

March 27, 1934.

T. R. HERBEST, JR

1,952,803

ART OF MANUFACTURING BUNDLES OF LATHERS HAIRPINS

Filed Aug. 2, 1930

3 Sheets-Sheet 1

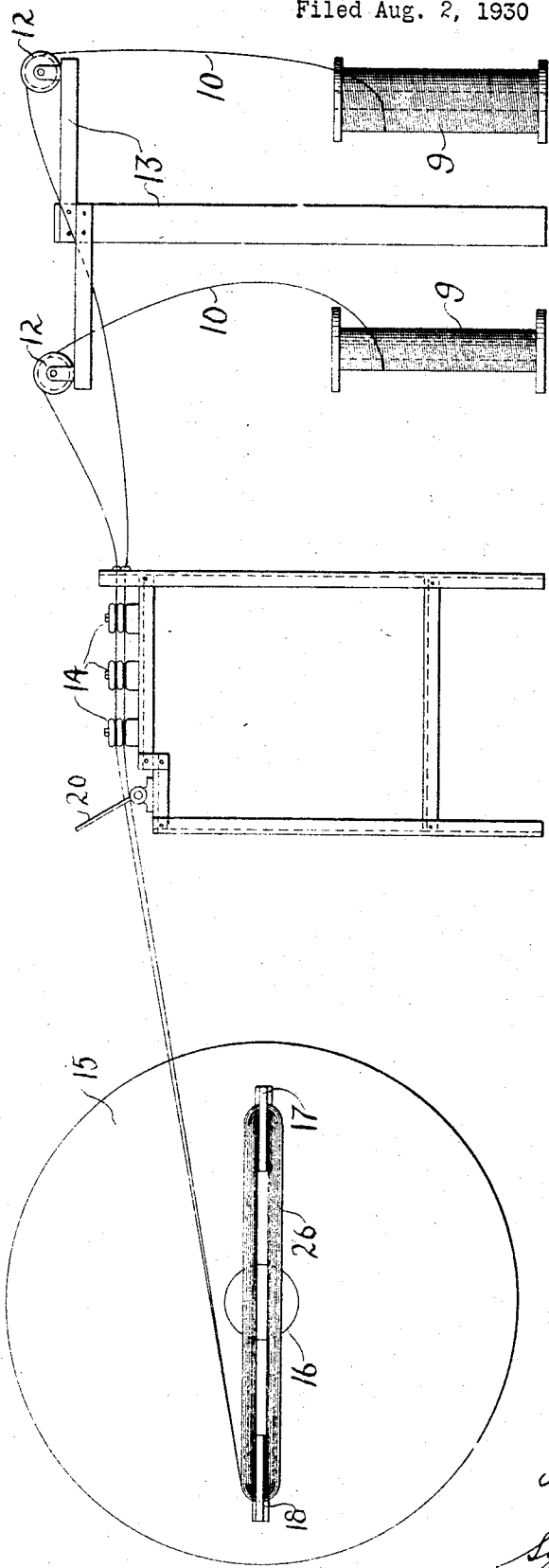


Fig. 1.

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3 Sheets-Sheet 2

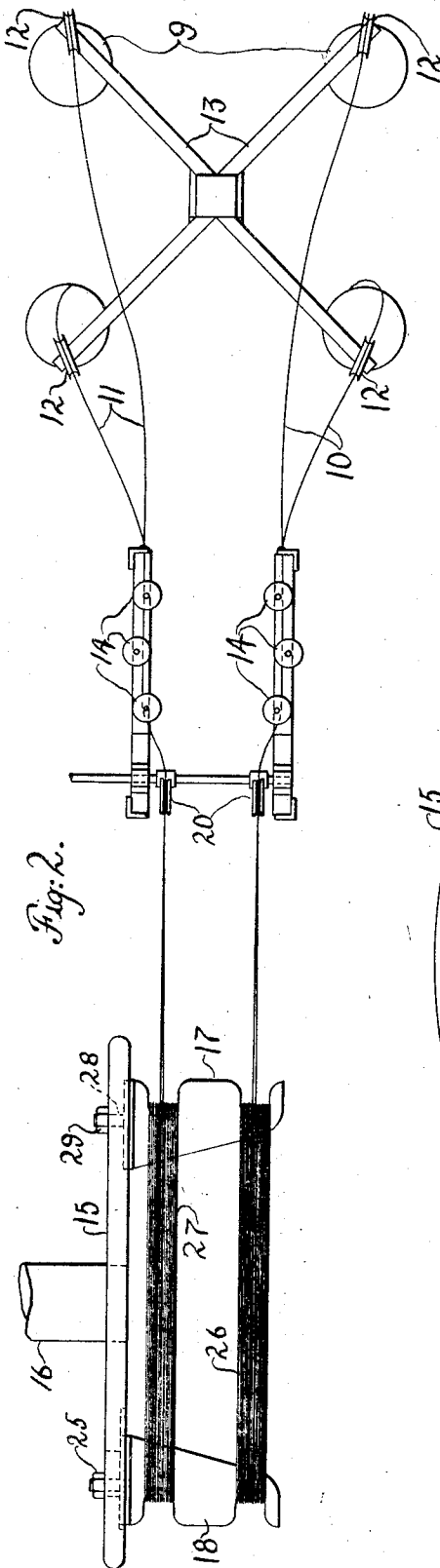


Fig. 2.

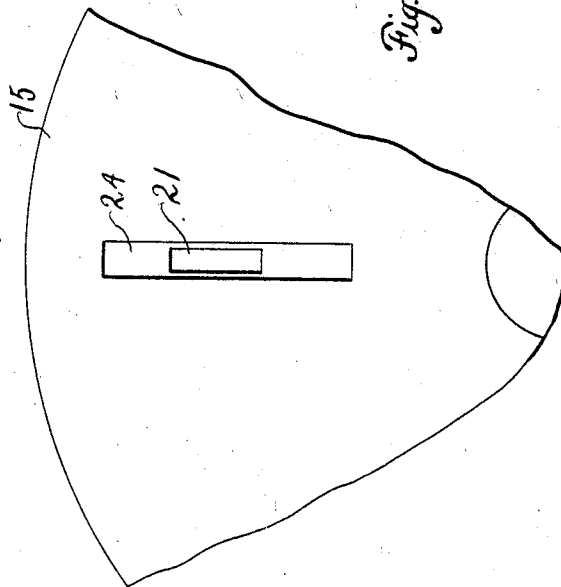


Fig. 3.

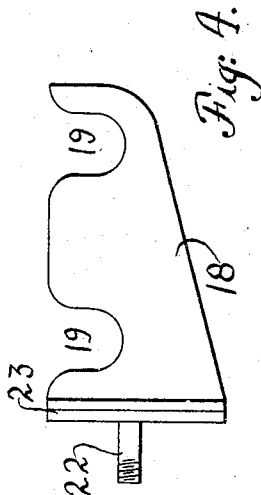


Fig. 4.

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3 Sheets-Sheet 3

Fig. 6.

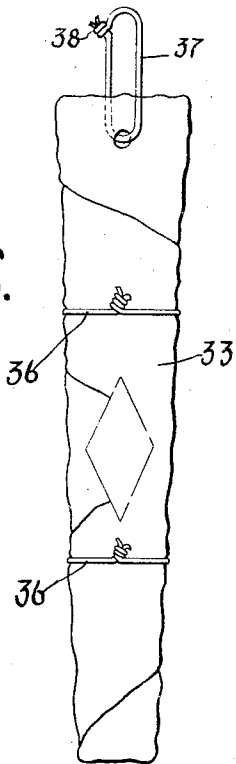


Fig. 5.

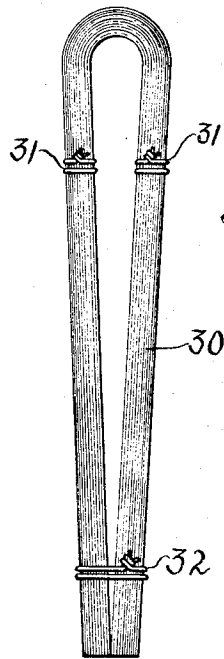


Fig. 7.

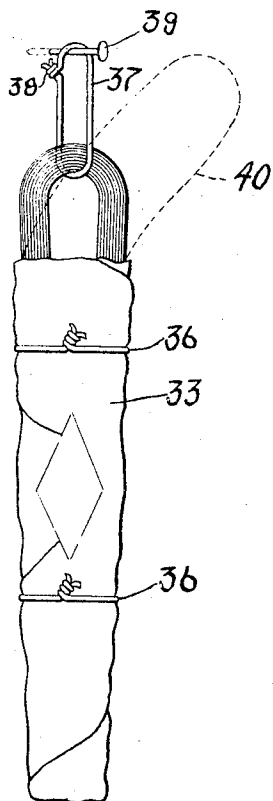
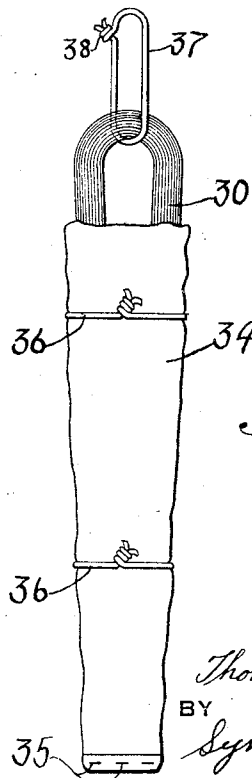


Fig. 8.



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1,952,803

ART OF MANUFACTURING BUNDLES OF LATHERS' HAIRPINS

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Application August 2, 1930, Serial No. 472,689

8 Claims. (Cl. 140—92.2)

This invention relates to bundles of lathers' hairpins and a method of producing the same. The nature, objects and advantages will best be understood from the following remarks.

5 Lathers' hairpins are employed for securing metallic lath to a supporting structure, after which the plaster is applied to the lath. The hairpin is made of wire which can readily be bent by hand and will take a set. Annealed wire is ordinarily employed for the purpose. An end of the hairpin is hooked through an opening in the lath and bent around a supporting piece or structure, after which the two ends may be twisted or otherwise secured together.

15 Ordinarily the lathers are supplied with a coil of wire for their hairpins. The wire coil is merely cut up in pieces or in halves usually on the job. This cutting, obviously, is difficult and troublesome for various reasons. For example, because of the character of the wire it is readily deformed, the wires become tangled, are difficult to separate, and sometimes cause injury to the lather's hands. The entangling involves a loss of time which is very objectionable because metal lath should be capable of being applied substantially as rapidly as wooden lath, if not faster. In addition, the common practice results in permitting the wires to become coated with all kinds of dirt and the like such, for example, as bits of plaster, all of which makes the wires difficult to use as well as unsatisfactory for other reasons which are well known in the art.

It is the primary object of the invention to overcome the foregoing difficulties and to make the hairpins readily available for the lathers at all times. Other objects and advantages will occur to those skilled in the art.

To this end I prepare the hairpins in advance, as will appear more fully hereinafter in the following description of the product as well as the method of this invention, reference being had to the accompanying drawings in which,

Fig. 1 is a somewhat diagrammatic side elevation of apparatus suitable for carrying out the method;

Fig. 2 is a top view of the apparatus;

Figs. 3 and 4 are views illustrating certain details of the apparatus;

Fig. 5 is a side elevation of a bundle of lather's hairpins produced in accordance with the method of this invention;

Fig. 6 is a side elevation of a bundle with a wrapping applied;

Fig. 7 shows a bundle in condition for use by the lather; and

Fig. 8 is a view similar to Fig. 7 of a modified form of bundle wrapper or covering.

With reference first to Figs. 1 to 4 inclusive, in which I have illustrated a suitable apparatus for carrying out the method of the present invention,

it will be seen that the lathers' hairpins may be and are, preferably, made by continuously feeding wire from a source of supply such, for example, as the reels 9. Any suitable type or number of reels may be employed and the wire or wires indicated by the reference characters 10 and 11, a total of four wires being shown in the present embodiment, may be fed over suitable guide rollers 12 mounted on any convenient supporting mechanism, as indicated at 13. The wires are next conducted thru any of the standard or well known wire straightening devices such for example, as those indicated at 14.

The coiling or winding mechanism illustrated includes a member 15 which is mounted to revolve with and to be driven by a shaft 16, the latter being actuated by connection with any suitable driving motor or mechanism. The element 15 carries, preferably, a pair of arms or members 17 and 18 each of which is recessed at a plurality of points, as indicated at 19 in Figure 4. With the members 17 and 18, mounted on the rotating element 15 with the recesses 19 opening outwardly (see Fig. 2) the wires 10 and 11 are fed into and wound on the recessed portions of the members 17 and 18. The feed of the wires from the straightening mechanism 14 to the winding mechanism is preferably accomplished by means of guide members 20 which may be stationarily mounted or provided with some suitable manually operable device for causing a transverse movement thereof with respect to the elements 17 and 18.

At this point it should be noted that in the apparatus illustrated, I have provided for the winding of two coils of hairpin wire, but it is to be understood that the members 17 and 18 may be configured otherwise than as indicated in order to accommodate more than two coils. It should also be observed that in the present embodiment of the invention, each coil is wound of or from a pair of wires which are fed to the winding mechanism simultaneously, that is, I have arranged for the winding of two wires (see Fig. 2) on the outer set of recesses 19 of the members 17 and 18 and, in like manner, have provided for the winding of two wires 11 in the other pair of recesses of the winding members. I may, of course, wind each coil from a single wire or on the other hand I may wind more than two wires into each of the coils produced. It is preferable, however, to use more than one wire for each coil in view of the fact that the speed of production is greatly increased.

In order to facilitate removal of the coils from the winding mechanism, at least one of the members 17 or 18 is secured to the supporting and rotating element 15 in such manner as to permit a radially inward movement thereof and thus provide for disengagement and removal of the

coils from the winding members. By reference to Figures 3 and 4, it will be seen that the mechanism which I prefer to employ for this purpose includes a slot-like aperture in the element 15, as indicated by the reference character 21, the same being adapted to receive the bolt 22 of one of the winding members, in this instance the member designated by the reference character 18. In addition the base portion 23 of the member 18 is adapted to be received in a recess 24 in the element 15, the recess being of sufficient length to permit relative movement between the members 18 and 15 radially with respect to the shaft 16. As will be seen from inspection of Figure 2, a securing nut 25 associated with the bolt 22 serves rigidly to secure the winding arm or member 18 to the rotating element 15. When it is desired to remove suitably wound coils from the winding mechanism, therefore, it is necessary only to loosen the nut 25 and displace or move the member 18 radially inwardly toward the shaft 16 after which sufficient clearance is provided to permit removal of the coils, for example, the coils indicated by the reference characters 26 and 27 in Figure 2.

The winding arm or member 17 is indicated in Figure 2 as being secured to the rotating element 15 by means of a bolt 28 and a nut 29. In the embodiment illustrated, the member 17 is not disclosed as being movable or adjustable with respect to the carrying element although, it is to be understood, such adjustment or adjustability could be provided in the manner indicated with respect to the arm 18.

After the coils are suitably wound and are severed from the source of wire supply, they may be removed from the apparatus in the manner just described and, preferably, thereafter cut or severed in order to produce bundles of orderly arranged hairpin-like wires such as that illustrated in Figure 5 by the reference character 30. The production of the bundles or groups of hairpin-like wires is preferably accomplished by cutting the turns of the coils, which are substantially elliptical in configuration, on their minor axes. Stated in another way, the turns of the coils are cut thru at points intermediate the relatively sharply bent portions of the coils (that is, the portions which engage the winding arm 17 and 18).

In addition to the foregoing the present invention has in view the packaging of the individual groups 30 of hairpin-like wires in order to facilitate handling, shipping and use of the hairpins. As a result of the novel packaging or wrapping the orderly arrangement of the wires is maintained throughout the handling, shipping and use even when substantially all of the wires of any particular bundle have been separated or removed therefrom and used on the job.

The completion of each group 30 into a packaged bundle includes the application of suitable tie means preferably in the form of tie wires. In the preferred embodiment tie wires 31 are applied to the legs of the group 30 at points intermediate the ends thereof, for example as indicated in Figure 5. In addition a wire 32 is applied in order to tie the two legs together at a point near the extremities thereof.

After the application of the tie wires 31 and 32, each individual group is preferably enclosed or covered in a wrapping, such as a piece of paper which may or may not be waterproof as desired, and it should be noted that I contemplate applying this covering either by suitably rolling the

group, preferably, diagonally in a piece of paper as indicated in Figure 6 or by slipping the group, base end first, into a completed bag as shown in Figure 8 and subsequently closing the mouth of the bag as by means of staples 35. After the application of the paper 33 or the bag 34, additional tie means 36 are preferably applied in order to secure all the elements of the packaged bundle together.

Furthermore, after the suitable packaging of the bundles, either by the use of plain pieces of paper or by the use of suitable bags, has been completed, a supporting member or loop is applied to the bundle preferably by piercing the wrapping or covering adjacent the base portion thereof and by the insertion, thru the pierced portions of the covering, of a wire 37. The ends of the wire 37 may be suitably joined together as by knotting or twisting as indicated at 38 in Figure 6, 7 and 8. The supporting member or loop 37 is useful in handling the bundles during shipping and the like and, in addition, affords a convenient means for supporting or hanging the packaged bundle on the job while the hairpins are being used.

The preferred manner of use of the bundles will be apparent from inspection of Figures 7 and 8, in the first of which a bundle is illustrated as being hung from a supporting member such as a nail 39, the supporting loop 37 being shown in engagement with such nail. After suitable hanging of a bundle in this manner, the upper portion of the covering 33 or 34 thereof is torn away as indicated, respectively, in Figures 7 and 8, in order to expose the base portion of the packaged bundle 30. With the base of the hair pins so exposed, a workman may withdraw the hairpins piecemeal, i. e., one or several of the hairpins may be withdrawn from the bundle and suitably employed in the attachment of metallic lath to wall structures, it being noted that while this use is not the only one to which the hairpins are adapted, still this particular use brings out the advantages and importance of various features of the bundle. The manner in which the hairpins may be removed from the bundle is clearly indicated in Figure 7 in which a hairpin 40 is illustrated as being partially withdrawn from a bundle. At this point it should also be noted that the manner in which the covering or wrapping of the bundle is secured thereto permits the base portion thereof to be torn off in order to expose the hairpins and, at the same time, prevents complete uncovering of the wires during their use.

In summing up, it should be observed that the wrapped bundle produced is of such form as completely to eliminate injury to the wires in handling prior to use. In addition, the packaging employed keeps the hairpins clean both before and during their use. In view of the form thereof, when a bundle is opened with ordinary care, the wires will not be tangled, and hairpins can be removed from the bundle very readily. Furthermore, the hanging of the bundle from a nail, hook, or the like prevents the hairpins from becoming interwoven or entangled. In this connection, it will readily be appreciated that in accordance with the usual practice, when the lather cuts his hairpins from a coil of wire of the usual configuration, the workman is not only substantially hampered in making application of lathing by reason of the additional time involved, but, in addition, the groups of hairpins which he may cut from his coil of wire must be laid aside and almost always become dirty as well as intertwined or interlaced in such manner as to cause additional loss of

time, as well as wastage of wires. The result is that frequently a lather must discard large groups of mixed up or dirty wires.

The present invention completely overcomes the above noted difficulties and affords the maximum convenience and efficiency, as well as economy in the application of lathing.

The present application in a continuation in part of my application Serial Number 269,444, filed April 12th, 1928, which has become abandoned.

What I claim is:—

1. The method of making bundles of orderly arranged lathers' hairpins which includes continuously feeding a wire from a source of supply, laying the wire up in a substantially elliptical coil having a multiplicity of closely grouped or bunched turns in contact with each other, cutting the coil substantially on its minor axis to produce a pair of groups or bundles of orderly arranged hairpin-like wires, applying tie means to the legs of the groups to maintain the orderly arrangement of the hairpin-like wires therein, applying a sheathing or protective covering to each group, applying tie means for the covering also surrounding the legs of the hairpin-like wires therein, and, after application of the covering, applying a supporting member to the bundle at its base end, whereby the bundle may be suspended or hung from the supporting member with the base part uppermost.

2. The method of making bundles of orderly arranged lathers' hairpins which includes continuously feeding a wire from a source of supply, laying the wire up in a substantially elliptical coil having a multiplicity of closely grouped or bunched turns in contact with each other, cutting the coil substantially on its minor axis to produce a pair of groups or bundles of orderly arranged hairpin-like wires, applying tie means to the legs of the groups to maintain the orderly arrangement of the hairpin-like wires therein, applying a sheathing or protective covering to each group, and, after application of the covering, applying a supporting member to the bundle at its base end by piercing the covering adjacent said end and inserting a supporting member through an aperture resulting from the piercing, whereby, in use, the bundle may be suspended or supported with its base end uppermost in order to facilitate removal of an upper portion of the protective covering and thus to permit piecemeal withdrawal of the hairpin-like wires without disturbing the orderly arrangement of those remaining.

3. The method of making bundles of orderly arranged lathers' hairpins which includes continuously feeding a wire from a source of supply, laying the wire up in a substantially elliptical coil having a multiplicity of closely grouped or bunched turns in contact with each other, cutting the coil substantially on its minor axis to produce a pair of groups or bundles of orderly arranged hairpin-like wires, applying tie means to the legs of the groups to maintain the orderly arrangement of the hairpin-like wires therein, and applying a supporting member to each group at its base end, whereby the bundle may be suspended or hung from the supporting member with the base part uppermost.

4. The method of making bundles of orderly arranged lathers' hairpins which includes continuously feeding a wire from a source of supply, laying the wire up in a substantially elliptical coil having a multiplicity of closely grouped

or bunched turns in contact with each other, cutting the coil substantially on its minor axis to produce a pair of groups or bundles of orderly arranged hairpin-like wires, applying tie means to the legs of the groups to maintain the orderly arrangement of the hairpin-like wires therein, applying a sheathing or protective covering to each group, and applying tie means for the covering also surrounding the legs of the hairpin-like wires therein.

5. The method of making bundles of orderly arranged lathers' hairpins which includes continuously feeding a wire from a source of supply, laying the wire up in a substantially elliptical coil having a multiplicity of closely grouped or bunched turns in contact with each other, cutting the coil substantially on its minor axis to produce a pair of groups or bundles of orderly arranged hairpin-like wires, applying a sheathing or protective covering to each group, and, after application of the covering, applying a supporting member to the bundle at its base end by piercing the covering adjacent said end and inserting a supporting member through an aperture resulting from the piercing, whereby the bundle may be suspended with its base part uppermost.

6. A method for manufacturing lathers' hairpins which includes winding a substantially elliptical and materially flattened coil of wire having a multiplicity of closely bunched or grouped turns the cross sectional shape of which is substantially circular throughout the coil including the relatively sharply bent portions thereof, and cutting the coil substantially on its minor axis to produce a pair of groups of orderly arranged hairpin-like wires which differ in length in each group but the leg portions of which all terminate in substantially the same general plane.

7. A method for manufacturing lathers' hairpins which includes winding a substantially elliptical and materially flattened coil of wire having a multiplicity of closely bunched or grouped turns the cross sectional shape of which is substantially circular throughout the coil including the relatively sharply bent portions thereof, cutting the coil substantially on its minor axis to produce a pair of groups of orderly arranged hairpin-like wires which differ in length in each group but the leg portions of which all terminate in substantially the same general plane, and applying means to each group for maintaining the orderly arrangement of the hairpin-like wires therein, the means last mentioned being applied in such manner as to permit piecemeal withdrawal of the wires from each group without disturbing the orderly arrangement of those remaining.

8. A method for manufacturing lathers' hairpins which includes winding a coil of wire which incorporates a multiplicity of closely bunched or grouped turns, the coil further having relatively straight and relatively sharply bent portions, and the bunched or grouped turns having a substantially circular cross sectional shape throughout the coil including the relatively sharply bent portions thereof, and cutting the coil in the relatively straight portions thereof substantially intermediate the relatively sharply bent portions to produce bunches or groups of orderly arranged hairpin-like wires which differ in length in each group but the leg portions of which in each leg of each group all terminate substantially in a common general plane.

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