

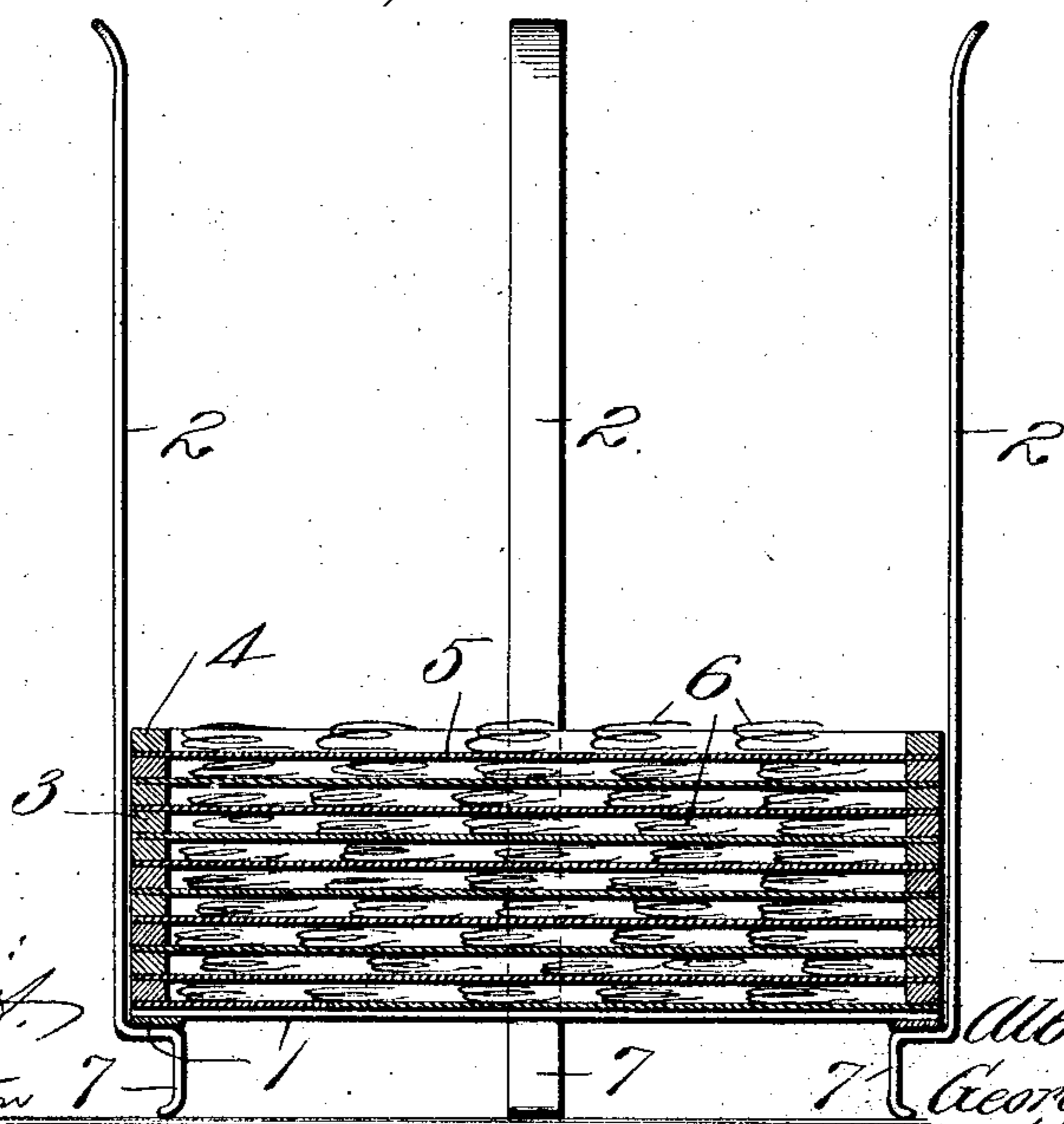
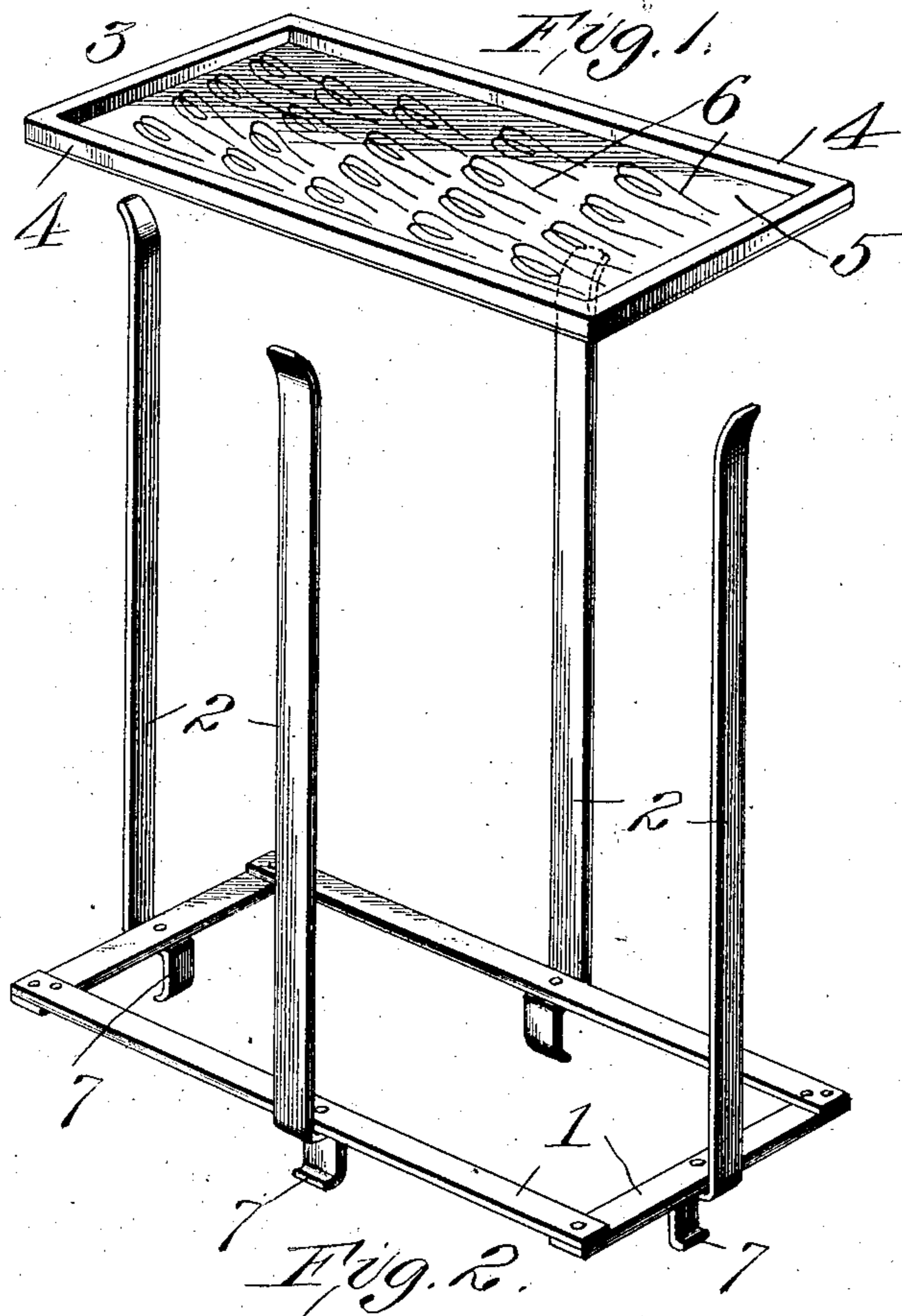
No. 768,614.

PATENTED AUG. 30, 1904.

A. W. W. MILLER & G. P. McDONNELL.
DEVICE FOR PROTECTING CARBON FILAMENTS FOR INCANDESCENT
ELECTRIC LAMPS.

APPLICATION FILED JULY 3, 1903.

NO MODEL.



Witnesses:

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UNITED STATES PATENT OFFICE.

ALBERT W. W. MILLER, OF SOUTH ORANGE, NEW JERSEY, AND GEORGE P. McDONNELL, OF ST. LOUIS, MISSOURI, ASSIGNORS TO AMERICAN ELECTRIC COMPANY, OF EAST ORANGE, NEW JERSEY, A CORPORATION OF NEW JERSEY.

DEVICE FOR PROTECTING CARBON FILAMENTS FOR INCANDESCENT ELECTRIC LAMPS.

SPECIFICATION forming part of Letters Patent No. 768,614, dated August 30, 1904.

Application filed July 3, 1903. Serial No. 164,117. (No model.)

To all whom it may concern:

Be it known that we, ALBERT W. W. MILLER, residing at South Orange, New Jersey, and GEORGE P. McDONNELL, residing at St. Louis, Missouri, citizens of the United States, have jointly invented a certain new and useful Improvement in Devices for Protecting Carbon Filaments for Incandescent Electric Lamps, of which the following is a full, clear, and exact description, 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, forming part of this specification, in which—

Figure 1 is a perspective view of our improved device with one of the trays elevated, and Fig. 2 is a vertical sectional view showing several trays in position.

This invention relates to a new and useful improvement in devices for protecting carbon filaments for incandescent electric lamps, the object being to construct a device of the character described which is simple, cheap, and economical of space and one which possesses the advantages of not only preserving the filaments against breakage, but enables the filaments to be stored in trays, each tray containing a certain number, which enables the number of filaments on hand to be quickly and readily determined.

Heretofore carbon filaments have usually been handled by arranging them on a rod or wire, a certain number being spaced apart—such, for instance, as a dozen—by a washer. This method of handling the filaments is objectionable not only because of the broken filaments resulting, but for the further reason that the filaments become tangled, thus consuming time in their separation. By our improved device each filament is separate from the others, and as the superimposed trays contain a given number of filaments it is obvious that the filaments are not only better protected, but are more accessible to ready handling, but in addition the exact number

of filaments in the trays or nests of trays can be readily determined.

With these objects in view the invention consists in the construction, arrangement, and combination of the several parts, all as hereinafter described, and afterward pointed out in the claim.

In the drawings, 1 indicates a frame, preferably composed of side and end pieces riveted together. Rising from this base-frame are standards 2, their outer ends being preferably curved outwardly to center and guide the trays when they are introduced into the frame. There may be one or more of these standards extending upwardly from each of the four sides of the frame, and these standards may be located at any point on the sides of the frame and be of any desired shape in cross-section.

3 indicates trays, which are preferably made up of marginal flanges or a frame-piece 4 with a bottom 5. The bottom supports the filaments 6, arranged in the tray, and the marginal flanges provide a suitable depth for the filaments, so that the bottom of the next tray above will not come into such close contact with the filaments as to cause breakage thereof.

It will be observed that the standards 2 are provided near their lower ends to form seats on which the frame rests. These seats are in the form of offsets (designated by the reference-numeral 2^a) and serve to efficiently support the frame on which the trays are to rest. The frame or base-plate is illustrated as being riveted to the respective offsets 2^a, and the ends of the standards terminate in depending extremities, forming legs to space the frame or base above the surface on which the holder rests. Such a device may be easily and conveniently constructed and will efficiently serve the purpose for which it is intended.

In practice each tray has a capacity for a predetermined number of filaments, and the

filaments are preferably so disposed that each tray will contain such predetermined number. These trays are then arranged in the holding-frame one above the other, with the result
5 that the number of trays in the frame multiplied by the number of filaments in each tray will show the number of filaments contained in the device. These trays when assembled in the frame are in such relation as to provide
10 an excellent means for protecting the filaments thereon from dust and moisture and facilitate the handling thereof.

We are aware that minor changes in the construction, arrangement, and combination
15 of the several parts of our device can be made and substituted for those herein shown and described without in the least departing from the nature and principle of our invention.

Having thus described the invention, what is claimed as new, and desired to be secured 20 by Letters Patent, is—

A tray for carbon filaments comprising a skeleton frame, upstanding tray-holding standards provided with free outwardly-bent terminals, in bent offsets carried by the standards 25 and secured to the frame, and depending legs fixed to the offsets; substantially as described.

In testimony whereof we hereunto affix our signatures, in the presence of two witnesses, this 30th day of June, 1903.

ALBERT W. W. MILLER.
GEORGE P. McDONNELL.

Witnesses:

GEORGE BAKEWELL,
FREDERICK H. GIBBS.