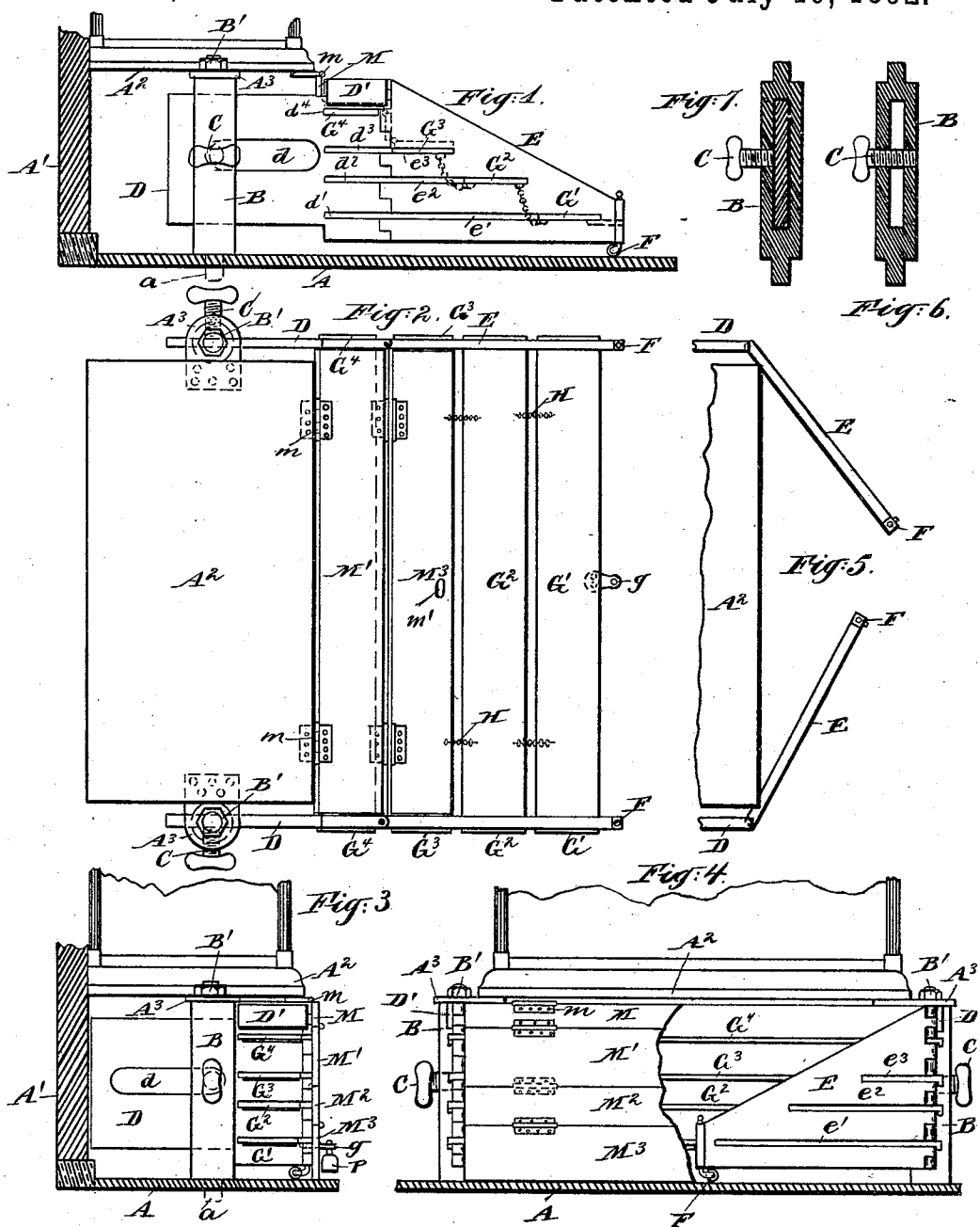


(No Model.)

H. A. KOELLER.
FOLDING STAND.

No. 479,073.

Patented July 19, 1892.



Witnesses:
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UNITED STATES PATENT OFFICE.

HERMAN A. KOELLER, OF NEW YORK, N. Y.

FOLDING STAND.

SPECIFICATION forming part of Letters Patent No. 479,073, dated July 19, 1892.

Application filed March 16, 1892. Serial No. 425,097. (No model.)

To all whom it may concern:

Be it known that I, HERMAN A. KOELLER, a citizen of the United States, residing in the city and county of New York, in the State of New York, have invented a certain new and useful Improvement in Folding Stands, of which the following is a specification.

My improved stand is intended more especially for supporting baskets, boxes, &c., in front of grocery stores, and it will be described as thus used; but the invention may serve for other analogous uses. It provides a strong and durable construction, capable of supporting and exhibiting a large quantity of goods and of being reduced to a small compass and securely locked against intermeddling when not required.

The accompanying drawings form a part of this specification and represent what I consider the best means of carrying out the invention.

Figure 1 is a side elevation, partly in vertical section, showing the stand open. Fig. 2 is a corresponding plan view. Fig. 3 is a side elevation corresponding to Fig. 1, but showing the parts closed. Fig. 4 is a front elevation. The folding cover is partly broken away. Fig. 5 is a plan view of a portion. Fig. 6 is a vertical section of one of the uprights, and Fig. 7 is a similar view showing a modification.

Similar letters of reference indicate corresponding parts in all the figures where they appear.

A is a flag-stone constituting a part of the pavement and having holes *a* drilled or otherwise produced therein.

A' is the wall of a building, and A² the base or bottom of a projecting window, partially shown in Figs. 1 and 3.

A³ A³ are rigid arms bolted or otherwise fixed to the window-bottom A² and extending laterally.

B B are slotted uprights of cast-iron or other suitable material having their lower ends secured by lead or sulphur in the holes *a* and their upper ends held in the arms A³ and secured by nuts B'.

D D are plane slides capable of being moved forward and backward a sufficient distance in the uprights B. To the front edge

of each is knuckled a wing E, which performs important functions. Its length horizontally is nearly half the length of the structure. Its upper edge is inclined, as shown. It has a horizontal lower edge terminating in a caster F. Horizontal slots *e' e² e³* are formed in these folding parts E, open at the back edge.

M is a plate of boiler-iron or other suitable material, permanently but loosely attached to the window-base A² by butts *m*.

M' M², &c., are corresponding plates hinged together and to the plate M by butts, as shown. The last plate M³ has a hole *m'* at its mid-length. When the stand is adjusted for use, the wings E are extended at right angles with the front A' of the building and parallel with each other, and horizontal boards or shelves G' G² G³ G⁴ extend across, supported in the front ends of the several slots *e' e² e³*. The widths of these several boards are uniform and sufficient to afford a reliable support for goods. The slots are so adjusted that the shelves form a series of steps, each higher than the one in front. They are connected by chains H. A tongue *g* extends forward at the mid-length of the lowermost shelf G' and is provided with a hole to facilitate locking, as will appear farther on. The end of each board G' G², &c., is provided with a cleat or flange on each end, which aids to keep the boards in their proper position as they are alternately adjusted for use or slid back into the closely-packed position. The front edge of each slide D is provided with open slots *d' d² d³*, corresponding to and matching the slots *e' e² e³* and of a depth a little more than equal to the width of the corresponding boards or shelves G' G², &c. Above this series is still another similar open slot *d⁴*, which retains permanently a corresponding board G⁴.

When my stand is no longer required and is to be contracted into its smallest dimensions, the boards or shelves G' G², &c., are moved backward into the slots *d' d²*, &c. The plates M M' M², &c., are lifted temporarily, the wings E are folded into line, as shown in Figs. 3 and 4, and then the plates M M' M², &c., are extended downward vertically and the hole *m'* receives the tongue *g*, and a padlock P, being engaged in the hole in this tongue and properly locked, the whole is se-

cured until it is again wanted. Ordinarily the parts will be thus adjusted each night. The reverse operation again puts the parts into condition for use the next morning.

- 5 Each slide D has a closed slot *d* at the mid-height. A screw C is tapped into each upright B and traverses this slot. The parts should be fitted so closely that when the device is out of use and the screws C are tightly
10 set they will spring together or partially close the slot in the upright B sufficiently to grip the slide D and hold it against displacement; but when this screw is slackened the slides may be easily moved inward or outward.
15 Each slide D is provided at its upper front corner with a fixed wing D', which projects sufficiently to serve as a stop to prevent the folding wings E from being turned too far outward. The plate M is of just sufficient
20 width to drop nearly down to the top of the shelf G¹. When the parts are extended and the plate M is in this position, the plate M' is extended horizontally on the shelf G¹, and the plate M² is allowed to drop downward
25 from the front edge thereof, extending nearly to the upper surface of the next shelf G³. Thence the plate M³ extends forward on the shelf G³. The screws C may be tightened when the device is closed to aid in keeping
30 parts in the compacted condition, and they may also be tightened when the device is in use to aid in holding the parts in the extended condition.

Modifications may be made without departing from the principle or sacrificing the advantages of the invention. The number of the shelves and the spaces between them may be made greater or less. The stops D' may be cast in one with the slides D.

- 40 Instead of making the uprights sufficiently thin to yield by their elasticity and springing them inward by the screws C, the uprights may be made stiffer and the screws C may be tapped only through one part of the upright and caused each to hold its respective slide D
45 by simple pressure of its end against the slide. Fig. 7 shows such a modification.

I claim as my invention—

- 50 1. In a device for exhibiting goods, the slides D and folding wings E hinged thereto, in combination with each other and with the series of shelves G' G², all arranged to serve substantially as herein specified.
55 2. In a device for exhibiting goods, the series of shelves G' G², and the folding wings

E, adapted to support them in stepped positions, in combination with each other and with the flexible connections II between the several shelves, all arranged for joint operation substantially as herein specified.

3. In a device for exhibiting goods, the series of shelves G' G², and the folding wings E, slotted horizontally, as indicated by *e'* *e*² *e*³, adapted to support them therein in stepped positions, and with the slides or side pieces D, also slotted horizontally, the slots registering as shown and adapted to serve as herein specified.

4. In a device for exhibiting goods, the series of shelves G' G², and the folding wings E, slotted horizontally, as indicated by *e'* *e*² *e*³, adapted to support them therein in stepped positions, and with the slides or side pieces D, also slotted horizontally, the slots registering as shown, and with the tongue *g*, carried on one of the shelves and extending beyond the parts when folded, adapted to facilitate locking in the closed position, as herein specified.

5. In a device for exhibiting goods, the series of shelves G' G², and the folding wings E, slotted horizontally, as indicated by *e'* *e*² *e*³, adapted to support them therein in stepped positions, and with the slides or side pieces D, also slotted horizontally, the slots registering as shown, and with the cover composed of plates M M', &c., flexibly connected, and locking means adapted to secure the whole, all arranged to serve substantially as herein specified.

6. In a device for exhibiting goods, the series of shelves G' G², and the folding wings E, slotted horizontally, as indicated by *e'* *e*² *e*³, adapted to support them therein in stepped positions, and with the slides or side pieces D, also slotted horizontally, the slots registering as shown, and with the tongue *g*, carried on one of the shelves and extending beyond the parts when folded, adapted to facilitate locking in the closed position, and with the clamping means C, arranged to secure the parts in the extended or contracted position at will, all substantially as herein specified.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

HERMAN A. KOELLER.

Witnesses:

J. L. FINGLETON,
H. A. JOHNSTONE.