

Aug. 28, 1956

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2,760,428

ROTISSERIE ATTACHMENTS

Filed Aug. 3, 1953

3 Sheets-Sheet 1

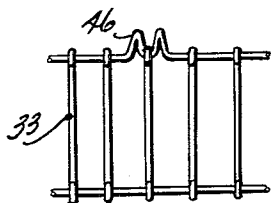
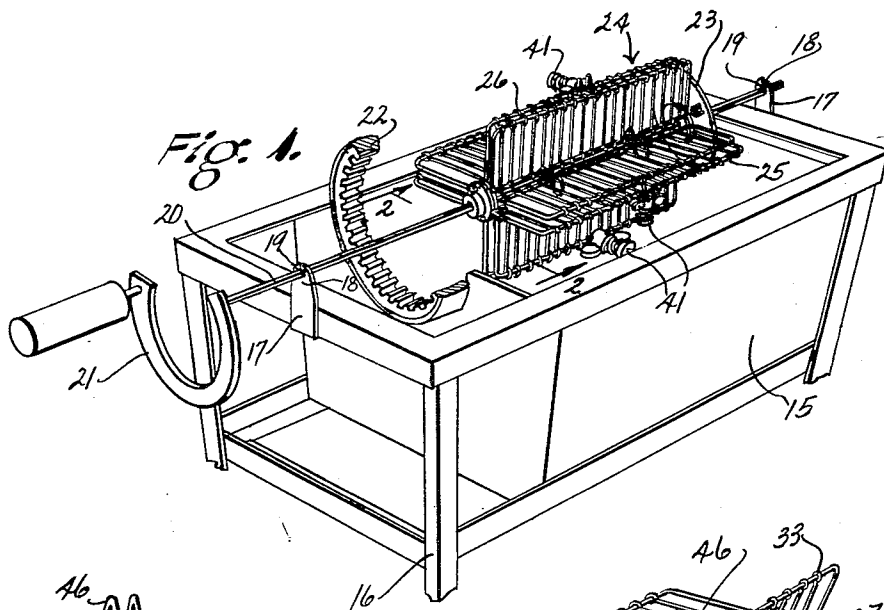


Fig. 5.

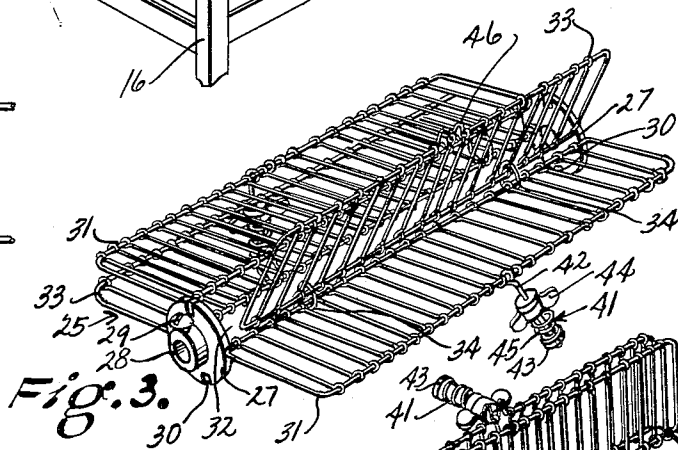


Fig. 3.

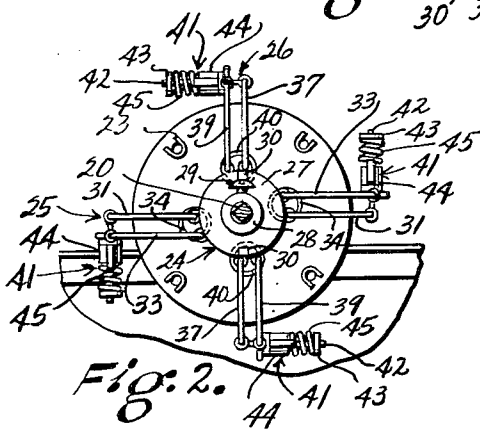


Fig. 2.

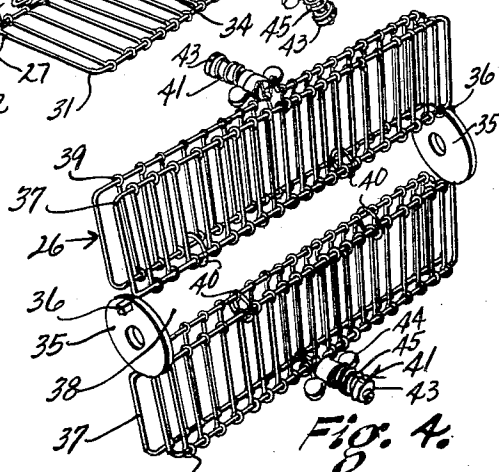


Fig. 4.

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3 Sheets-Sheet 2

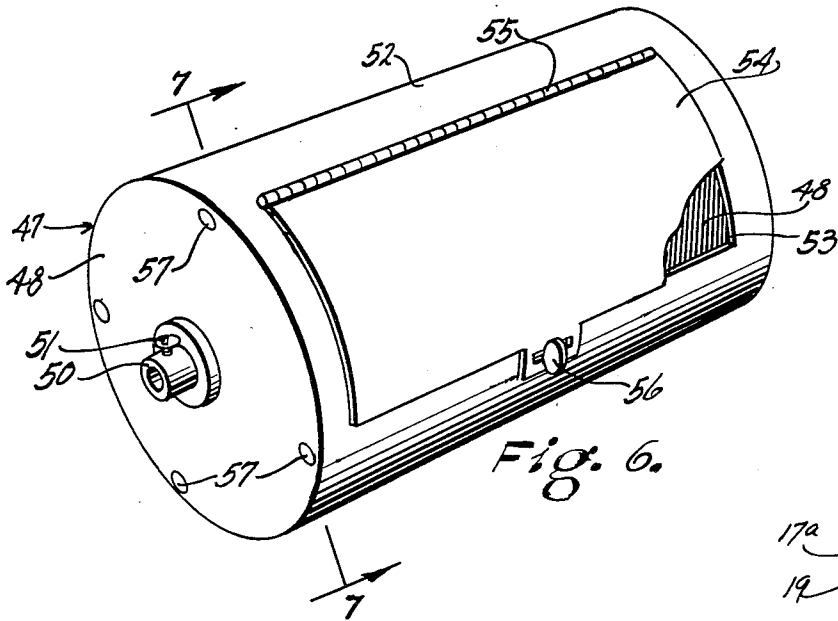


Fig. 6.

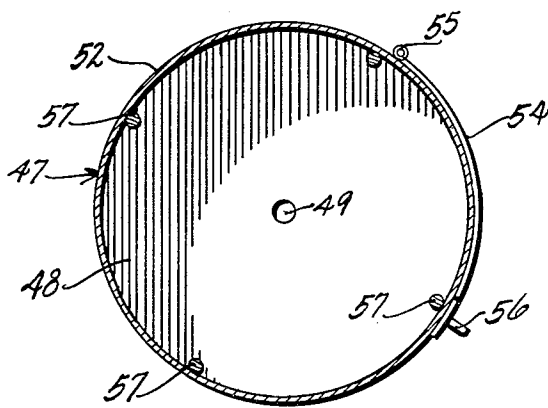


Fig. 7.

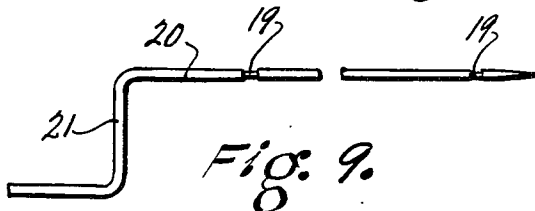


Fig. 9.

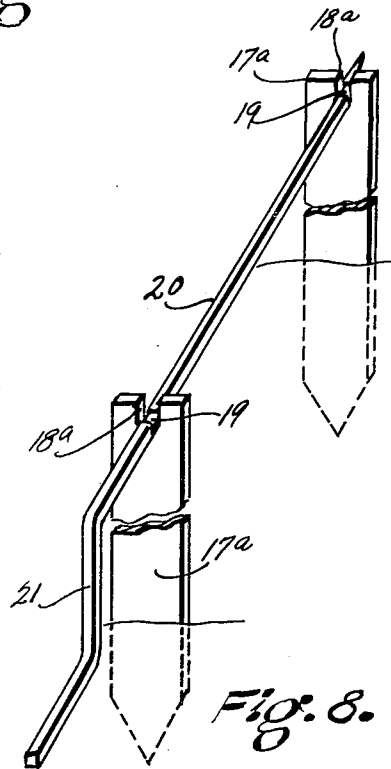


Fig. 8.

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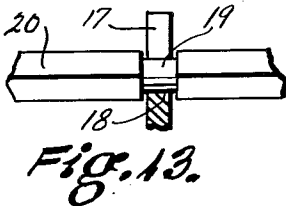
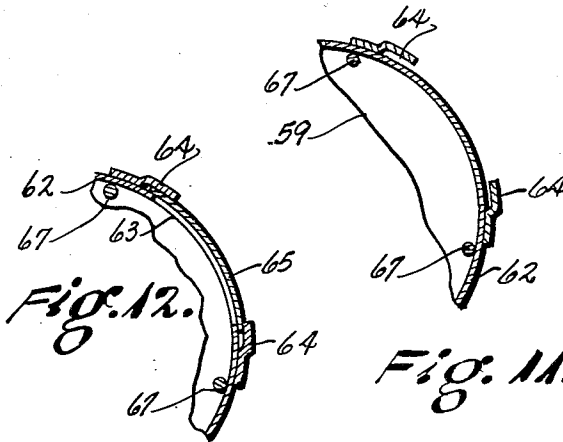
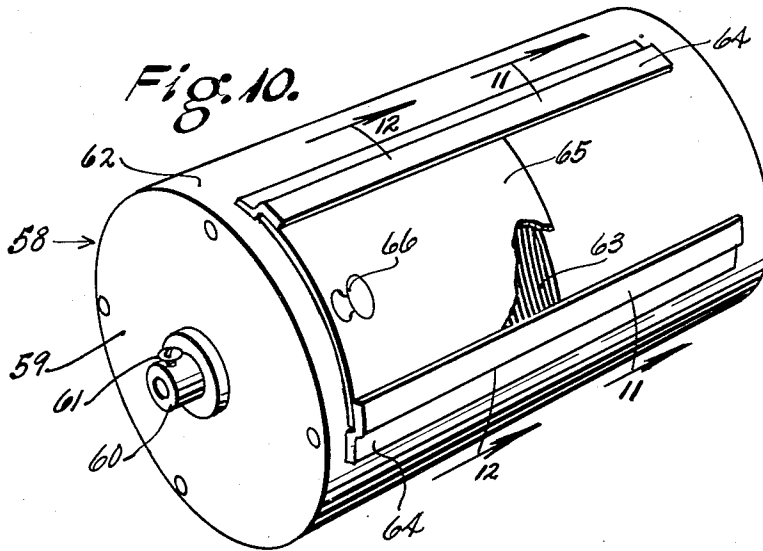
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3 Sheets-Sheet 3



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ROTISSERIE ATTACHMENTS

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Application August 3, 1953, Serial No. 371,920

6 Claims. (Cl. 99-427)

My invention relates to new and useful improvements in rotisserie attachments to be employed, especially, in connection with the rotisserie disclosed in my co-pending application filed May 14, 1953, Ser. No. 355,126 and also utilized as individual food cookers independently of the apparatus shown in the above mentioned application.

An object of the present invention is to provide cooking utensils to hold articles of food, which cannot readily be placed on a spit or skewer, and adapted to be mounted on a removable shaft for presenting different areas of the food progressively to a heat zone.

Another object of this invention is to construct a gridiron of two separable sections whereby the same may be disassembled and packed in a small space for storage or easy transportation, each section including two, oppositely located food holding elements so that when the parts are assembled the sections cross each other at right angles and the holding elements are at the ends of the arms.

Another object of the invention is to so construct each holding element as to provide a relatively stationary member and a loosely hinged member connected to the stationary member and having means for temporarily holding the members in closed condition.

Another object of the invention is to provide for connecting the two gridiron sections to hold them against separate relative rotation and means to fasten the assembled unit to a rotatable shaft.

Another object of the invention is to provide a gridiron consisting of two similar sections each having laterally spaced holding elements providing an opening in at least one of them for the projection through said opening of the other of said sections which is slightly shorter than the first section, said holding elements including companion grille members one of which is hinged to the other.

Another object of this invention is to provide a cylinder including a solid or foraminous circumferential wall and removably mounted on a rotatable shaft adjacent a heat zone, said cylinder adapted to contain food to be cooked during rotation of said cylinder.

A further object of the invention is to provide baffles within the cylinder for agitating the articles of food therein.

A still further object of this invention is to provide various types of closures for the access opening to the cylinder.

With the above and other objects in view this invention consists of certain details of construction and combination of elements hereinafter set forth and then designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same I will describe the construction in detail referring by numerals to the accompanying drawing forming a part hereof, in which:

Fig. 1 is a perspective view of one type of rotisserie shown in my copending application with the spit rotators removed and the gridiron mounted on the rotary shaft.

2

Fig. 2 is a fragmentary section on an enlarged scale taken at the line 2-2 of Fig. 1.

Fig. 3 is a perspective view of one of the gridiron sections and showing one of the hinged members of a grille element in an open position.

Fig. 4 is a similar view, in a different position, of the other section which is to be projected through the first section between the grille elements when the parts are assembled to complete the gridiron.

Fig. 5 is a fragmentary view of one of the movable or hinged members of the food holding grille elements showing the latch keeper.

Fig. 6 is a perspective view of a cylinder to be removably mounted on a rotatable shaft and depicting one type of closure which is partly broken away.

Fig. 7 is a section on the line 7-7 of Fig. 6.

Fig. 8 is a perspective view of a rotatable shaft illustrating how it can be supported on individual stake supports inserted in the ground.

Fig. 9 is a detail side view of the shaft.

Fig. 10 is a perspective view of a cylinder showing another type of closure for the access opening.

Fig. 11 is a fragmentary section at the line 11-11 of Fig. 10.

Fig. 12 is a similar section at the line 12-12 of Fig. 10.

Fig. 13 is a further enlarged view, partly in elevation and partly in section, of a part of the shaft and one of its supports.

In carrying out my invention as herein embodied reference will first be made to Figs. 1 to 5, inclusive, wherein 15 represents a fire pot constructed to hold burning wood, charcoal and the like or other heating elements such as electrical heating units mounted on the interior surfaces of some of the fire pot walls and controlled by switches, thermostats etc., to provide a heat zone. This fire pot is shown as mounted on a suitable supporting frame 16 having uprights 17 at opposite ends and in the upper ends of which are formed bearing notches 18 to receive the reduced and rounded journals 19, Fig. 13, of the square or other shaped rotatable shaft 20. The forward end of the shaft projects some distance beyond the forward end of the frame when a crank handle 21 is to be used to rotate said shaft. The crank handle represents a means for transmitting motion to the shaft but other means can be utilized such as an electric motor and appropriate gears.

On one end of the fire pot is a mutilated internal gear 22 with which pinions on spits or skewers (not shown) mesh to revolve the spits as the shaft is revolved and said spits are moved in a circle about the axis of said shaft through the medium of discs 23 on the shaft and on which the spits are revolvably mounted. There is one disc adjacent each end of the shaft so as to be located on opposite sides of the mutilated gear, all of which is fully shown and described in my aforementioned copending application.

When using the attachments described herein the unemployed parts, particularly the spits with their pinions and the spit holding discs are removed so that the shaft 20 projects through the mutilated gear. In mounting or removing said shaft 20 it is merely passed through the open perimeter of said mutilated gear.

The gridiron attachment 24 comprises two sections 25 and 26. The section 25 includes two opposed and spaced collars 27 for passage over the shaft 20 lengthwise thereof and one or both of said collars have hubs 28 projecting from the outer faces to receive fastening means 29, such as screws, to temporarily secure the gridiron to said shaft. Also said collars have peripheral notches 30 in diametrically opposed locations on the collar circumferences for a purpose to be presently described. To the collars, and

3

located between them, are secured the relatively stationary grille members 31 which may be in substantially the same plane, Fig. 2, and laterally spaced apart to provide an opening 32 between the inner or back longitudinal edges thereof. To the inner or back edges of the relatively stationary grille members 31 are loosely hinged the movable or swinging grille members 33 by means of hinge links or loops 34 that allow for considerable "play" or scope of movements between the parts for adjustment to the approximate thickness of articles clamped between cooperating stationary and swinging grille members which form the holding elements.

Like the first mentioned gridiron section the second section includes two opposed and spaced collars 35, Fig. 4, also to pass over the shaft 20 when aligned with the collars 27 as hereinafter explained and one or both of said collars 35 have lugs 36, one lug projecting from the outer face of a single collar, to enter either notch 30 in the collars 27. To the second pair of collars 35, and located between them, are secured the relatively stationary grille members 37 which may be in substantially the same plane, Fig. 4, and laterally spaced apart to provide some opening 38 between the inner or back longitudinal edges thereof. The opening 38 in the gridiron section 26 need not be as large as the opening 32 in the section 25 because nothing passes through said opening 38 while the second section 26 is to be projected into the opening 32.

To the inner or back edges of the relatively stationary grille members 37 are loosely hinged the movable or swinging grille members 39 by means of hinge links or loops 40 which allow for considerable scope of movement between the parts to accommodate articles of food of different thicknesses clamped between cooperating stationary and swinging grille members which form the holding elements of the second gridiron section.

The swinging grille members of each gridiron section are on opposite faces of the respective stationary grille members. Specifically when a gridiron section is in a horizontal plane the swinging grille member to one side of the center line is below its companion stationary grille member while the swinging grille member on the opposite side of the axial center of the gridiron section is above its associated stationary grille member.

As all of the swinging grille members must be temporarily held in closed positions when articles of food, such as hamburgers, are placed in the holding elements for cooking operations I have shown appropriate latches 41 for this purpose. As herein shown, merely for purposes of illustration, each latch is comprised of a rod 42 pivotally or swingingly connected at its inner end to the forward edge of a grille member, such as the stationary grille member 31 of a holding element, and said rod has a head 43 at its outer end. On the rod 42 is slidably mounted a quick-acting winged gripping member 44 with a spring 45 between the head and said gripping member to constantly urge the latter inwardly along the rod. The forward edge of the other grille member, such as the swinging member 33, has an apertured keeper 46, Fig. 5, to receive the rod of a respective latch and be contacted by the spring pressed gripping member to temporarily hold the grille members in a closed condition.

In assembling the gridiron sections one of them, such as section 26, which is shorter than the other, as section 25, is projected into the opening, as 32, of said other section 25 until the collars of both sections align with one another. During this operation the lugs 36 on one pair of collars will enter appropriate notches 30 in the other pair of collars and thus connect the two gridiron sections together temporarily. The gridiron sections thus assembled are substantially at right angles to each other and the holding elements comprised of the grille members project radially from the axial center of the gridiron and are evenly spaced circumferentially.

The shaft 20 is projected through the aligned collars and the gridiron fastened to said shaft by the fastening means 29 on the collars which are positioned outwardly

4

of the gridiron structure. Next the shaft, with the gridiron thereon, is passed radially through the opening in the perimeter of the mutilated gear and mounted on the up-rights 17 with the journals 19 resting in bearing notches and said gridiron over and partly within the fire pot.

With one of the gridiron sections in a horizontal position the swinging grille member of a holding element at one side of the fire pot can be unlatched and opened upwardly for placing the articles of food to be cooked therein or for removing the cooked articles therefrom. During the cooking operations the various surfaces of the article of food are passed through the heat zone by rotation of the shaft until thoroughly cooked.

In lieu of the uprights 17 other uprights 17a in the form of stakes to be driven into the ground can be employed for supporting the shaft 20 on which any of the devices or attachments can be mounted. These stake-like uprights have sharpened lower ends and are provided at the upper ends with the bearing notches 18a. In employing the stake-like uprights they are driven into the ground in properly spaced relation to receive the shaft journals 19 and a fire is built on the ground surface between the uprights whereby the fire pot may be dispensed with temporarily if desired.

By removing the gridiron from the shaft another type of attachment can be used for other forms of cooking. For example a cylindrical cooking utensil 47, Figs. 6 and 7, can be employed and includes end walls 48 each having an axial aperture 49, Fig. 7, surrounded by a hub 50, Fig. 6, with a fastening device 51, such as a screw, to engage the shaft 20 for temporarily connecting the cylindrical cooking utensil to the shaft 20. In addition to the end walls there is a tubular body 52 of solid or foraminous material and said body has an access opening 53 normally closed by a swinging door 54 hinged at 55 contiguous one of the longitudinal edges of said access opening. The door is temporarily fastened in a closed position by a suitable catch 56.

Preferably there are baffles 57 within the cylindrical utensil and may be in the form of wires extending the full length of the interior with the ends fixed to the end walls 48 and resting against the inner surfaces of the tubular body.

In Figs. 10, 11 and 12 I have illustrated a modified form of cylindrical utensil 58 also including apertured end walls 59 with hubs 60 and fastening devices 61 and a tubular body 62 of solid or foraminous material. The body has an access opening 63 therein located adjacent one end of the utensil and adjacent the longitudinal edges of said opening are parallel tracks 64 in which is slidably mounted the door 65 having a knob 66 whereby the door may be slid to and fro for covering and uncovering the said access opening. Like the other type of cylindrical utensil the modification has baffles 67 lengthwise of and within the same.

Whenever desired either type of cylindrical utensil may be mounted upon the shaft 20 by projecting the latter through the hubs and apertured end walls and then placing said shaft on the uprights so that the utensil will be in the heat zone. After the articles to be cooked, such as popcorn, corn on the cob and other foods that can be toasted or roasted in an enclosed container, are placed in the cylinder through the access opening and the door closed. Subsequently the shaft with the cylindrical utensil thereon is revolved to progressively pass the tubular body surface through the heat zone until the articles of food are thoroughly cooked.

From the foregoing it will be apparent that after the shaft is withdrawn from the gridiron the sections thereof may be dissembled and the whole apparatus packed in a small space for storage or transportation and likewise the cylindrical utensils can be removed from the shaft and the parts made into a bundle for easy handling.

By utilizing a number of different types of attachments for removable mounting on the shaft various forms of

5

foodstuffs can be cooked to produce savory meals indoors or outdoors.

Having described my invention what I claim as new and useful is:

1. In a device of the kind described, a rotary shaft, a gridiron removably assembled on said shaft, said gridiron comprised of two sections each consisting of a pair of holding elements spaced apart in substantially the same plane and providing an opening between the spaced holding elements, one of said sections being slightly smaller than the other section for projection into and part way through the opening of the larger section, and hubs on the sections to receive the shaft.

2. A gridiron for assembly on a rotary shaft comprising two sections each including two aligned hubs and a pair of spaced holding elements connected to said hubs and located in substantially the same plane, the spacing of said holding elements providing an opening between them, one of said sections being slightly larger than the other section whereby the smaller section can be projected into and part way through said larger section for aligning all of the hubs to receive a shaft, and means on said hubs to assist in aligning them and holding the sections at substantially right angles to each other.

3. The gridiron as set forth in claim 2 wherein each holding element includes a substantially stationary grille member fixed to one pair of hubs, a swinging grille member, means to loosely hinge the swinging grille member along one edge to the corresponding edge of its respective stationary grille member, and latch means to temporarily retain the swinging grille member in a closed position relative to the stationary grille member.

4. The gridiron as set forth in claim 2 wherein the means on the hubs to assist in aligning them and holding the sections in predetermined relative locations consists of lugs projecting from outer faces of the hubs of the

6

smaller section and peripheral notches on the hubs of the other gridiron section to receive said lugs.

5. The gridiron as set forth in claim 3 wherein each latch means comprises an adjustable gripping member associated with the stationary grille member, and a keeper on the swinging grille member for coaction with the gripping member of the latch means.

6. In a device of the character described, a rotary shaft, a gridiron removably mounted on said shaft and comprising two separable sections each including two hubs and two holding members fixed to their respective hubs, the holding members of each section lying in a common plane and spaced edgewise in the region of the hubs to provide an opening between them, one of said sections being slightly smaller than the other section whereby said smaller section may be projected part way through the opening of said other section for aligning all of the hubs, said holding members each including a relatively stationary grille member and a swinging grille member loosely hinged to the relatively stationary grille member at the edge adjacent the shaft, and a spring latch attached to one of said grille members for cooperation with the companion member to temporarily hold them in closed condition with articles between them under resilient pressure.

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