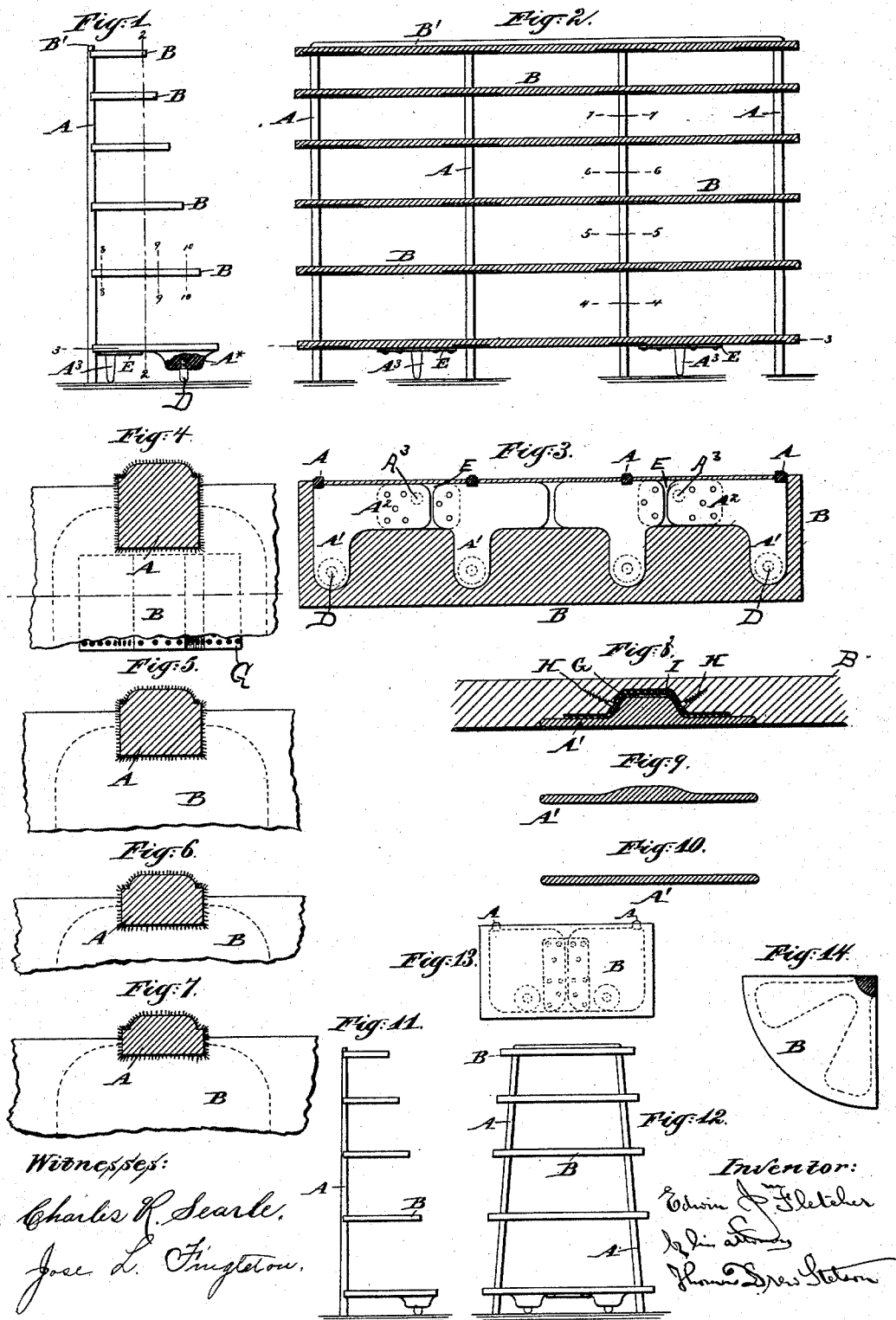


(No Model.)

E. J. FLETCHER.
TRUNK STAND.

No. 483,348.

Patented Sept. 27, 1892.



UNITED STATES PATENT OFFICE.

EDWIN JOHN FLETCHER, OF NEW YORK, N. Y.

TRUNK-STAND.

SPECIFICATION forming part of Letters Patent No. 483,348, dated September 27, 1892.

Application filed April 21, 1892. Serial No. 429,996. (No model.)

To all whom it may concern:

Be it known that I, EDWIN JOHN FLETCHER, a subject of the Queen of Great Britain, residing in the city and county of New York, in the State of New York, have invented a certain new and useful Improvement in Trunk-Stands, of which the following is a specification.

My improvement is intended more especially for supporting the small and strongly-locked boxes—technically “trunks”—used in the jewelry trade; but it is capable of being usefully employed in various other situations, among which are the supporting of books and other heavy articles in vaults and safes and in book-cases. I have designated it and will describe it as mainly intended for supporting jewelers’ trunks.

The stand holds up any required number of shelves strongly and rigidly without any support at the front, except at the base of the entire structure. Each shelf has a surface of rose-wood or other fine wood and contains within its moderate thickness iron or steel constructed and disposed so as to give great strength and rigidity.

Special provisions are made to stiffen the structure laterally, and I provide sufficient weight at the front of the base to prevent its being ever overturned by any ordinary backward pressure, as in forcing home a trunk at the top.

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 of a trunk-stand complete. Fig. 2 is a vertical longitudinal section on the line 2 2 in Fig. 1, and Fig. 3 is a corresponding section on the line 3 3 in Figs. 1 and 2. Figs. 4 to 10, inclusive, represent details on a larger scale. Fig. 4 is a horizontal section on the line 4 4 in Fig. 2; Fig. 5, a corresponding section on line 5 5; Fig. 6, a corresponding section on line 6 6, and Fig. 7 a corresponding section on line 7 7. Fig. 8 is a vertical section on the line 8 8 in Fig. 1. Fig. 9 is a corresponding section on line 9 9, and Fig. 10 is a corresponding section on line 10 10 in said figure. The remaining figures show modifications. Fig. 11 is a side elevation, Fig. 12 a front elevation, and Fig. 13 a plan view, of a form of

my invention having only two uprights. Fig. 14 is a horizontal section in the plane of the center of one of the shelves, showing a form of the invention having only one upright, adapted to serve in the corner of a room for what is sometimes called a “what-not.”

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

Referring to Figs. 1 to 10, A A are sound castings of iron or steel. They may be white iron thoroughly annealed or malleable cast-iron, certain portions being designated, when necessary, by supernumerals, as A' A². Each shelf is mainly of wood B, preferably rose-wood or other fine strong wood, well seasoned, saturated, and varnished. The castings have arms concealed in the shelves. The structure is arranged to afford strength and stiffness both vertically and laterally. The front is heavily loaded at the bottom to avoid the risk of its ever being overturned backward. The arms are designated A' and are each cast integral with one of the uprights A. Their depth at the junction is almost equal to the full thickness of the shelf, but their depth rapidly diminishes as they extend outward. A thin portion extends laterally from each, so as to directly support a large surface of the wood. The lowermost arm A' is very greatly thickened downward at the front end, as indicated by A*. (See Fig. 1.) The arms above have no such thickening, but are thin and lie each entirely between the planes of the top and bottom of the corresponding wood portion B.

On the upright A at each end in the plane of the lowermost arm A', and consequently in the plane of the lowest shelf B, is another arm A², extending laterally inward a large portion of the distance from this standard to the next. (See Fig. 2.) The bottom of each standard A is smoothly rounded to serve as a foot. From a point near the extreme end of each arm A² a short leg extends downward, as indicated by A³, which contributes another foot at the back a little distance from each end of the structure. The heavy portion at the front of each of the lowermost arms A² is drilled and tapped and receives a screw-threaded piece D, which is nicely rounded at the bottom and serves as an additional foot. There are thus at the

back four feet formed by the bases of the up-
rights A and two more, nearly or exactly in
line therewith, formed by the legs A³, extend-
ing downward from the arms A², and four at
5 the front formed by the pieces D, tapped into
the thick and heavy portion of the lower
arms A'.

It is important to stiffen the device against
any lateral racking movements or oscillations.
10 The legs A³, connected to the exterior upright
A by the rigid arms A², contribute to this end.
If the frame is racked to the left, the leg A³,
near the right of the structure, pressing forcibly
on the floor resists the movement, and if
15 the device is racked to the right the corre-
sponding leg A³ on the left side of the struc-
ture becomes effective. I provide means for
still further stiffening the structure. I widen
the back end of the lower arms on the two
20 middle uprights, so that they nearly meet the
arms A², and apply on the under side of the
junction a rigid plate E, overlapping strongly
upon each and perforated to receive the leg
A³, and secure it by riveting both to the arm
25 A' of the middle upright and to the arm A² of
the end upright. The same effect can be ob-
tained by casting the whole in one; but it is
more economical in the manufacture and
transportation of the parts to make them sep-
30 arate and unite them strongly and stiffly by
the riveted plate E, which may be of any de-
sired thickness.

A portion of the wood of each shelf is ex-
cavated on the under side a little more than
35 sufficient to receive the proper arm A'. Each
arm A' being deep at and near its junction,
with the upright and thinner each side and
farther out, I give a corresponding form to
the excavation of the wood. The wood may
40 be easily removed either by hand or machin-
ery to a sufficient extent to receive the arm
with a little surplus space. Near the back of
the shelf where the wood has been most re-
duced in thickness there is so little wood left
45 in the upper surface that it is liable to be
crushed in any severe use of the stand. I de-
fend against this by fortifying such portion.
G is a plate of thin steel used for this pur-
pose. Its area is indicated in Fig. 4. Its cross-
50 section is shown in Fig. 8. The high portion
which applies against the thin part of the
wood B is thickly perforated. All parts may
be perforated, as shown. When setting this
plate, I apply liberally to its upper surface a
55 prepared glue I, which will adhere with force
to the steel plate G and also to the wood, thus
effecting a strong junction. The perfectness
of the union and its absolute reliability under
all conditions is increased by the perforations
60 in the highest part of the plate, and, allowing
the glue to flow through these, thus still more
reliably unites the metal and the wood.

H are screws standing in the inclined posi-
tion, shown inserted through the plate G at
65 the points indicated, and aiding, further, to se-
cure these important strengthening-pieces to
the wood of the shelf. These plates G prefer-

ably extend only a few inches from the up-
right.

It is not easy to produce cavities in the wood 70
which either alone or after being thus equipped
with the strengthening-plates G will apply
closely and exactly on the corresponding arms
A'. I do not attempt it, but make the cavity
a little in excess, thus allowing for slight im- 75
perfections in the forms or surfaces, and also
for slight warpings and distortions of the
arms. I fill the spaces between the arms and
the adjacent surfaces of the wood with what
is sometimes known as "blue-iron cement," 80
which, being allowed sufficient time to set, per-
fectly fills the space and makes the work com-
plete. Cement of a suitable character for my
purpose may be made by working common
brown lime and cement with raw linseed-oil 85
to the consistency of a pudding, with a little
litharge, and applying it immediately; or
another cement, which may be in some re-
spects superior, may be made by working dry
white lead in its ordinary commercial finely- 90
divided condition with copal varnish of like
consistency with a little Japan drier. No oil
drier should be used.

I apply on the under surface of each shelf,
except the bottom one, a sheet of thin dark 95
fabric, extending it smoothly across both the
woodwork B and the arms A', and secure it
by a thin coating of prepared glue I. This
gives a sufficiently smooth and tasty finish
for the under side. I produce a proper solu- 100
tion by stirring a good quantity of glue in
water with heat, adding about five per cent. of
pulverized pumice-stone and about half of one
per cent. of shellac previously reduced by a
suitable solvent, as alcohol or borax water or 105
the like.

The several uprights A are each coated with
the prepared glue and neatly wrapped with
a good quality of plush, taking care to extend 110
the plush in one piece continuously around
and have the joint come in one of the re-en-
tering angles *a*. This must be skillfully cut
for the arms A' and to have a sufficient quan-
tity of the glue to insure perfect adhesion at
every point without any excess to saturate the 115
plush and affect the pile, which it is impor-
tant to preserve with its fine and rich surface.

The uppermost shelf has a bead B' along its
back edge to serve as a stop in pushing back
a jewelry-trunk or other articles thereon; but 120
the other shelves need not be thus equipped,
as the uprights A serve as a sufficient stop.

My stand may be independent from or may
be set against or secured to a wall. It may be
inclosed in a case, as a cabinet, a book-case, or 125
a wall show-case.

I claim as my invention—

1. In a stand for jewelers' trunks and analo-
gous uses, a wood shelf B and one or more arms
A', of metal, concealed therein and cast or 130
otherwise formed in one piece or integral with
the uprights A, all arranged to serve substan-
tially as herein specified.

2. In a stand for jewelers' trunks and analo-

gous uses, a series of shelves B and metal arms A', the latter formed integral with one or more uprights A and weighted at the front, as indicated by A, substantially as herein specified.

3. In a stand for jewelers' trunks and analogous uses, a series of shelves B and contained metal arms A', the latter formed integral with one or more uprights A, in combination with each other and with metal plates G, separately attached to reinforce the thin portions of the shelves and with a filling cement, all arranged to serve substantially as herein specified.

4. In a stand for jewelers' trunks and analogous uses, a series of shelves B and contained metal arms A', the latter formed integral with two or more uprights A, in combination with each other and with the lateral arms A² and legs A³, adapted to stiffen the structure laterally, as herein specified.

5. In a stand for jewelers' trunks and analogous uses, a series of shelves B and contained

metal arms A', the latter formed integral with two or more uprights A, in combination with each other and with the lateral arms A², corresponding extensions from adjacent uprights, and riveted plates E, engaging them stiffly together, all adapted to serve as herein specified.

6. In a stand for jewelers' trunks and analogous uses, a series of shelves B and contained metal arms A', the latter formed integral with two or more uprights A, in combination with each other and with the lateral arms A² and legs A³ and riveted plates E, each bridging across from the arm A² on one upright to the arm A' on the adjacent upright, adapted to jointly stiffen the structure laterally, as herein specified.

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

EDWIN JOHN FLETCHER.

Witnesses:

H. A. JOHNSTONE,
JOSE L. FINGLETON.