes 22 on the end walls, thereby securely locking the several parts of the crate in their assembled positions. When the crate is to be re-shipped, the cover and side walls are disengaged from the eyes of the end walls and the two side walls unhooked from the loops 3, the side wall 6 being placed over the upper face of the base. The end walls are swung downwardly and over the bottom of the base 1, when the side wall 7 and cover 9 hinged thereto are folded together and placed over the end walls. This operation will reduce the crate to a compact form, which will occupy but a minimum amount of space in re-shipping and it will be readily seen that the various parts of the crate may be quickly set up or knocked down, as occasion may require. It will further be seen

that when the locking members are properly secured with their respective eyes, the parts of the crate will be securely locked in their assembled positions. It will further be seen that the various wires extending over the outer faces of the parts of the crate will form a reinforcing means therefor. It will likewise be seen that in view of the fact that the parts of the crate are constructed of wood and wire employed for binding the parts in their assembled positions, the crate can be produced at a minimum expense and will be extremely light in weight.

What we claim is:—

A shipping crate, comprising the combination with the side and end walls, a cover and wires connecting said parts together, certain of said wires having eyes at their ends, of locking members formed from single pieces of wire and coiled at their centers to form eyes, the free ends of said locking members having fingers extending at right angles thereto and adapted to engage the eyes of the wires on the side and end walls.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

RICHARD MUEHR.
RUDOLF MUEHR.

Witnesses:

F. F. MICHALKE,
FRANK RIPPER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."