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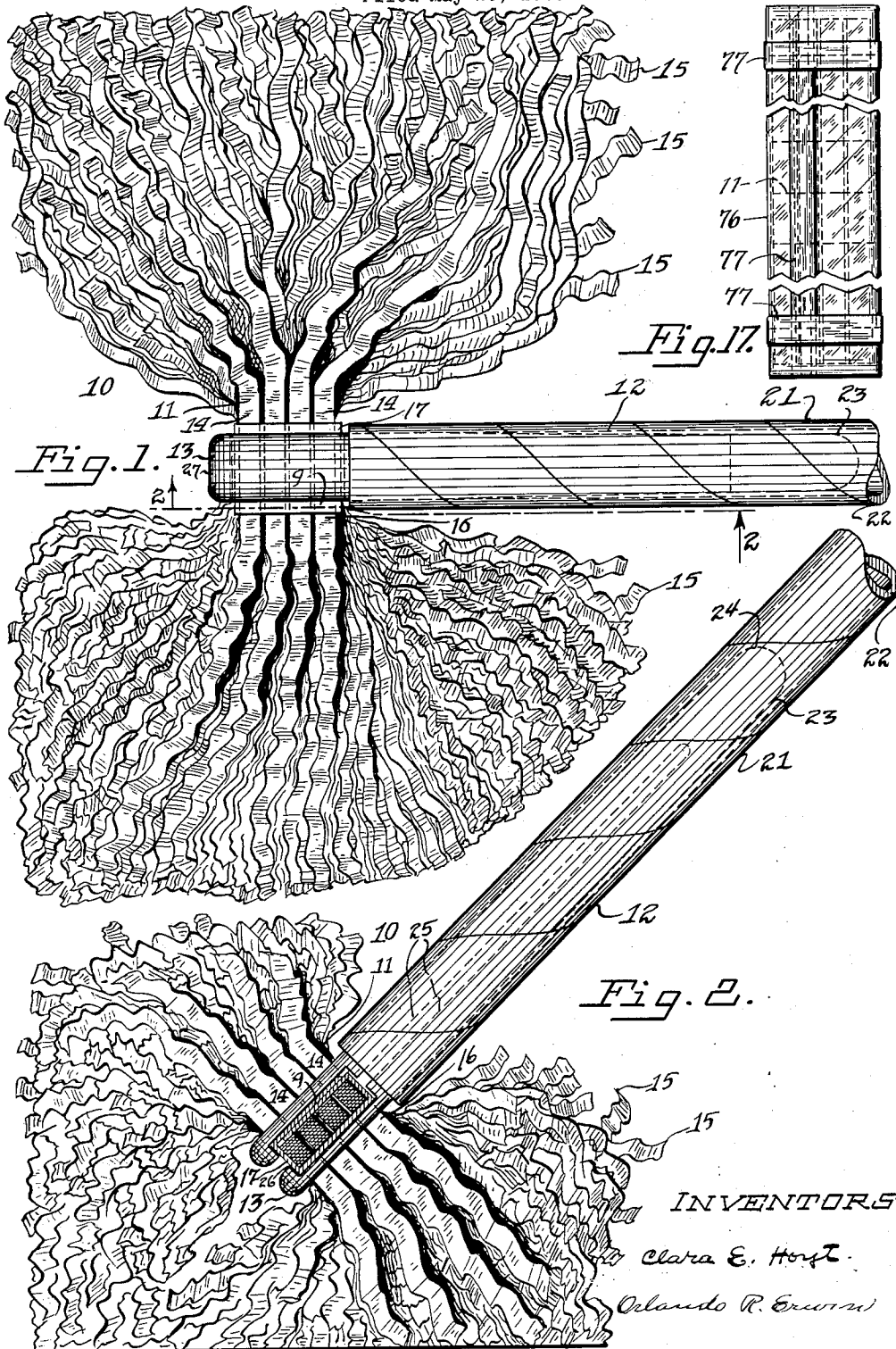
C. E. HOYT ET AL

1,993,215

METHOD OF MAKING A DUSTING AND POLISHING MOP

Filed May 29, 1933

3 Sheets-Sheet 1



INVENTORS

Clara E. Hoyt

Orlando R. Emerson

March 5, 1935.

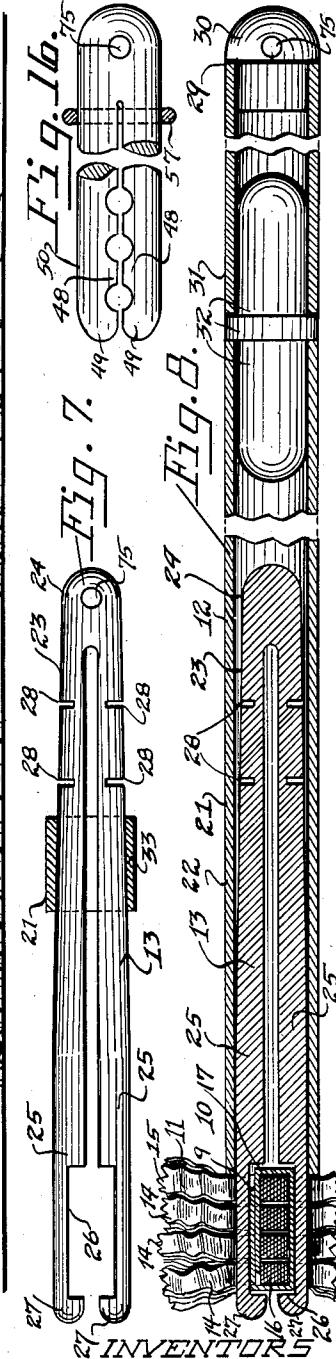
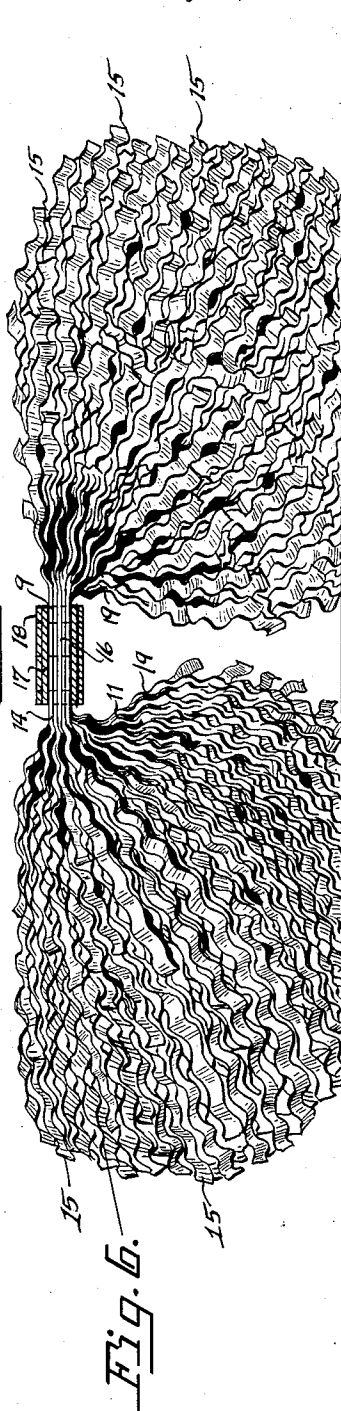
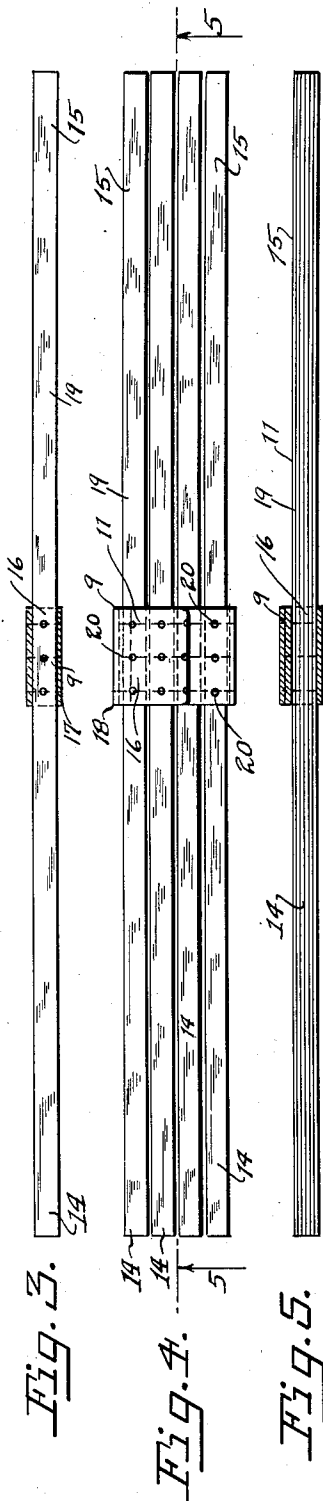
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METHOD OF MAKING A DUSTING AND POLISHING MOP

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3 Sheets-Sheet 2



Clara E. Hoyt.
Orlando W. Erwin

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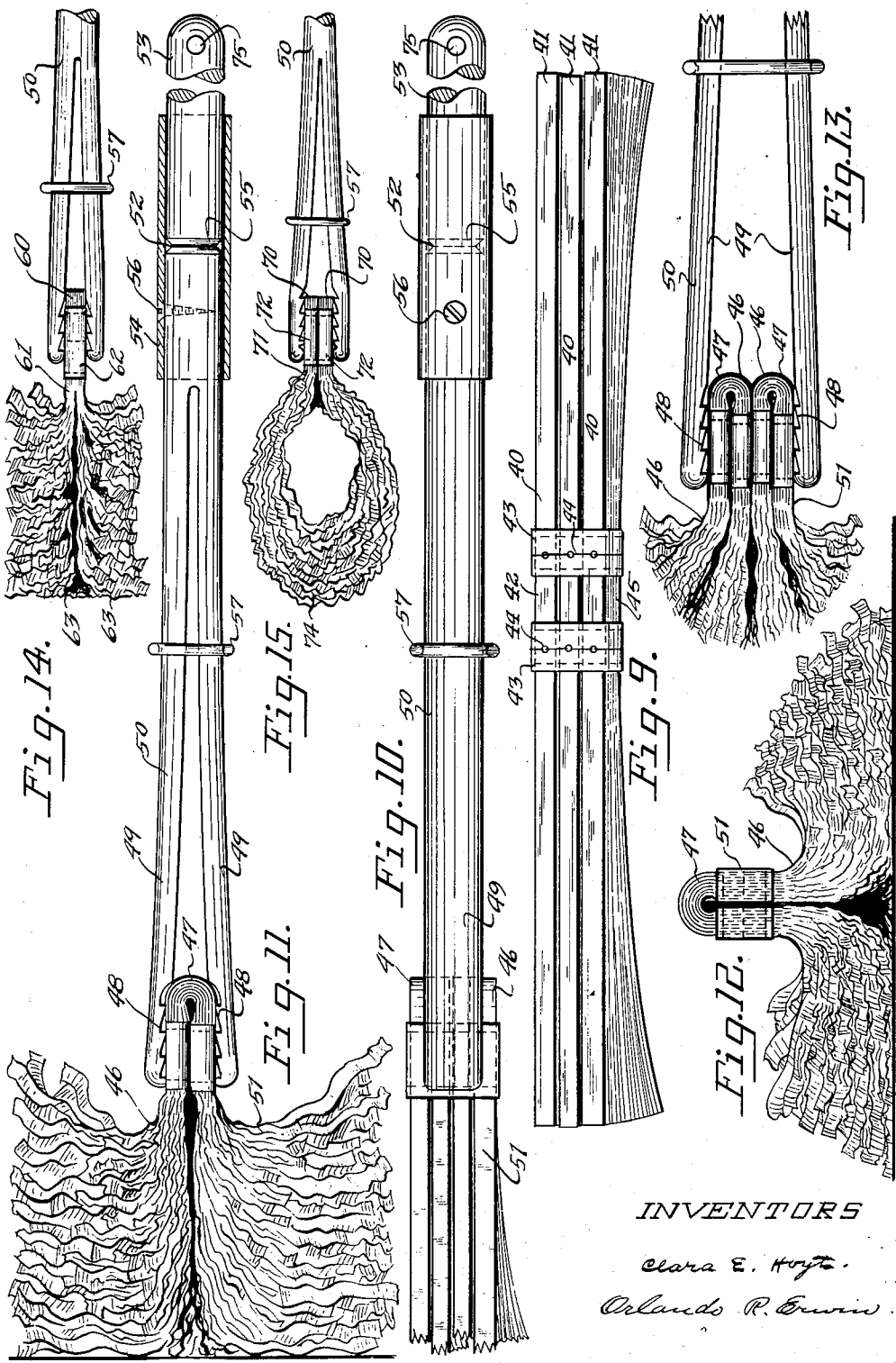
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METHOD OF MAKING A DUSTING AND POLISHING MOP

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3 Sheets-Sheet 3



INVENTORS

Clara E. Hoyt.
Orlando R. Erwin.

UNITED STATES PATENT OFFICE

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METHOD OF MAKING A DUSTING AND
POLISHING MOPClara E. Hoyt, Wauwatosa, and Orlando R.
Erwin, Milwaukee, Wis.

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2 Claims. (Cl. 300—21)

Our invention relates to dry dusting, cleaning and polishing mops, and it has special reference to the method of making a mop-head cluster in which a soft, pliable mass of paper strips, which have previously been impregnated as with fine furniture polish, are securely and durably fastened together at a portion of their length, by non-detachable means, to form a binder and also a durable nucleus for mop-handle attachment, said strips being thoroughly crinkled at the unfastened portion of their length and fluffed at the crinkled portion thereof to form a dry-dusting, cleaning and polishing mop-head cluster, or "refill" for quick attachment, detachment and replacement, respectively, to the clamping means of a manipulating handle.

The primary object of this invention is to provide a method of making a mop-head cluster, or "refill", for attachable, detachable and interchangeable connection with a manipulating handle, said mop-head being made of soft, pliable and dust-adhesive paper strips, enabling the cluster to grab and hold all the dust, dirt and lint with which the cluster comes in contact during the dry-dusting, cleaning and polishing operations, without scattering the dust or leaving any lint or residue and to evenly distribute the beneficial polish with which the cluster is impregnated and to restore and preserve every type of wood, or other, finish. Furthermore, said mop-head cluster, or "refill", need never be shaken out, or laundered or "re-oiled", as it may readily be detached from the manipulating handle, as when excessively dust-laden, soiled or worn, and quickly replaced by a new cluster, or "refill", whereby a very light-weight, fast-action, simple and cheap mop is produced which has proven to be suitable and superior for efficient and economical daily dusting, cleaning and polishing of hardwood floors, furniture and other finely finished surfaces in the home, office and school.

The foregoing and other features residing in our invention will now be more fully described, and then set out in the appended claims.

In the accompanying drawings:

Figure 1 is a plan view of the preferred form of our improved device, showing the detachable, interchangeable mop-head cluster thereof coupled, by its nucleus, to a tubular handle.

Figure 2 is a side view of said device, partly shown in vertical section and drawn on the line 2, 2 of Figure 1.

Figure 3 is a plan view of a single bundle of paper strips, shown permanently fastened to-

gether in a flat, compact and parallel arrangement, centrally of the bundle, forming a nucleus-segment, and forming a part of our mop-head, prior to crinkling and fluffing the unfastened portion of the strips into a mop-head cluster segment.

Figure 4 is a plan view of a plurality of bundles of paper strips,—shown in Figure 3,—said bundles being shown permanently fastened together,—in a flat, compact and parallel arrangement,—centrally of the bundles, forming a mop-head nucleus, together forming the preferred form of the mop-head of our invention, prior to crinkling, waving and fluffing of the unfastened portions of the paper strips into a mop-head cluster.

Figure 5 is a vertical sectional view of the mop-head shown in Figure 4, drawn on the line 5, 5 thereof, being shown prior to the crinkling and fluffing of the paper strips.

Figure 6 is a similar view to that of Figure 5, but showing the paper strips thoroughly crinkled and fluffed at the unfastened portion of their length, forming the preferred form of the mop-head cluster of our invention.

Figure 7 is a side view of the coupling member of the device shown in Figures 1 and 2 for quickly and firmly connecting or disconnecting the detachable and interchangeable mop-head cluster to or from its tubular mop-handle respectively.

Figure 8 is a side view, largely in central, longitudinal section, of the preferred form of construction of the assembled mop and its handle and handle extension and coupling means therefor,—comprising our invention,—showing a fragmentary view of the mop-head cluster thereof in operative coupled connection with a tubular handle.

Figure 9 is a perspective plan view of a plurality of bundles of paper strips, shown securely fastened together, at a portion of their length, as by tape-wrapping and stitching, forming a modified construction of the mop-head of our invention, being shown prior to the crinkling and fluffing of the paper strips thereof at the unfastened portion of their length.

Figure 10 is a plan view of a modified form of our device,—shown in Figures 1, 2 and 8,—showing the provisions for clamping the nucleus of the mop-head to a mop-handle,—having a handle-extension in coupled connection therewith,—and said clamping provisions as being integral with the handle, and showing the mop-head thereof prior to being crinkled and fluffed.

Figure 11 is a side view of the device shown in Figure 10, but showing the mop-head cluster in its crinkled and fluffed state.

Figure 12 is also a side view of the crinkled and fluffed mop-head cluster, shown in Figures 9, 10 and 11, being shown detached from its manipulating handle, and being further shown as adapted to be used in the hand-gripping of the nucleus thereof, as in performing dusting operations, without said handle in operative coupled connection.

Figure 13 is a fragmentary view of the device shown in Figure 11, but showing a plurality of said mop-head nucleuses in operative, detachable, coupled connection with the manipulating mop-handle of our invention.

Figure 14 is also a fragmentary view of the mop-handle shown in Figure 11, being shown having a further modified form of mop-head cluster in operative coupled connection therewith,—at the nucleus thereof,—in which the mass of paper strips are shown fastened together at one end portion only of the bundle and crinkled and fluffed at the remaining unfastened portion.

Figure 15 is also a fragmentary view of the mop-handle shown in Figures 10 and 11, being shown having a further modified form of mop-head cluster in operative, coupled connection therewith,—at the nucleuses thereof,—in which the bundled mass of paper strips are shown fastened together at both their end portions of the bundle and crinkled and fluffed at the remaining unfastened portion.

Figure 16 is a fore-shortened, fragmentary view, part in vertical section, of a slightly modified form of our combined mop-handle and mop-head clamp, from that shown in Figures 10 and 11, and

Figure 17 is a fore-shortened plan view of the "refill" package wrapper.

In the drawings, like parts are identified by the same reference numbers throughout the several views.

Referring especially to the preferred construction of our device shown in Figures 1 to 8 inclusive, our improved mop 10 comprises a quickly detachable and interchangeable, laminated-paper mop-head cluster 11, having a compact, reinforced and durable nucleus 9 for gripping-connection to a manipulating mop-handle 12, through a coupling member 13, for quickly and firmly gripping the mop-head cluster, preferably centrally thereof, and for quickly making a tight, telescoping, jointed connection with the tubular handle therein shown, at either end thereof and also for quickly detaching the said mop-head cluster from both the tubular handle 12 and said coupling member 13, as when the cluster 11 is excessively soiled or worn, for the purpose of interchanging it with a new, clean and fully "oiled" cluster, or for hand-gripping use without the mop-handle in operative connection.

The mop-head cluster 11 is preferably formed of a plurality of bundles 14, 14, each bundle comprising a predetermined number of relatively narrow strips 15 of "oiled" paper of predetermined and preferably equal lengths, firmly fastened compactly and durably together at a portion of their length, preferably at the central portion 16 thereof, as by means of adhesive tape binding 17, wrapped tightly around the bundle, and securely reinforced, as by stitching, gluing or riveting the strips together and to said binder, to form the mop-head nucleus of the cluster, for

gripping attachment to the mop-handle. The plurality of bundles 14, 14 are then placed adjacently, preferably in compact, parallel relation, and firmly fastened together, as at a portion of their length and preferably at said central portion thereof, as by additional adhesive tape-binding and stitching of the bundles 14, 14, as shown particularly in Figure 4, thus forming the preferred form of mop-head cluster of our invention, the paper strips thereof being thoroughly crinkled, waved and fluffed at the unfastened portion of their length, as shown in Figures 1, 2 and 6.

A plurality of said mop-head clusters 11, thus constructed, are then packed compactly together in a suitable carton or packing box, not shown herein, to be sold to the user as "refills" or interchangeable mop-heads, for replacement connection with the mop-handle and its coupling provisions, when desired or when the used mop-head cluster becomes excessively dust-laden, soiled or worn,—each "refill" being preferably wrapped and sealed in an individual package, as in vegetable-parchment paper wrapping, to preserve the "refill" in its original fresh, clean and fully "oiled" condition.

The strips 15 of paper are preferably made and converted from 100% rag pulp paper, having the grain or fibers thereof running longitudinally of the sheeting, and in impregnating the paper as with a fine furniture polish, and in slitting and cutting the sheeting into narrow strips of predetermined widths and lengths, thereby providing soft, pliable paper strips of relatively great tensile strength, durability and efficiency for the purpose of constructing the mop-head clusters of our device.

The tubular member 21 of the mop-handle 12, shown in Figures 1, 2 and 8, is preferably made of laminated, glued-paper construction, as by winding the paper upon a mandrel, to sufficient wall-thickness 22, thereby forming a light, strong mop-handle of low cost construction very suitable for the purpose.

The mop-head coupling member 13 is preferably made of hard wood in a cylindrical shape 23, preferably having a slight taper towards the handle end 24 thereof, whereby the coupling has a telescoping fit in the said tubular handle. The said coupling 13 is further bifurcated at 25, and a socket 26 having opposing gripping-jaws 27, 27, is formed in the bifurcated members 25, 25, near the free ends 27, 27, to receive and clamp the nucleus 9, of the mop-head cluster 11, therein. To increase the resiliency of the bifurcated members 25, 25 to facilitate the insertion and withdrawal of the said nucleus of the mop-head cluster 11, said bifurcated members are preferably provided with a plurality of lateral saw-cuts 28, 28. The opposing jaws 27, 27 of the coupling member 13 are firmly drawn together with a tight grip upon the nucleus 9 of the mop-head cluster 11, by means of the telescoping action of the tubular handle 21 when the tapered coupling member 13 is inserted sufficiently in one end of said tubular handle. Similarly, when the mop-head cluster 11 and its coupling member 13 are withdrawn together from telescoping engagement with the said tubular handle 21, the nucleus 9, of the mop-head cluster 11, is free to be removed from clamping engagement between the jaws 27, 27 of the coupling member 13.

To increase the length of the tubular mop-handle 21, so as to provide handles of various lengths to suit various dusting operations, addi-

tional tubular handle-extensions 31 are adapted to be coupled to the handle 21, at the free end thereof, by means of a telescoping connector 32, which has a tight, concentric fit interiorly of the tubular handles, at the butt-joint thereof, as shown in Figure 8. The upper open end 29 of the tubular handle 12, or the extension handle 31, is preferably closed, as by means of a removable plug 30, having a tight, concentric telescoping fit into the tubular handle at either end thereof.

Referring to Figure 7, the tubular member 21, of the mop-handle 12, shown in Figure 8, may be of relatively short length, and the coupling member 13 may be of relatively greater length,—in which case the elongated coupling member 13 is adapted to be used as the then mop-handle,—and, similarly, the fore-shortened tubular member 33 is then adapted to be used as a slip-ring to draw the pair of opposing jaws 27, 27, of the socket 26, together, by its sliding concentric fit upon the said tapered portion of the bifurcated end of the then handle 13.

Referring to Figure 9, this perspective view shows a plurality of three bundles 40, 40, 40, of paper strips 41, 41, securely and firmly fastened together, at a portion of their length, in compact, parallel and flat arrangement, near the central portion 42 of the bundles 40, the same being fastened together as by means of adhesive tape binding 43, 43 and stitching 44, 44,—whereby the resulting bundle 45 may readily be bent in a U-shaped nucleus 46, as shown in Figures 10 to 13 inclusive, either for insertion of the U-bent nucleus 47 into the jaws 48, 48 of the mop-handle 50, formed therefor in the bifurcated end-members 49, 49 of the elongated mop-handle 50, for simple, quick and firm attachment of the resulting mop-head cluster 51, thereby formed,—or said cluster 51 may, after being crinkled and fluffed, be used for dusting, cleaning and polishing of motor vehicles, furniture and the like, without the manipulating handle 50 in connection therewith, as shown in Figure 12, by direct hand-gripping of the nucleus 47.

When excessively dust-laden, soiled or worn on the lower or exposed portion of the mop-head cluster 51, Figures 11, 12 and 13, the said cluster may be reversed, by unbending the U-bent portion, or nucleus 46, and reversely rebending the nucleus to the U-shape again, to expose the clean unused portion of the mop-head cluster to further dusting, cleaning and polishing operations.

Referring to Figures 10 and 11, the manipulating mop-handle 50 is therein shown having jointed handle coupling provisions 54, to provide the handle 50 with any desired elongations, divisions or extensions 53 thereof, as may be convenient or required to accommodate the mop to various dusting, cleaning and polishing operations. Said coupling provisions may comprise a simple tubular member 54, telescopingly fitting and overlapping the butt-joint 55 of the handle 50 with respect to its extensional or divisional handle 53,—and said tubular coupling 54 may be firmly and permanently fastened to said handle 50, as by the screw 56.

The handle-clamp adjusting means, herein shown as a slip-ring 57, reference being had to Figures 10, 11, 13, 14, 15 and 16, has an adjustable sliding fit upon the bifurcated portion of the mop-handle 50, whereby moving the slip-ring forwardly or backwardly along said handle varies the clamping pressure of the opposing jaws

48, 48, thereof, upon the nucleus of the mop-head cluster.

During storage disuse of the device, simple means are provided for hanging the device as upon a nail, which has been driven into the wall of a room for the purpose, as by a hole 75, bored laterally through the top end of the mop-handle, by means of which hole the device may easily be hung upon said wall by the supporting nail.

Referring to Figure 14, this view shows but one end portion 60, of the bundle of paper strips 61, fastened compactly together, and reinforced by any suitable means 62, to form the mop-head nucleus, which is shown coupled to the said handle 50, as above described, and the remainder of the bundle of strips is shown crinkled and fluffed at the unfastened portion thereof, as at 63, 63, thus forming a further modified construction of the mop-head cluster of our invention.

Referring to Figure 15, this view shows both end portions 70, 70, of the bundle of paper strips 71, fastened compactly together, and reinforced by suitable fastening means 72, 72, forming nuclei for the mop-head cluster 74, which nuclei are shown clamped in the said handle 50, as above described, and the intermediate unfastened portion of the bundle of strips is crinkled and fluffed at 74, as shown, thus forming a further modified construction of the mop-head cluster of our invention.

Figure 17 is a fore-shortened view of a "refill" mop-head 11, shown wrapped in vegetable parchment paper wrapping 76, having the overlapping joints of the wrapper securely and tightly sealed together by means of adhesive paper tape bindings 77, 77, adapted to preserve the "refill" in a fresh, clean and fully "oiled" condition, as when originally packed therein, and thereby prevent seepage and evaporation of the fine furniture polish with which the "refill" is preferably impregnated, until the "refill" is required for use in mopping operations.

The crinkling of the strips of the said mop-head cluster, or the so-called "refill", and the fluffing of the crinkled portion thereof, are accomplished by either of two methods, (a) and (b), as follows:

(a) The hand crinkling method is accomplished by firmly and repeatedly hand-grasping and squeezing portions of the strips at a time in both hands of the operator, repeating the process until the whole cluster is thoroughly crinkled at the unfastened portion thereof, when the entire cluster is vigorously shaken, by hand, to fluff the mass or cluster of crinkled strips; and

(b) The mechanical method of crinkling is accomplished as by passing the impregnated paper sheets, of which the cluster is fabricated, between a pair of meshed corrugating rolls or between a pair of pleating or corrugating dies or plates which are installed in operative connection in a power press, and from thence the corrugated paper sheets are passed into a paper-creasing power-press, after which the crinkled sheets are cut into narrow strips, when a predetermined quantity of the crinkled strips are packed or bunched together, preferably with the corrugations thereof in mesh and hence in flat, compact and parallel relation, after which the resultant pack or bunch is durably fastened together at a portion of its length, when the fluffing of the crinkled strips is accomplished by vigorously hand-shaking and separating of the strips at the unfastened portion thereof.

While we have shown our device in the pre-

ferred forms, it will be obvious that many changes and modifications may be made in the structures disclosed without departing from the spirit of the invention, defined in the following claims.

5 We claim:

- 10 1. The method of making a dusting and polishing mop-head cluster, consisting in impregnating soft, pliable paper sheeting with a furniture polish, slitting and cutting the impregnated paper sheeting into relatively narrow strips of substantially uniform width and length, packing a predetermined number of said impregnated strips together in a flat, compact and parallel arrangement, fastening the flat pack of strips together
15 at a portion of their length, and crinkling and

fluffing that flat pack of strips at the unfastened portion of their length.

2. The steps in the method of making a dusting and polishing mop-head cluster, consisting in impregnating soft, pliable paper sheeting with furniture polish, slitting and cutting the impregnated paper sheeting into strips of substantially uniform length and width, packing a predetermined number of said impregnated paper strips together in flat, compact and parallel arrangement to form a rectangular pack, and fastening the rectangular pack of impregnated paper strips together at a portion of their length.

CLARA E. HOYT.

ORLANDO R. ERWIN.