

W. R. MAEDER.
 KNOCKDOWN BIN.
 APPLICATION FILED APR. 11, 1910.

973,796.

Patented Oct. 25, 1910.

2 SHEETS—SHEET 1.

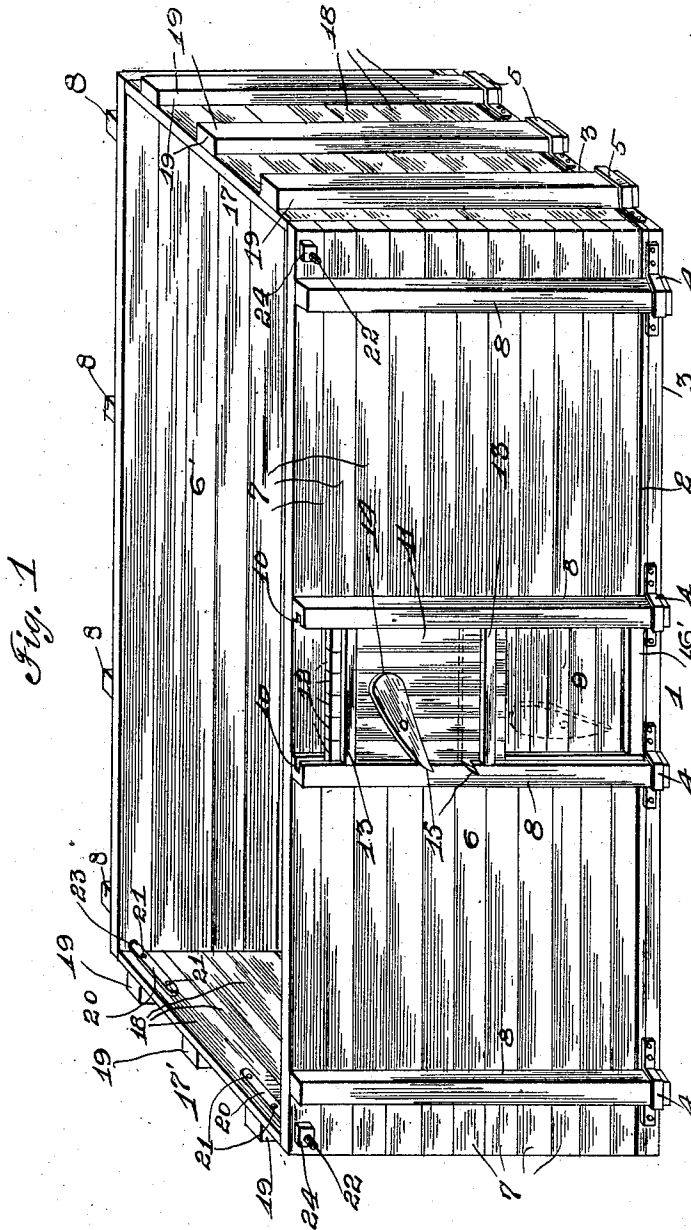


Fig. 1

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 M. L. Lessard
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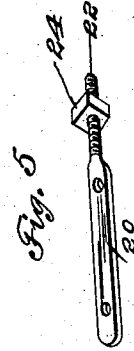
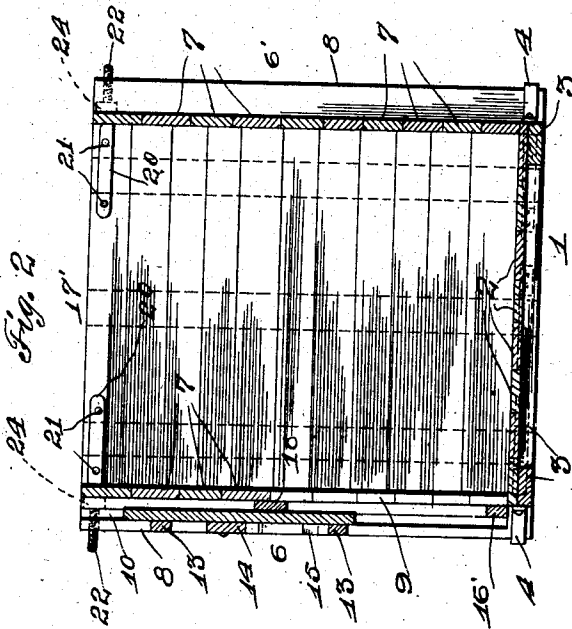
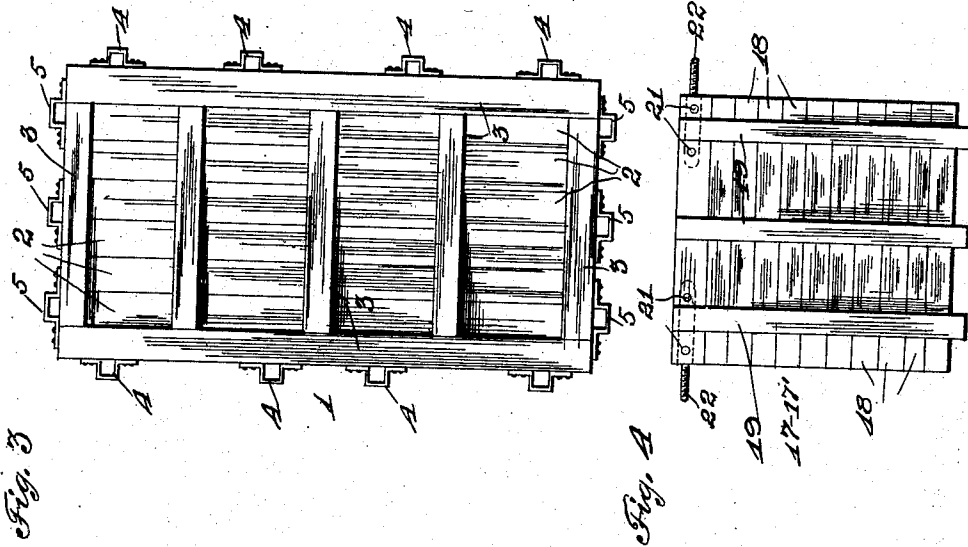
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 By *John H. Torrey*
 His Attorney

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UNITED STATES PATENT OFFICE.

WILLIAM R. MAEDER, OF CHICAGO, ILLINOIS.

KNOCKDOWN BIN.

973,796.

Specification of Letters Patent.

Patented Oct. 25, 1910.

Application filed April 11, 1910. Serial No. 554,705.

To all whom it may concern:

Be it known that I, WILLIAM R. MAEDER, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Knockdown Bins, of which the following is a specification.

My invention relates to improvements in knock-down bins and has for its object the production of a bin of this character which will be of a construction such as to adapt the same to be readily and quickly assembled for use and which may as easily and expeditiously be knocked down to occupy a minimum amount of space for storage or shipment.

A further object is the production of a bin which will be of strong, durable and economical construction and efficient in operation.

Other objects will appear hereinafter.

With these objects in view my invention consists in a knock-down bin characterized as above mentioned and in certain details of construction and arrangement of parts all as will be hereinafter fully described and more particularly pointed out in the appended claims.

My invention will be more readily understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a perspective view of a knock-down bin assembled for use embodying the preferred form of my invention, Fig. 2 is a central transverse section thereof, Fig. 3 is a bottom plan view of the bottom-forming member of the bin, Fig. 4 is a front elevation of one of the end-forming members of the bin, and Fig. 5 is a perspective view of one of the connecting threaded studs included in the construction, detached.

Referring now to the drawings, 1 indicates the bottom of the bin which is of a rectangular form, the same comprising a plurality of similar elongated rectangular body-forming sections 2 which are placed side by side or with their longitudinal edges contacting and rigidly secured together by longitudinally and transversely extending reinforcing cleats 3 arranged upon the under sides thereof. Rigidly secured to and spaced upon the peripheral edges of the bottom 1 are preferably metallic loops 4 and 5 arranged respectively upon the longitudinal and transverse edges of said bottom.

6 and 6' indicate the side members of the

bin each being formed of a plurality of elongated rectangular sections 7 arranged one above the other, the latter constituting the body thereof, and transversely or vertically extending cleats 8 spaced upon and rigidly secured to the outer sides of the members 7. The cleats 8 of each of the side members 6 and 6' are extended below the lower edge of the lowermost sections 7 thereof for snug engagement of the loops 4 provided upon the adjacent edge of the bottom. Provided centrally in the lower edge of the side 6 is a rectangular opening 9 adapted, when the bin is assembled, to constitute the discharge opening thereof. Slidably mounted upon the outer surface of the side members 6, the longitudinal or vertical edges thereof engaging channels 10 provided in the adjacent sides of the central cleats 8 provided upon said side member, is a closure 11 for the opening 9. Said closure comprises longitudinal sections 12 and transverse cleats 13, a pawl or detent 14 pivoted at 14' upon the front side thereof being adapted to engage notches 15 provided in the inner edge of one of the channeled cleats 8 to hold said closure in elevated or open position. Strips 16 and 16' arranged at the upper and lower edges respectively of the opening 9 are adapted, when the closure is in lowered or closing position, to contact the inner surface thereof at its upper and lower extremities so as to insure a tight connection and to prevent leakage from the bin therethrough.

17 and 17' indicate the end walls of the structure which are of identical construction, each comprising a body portion formed of a plurality of similar elongated rectangular sections 18 arranged one above the other, and vertically extending cleats 19 spaced upon and rigidly secured to the outer sides of said sections. The lower ends of said cleats are also extended so as to adapt the same for engagement of the loops 5 of the bottom. Having their inner flattened ends 20 rigidly secured as by screws or other suitable securing devices 21 upon the inner surface of each of the end walls at the upper corners thereof, the same projecting laterally beyond the vertical edges of said walls are screw-threaded studs 22. Said studs are adapted to engage perforations 23 provided for the reception thereof in the upper corners of the side members 6 and 6', and to which the same may be securely locked by means of nuts 24. Thus

simple and efficient means are provided for rigidly connecting the upper ends of the lateral walls of the bin.

- With the construction as set forth a bin will be provided which may be readily shipped or transported in a knock-down condition, and which, when it reaches its destination, may be readily and expeditiously assembled and arranged for use.
- The bin is especially adapted for employment as a coal receptacle, ready removal of the coal therefrom being effected through the discharge opening therein. It is understood, however, that it may be used for any other purpose to which it is applicable.

While I have shown what I deem to be the preferable form of my bin, I do not wish to be limited thereto as there might be various changes made in the details of construction and arrangement of parts described without departing from the spirit of the invention comprehended within the scope of the appended claims.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

1. A knock-down bin comprising a substantially rectangular bottom wall, loops spaced upon the peripheral edges of said bottom wall, vertical side and end walls having their lower edges resting upon the peripheral portions of said bottom wall, cleats spaced upon said side and end walls having their lower extremities extending downwardly and loosely engaging said loops, detachable connections between the contiguous edges of said side and end walls, one of said walls being provided with a discharge opening, and a sliding closure for said opening, substantially as described.

2. A knock-down bin comprising a substantially rectangular bottom wall, loops spaced upon the peripheral edges of said bottom wall, vertical side and end walls having their lower edges resting upon the peripheral portions of said bottom wall, spaced cleats provided upon the outer sides of said side and end walls, the lower extremities of said cleats loosely engaging said loops, threaded studs projecting from said walls

engaging and projecting through perforations in said side walls, and nuts threaded upon the outer ends of said studs for locking said side and end walls together, substantially as described.

3. A knock-down bin comprising a substantially rectangular bottom wall, loops spaced upon the peripheral edges of said bottom wall, vertical side and end walls having their lower edges resting upon the peripheral portions of said bottom wall, spaced cleats provided upon the outer sides of said side and end walls, the lower extremities of said cleats loosely engaging said loops, threaded studs laterally projecting from the vertical edges of said end walls loosely engaging and projecting through perforations provided adjacent the vertical edges of said side walls, and nuts threaded upon the outer ends of said studs for detachably locking said side and end walls together, substantially as described.

4. A knock-down bin comprising a sectional bottom wall substantially rectangular in outline, loops spaced upon and projecting from the peripheral edges of said bottom wall, sectional side and end walls having their lower edges resting upon the peripheral portions of said bottom wall, vertically extending spaced cleats provided upon the outer surfaces of said side and end walls, the lower extremities of said cleats loosely engaging said loops, threaded studs laterally projecting from the vertical edges of said end walls loosely engaging and projecting through perforations adjacent the vertical edges of said side walls, nuts threaded upon the outer ends of said studs for detachably locking said side and end walls together, one of said side walls being provided with a discharge opening at its lower edge, and a sliding closure for said opening, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM R. MAEDER.

Witnesses:

HELEN F. LILLIS,
JOSHUA R. H. POTTS.