Sept. 26, 1961 L. B. RATLIFF 3,001,578

DRAPERY SPACER AND PLEAT FORM

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FIG. 1

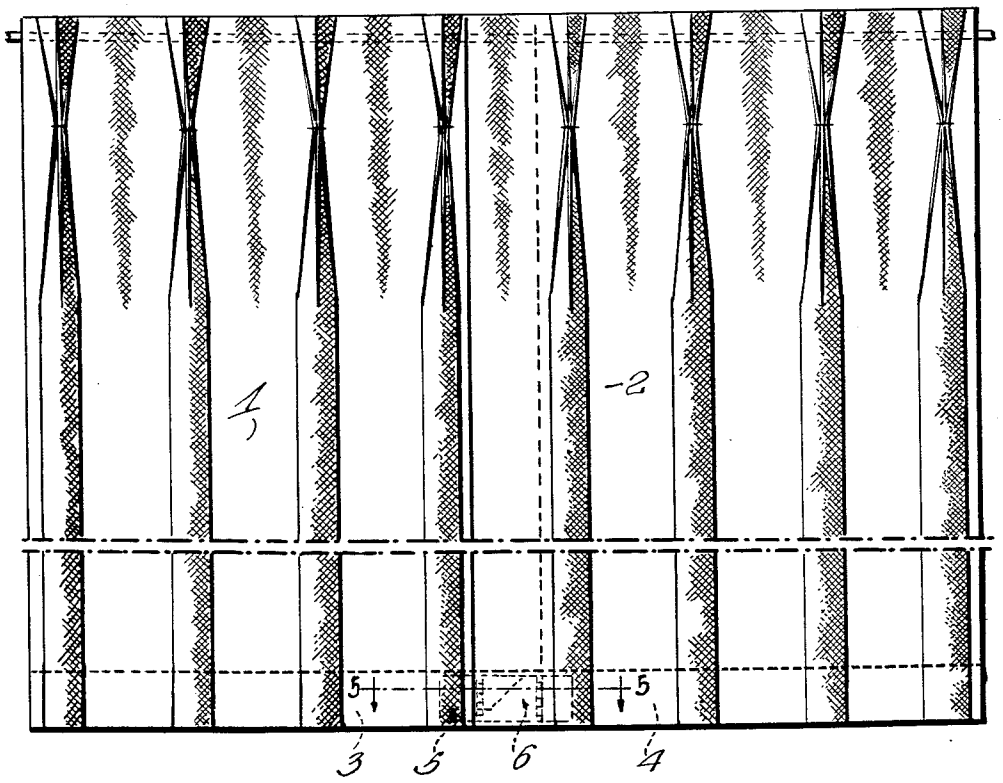
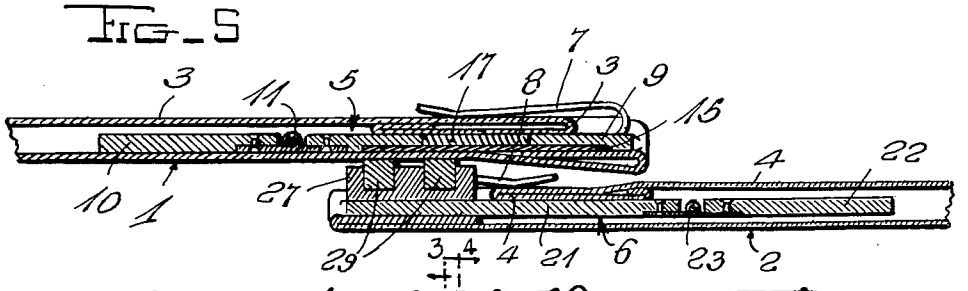


FIG. 5



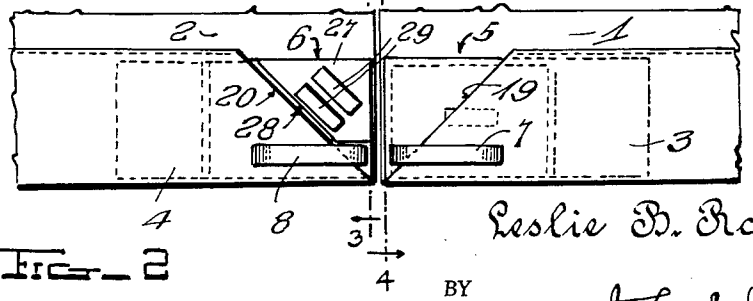


FIG. 2

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DRAPERY SPACER AND PLEAT FORM

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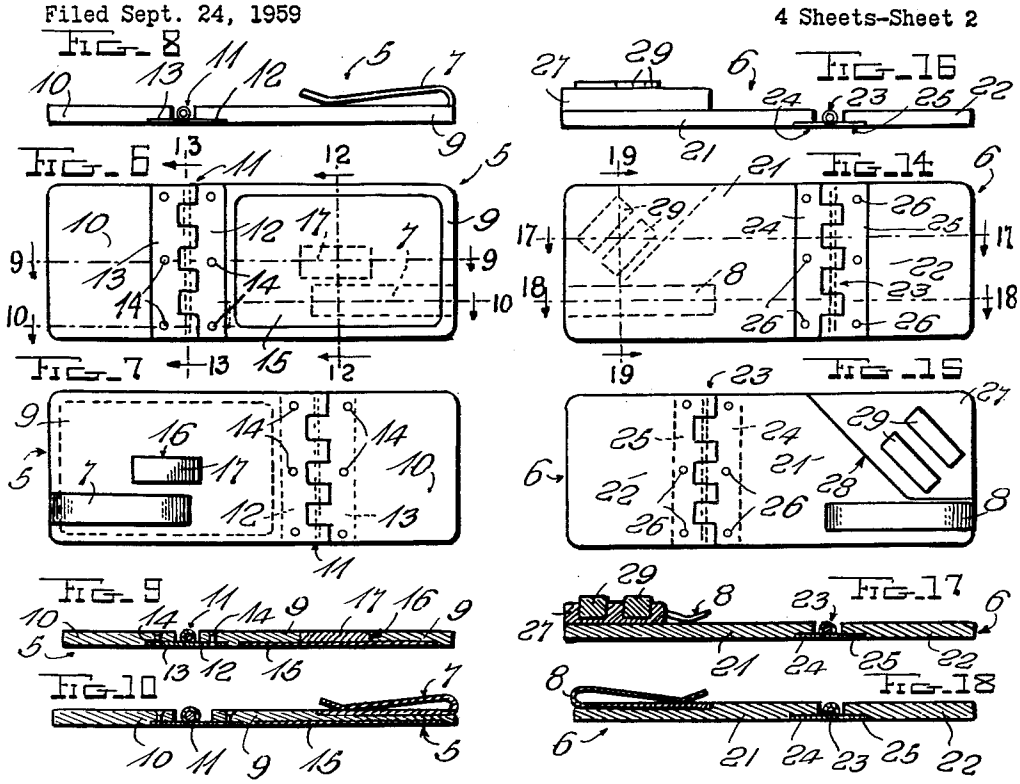

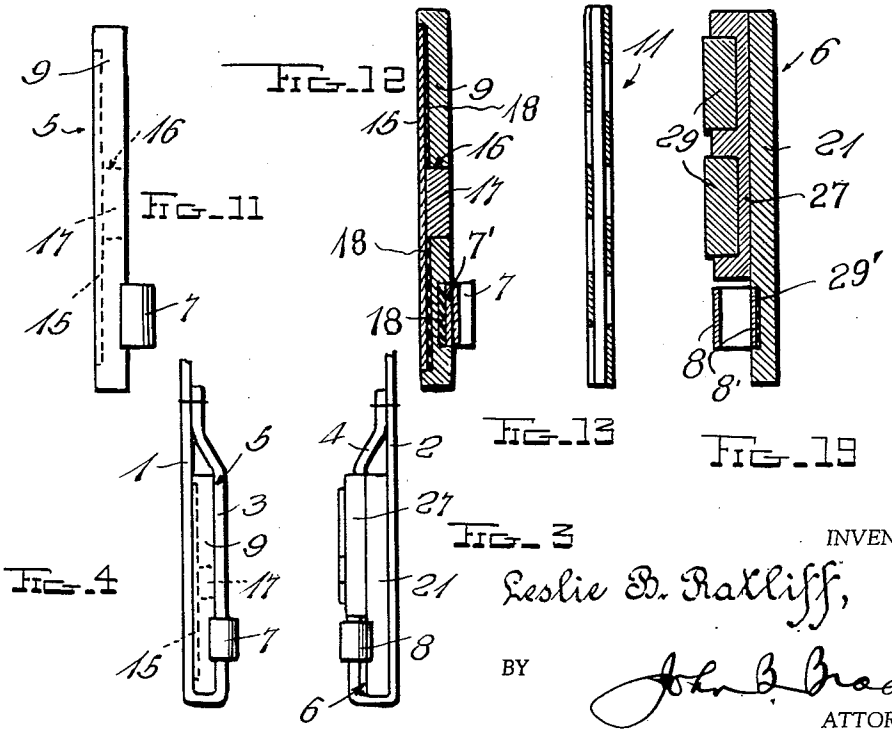

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DRAPERY SPACER AND PLEAT FORM

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FIG. 20

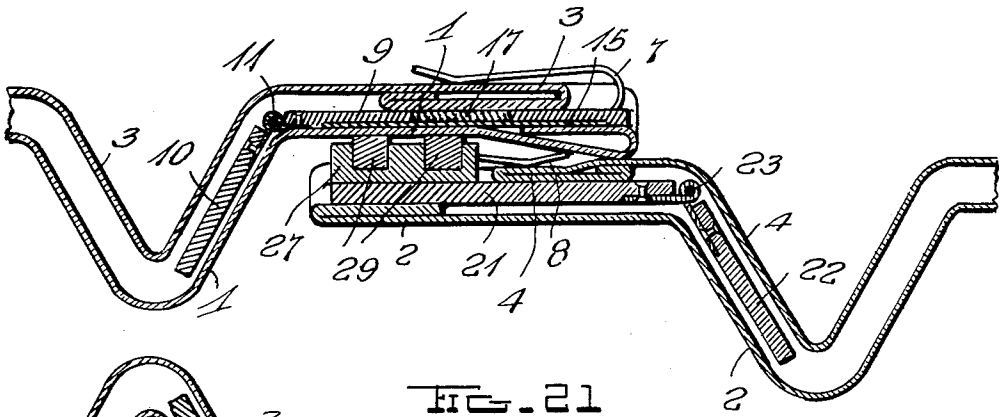


FIG. 21

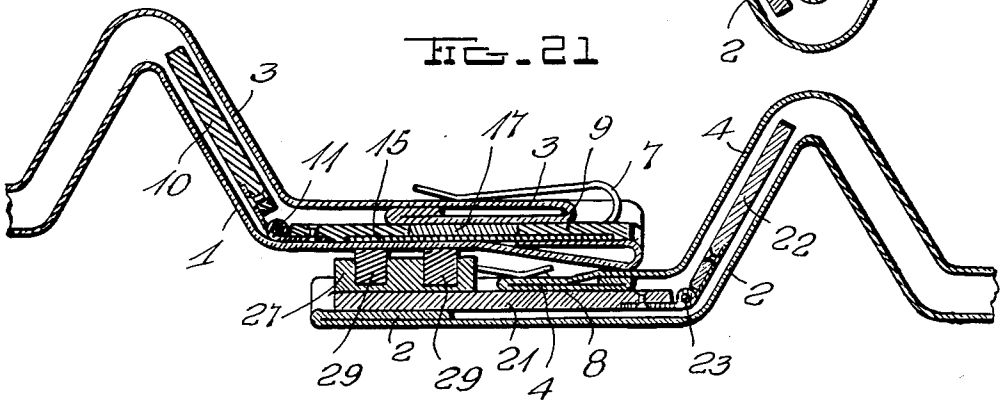


FIG. 22

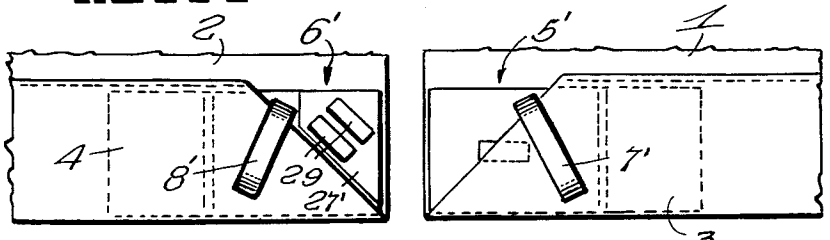


FIG. 24

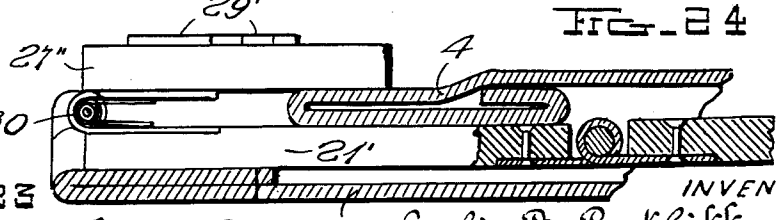
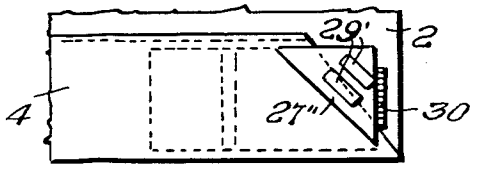


FIG. 23



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DRAPERY SPACER AND PLEAT FORM

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FIG. 25

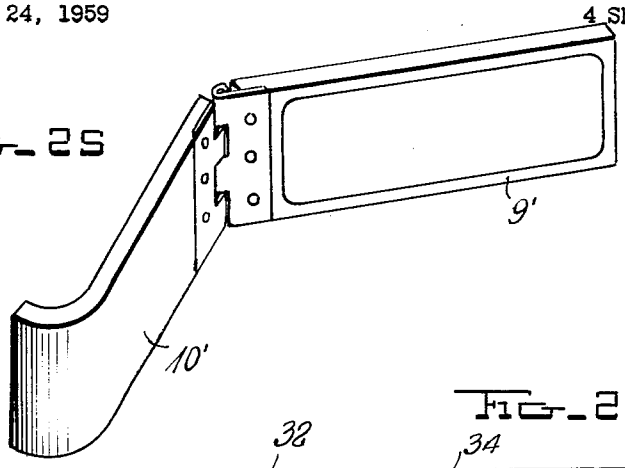
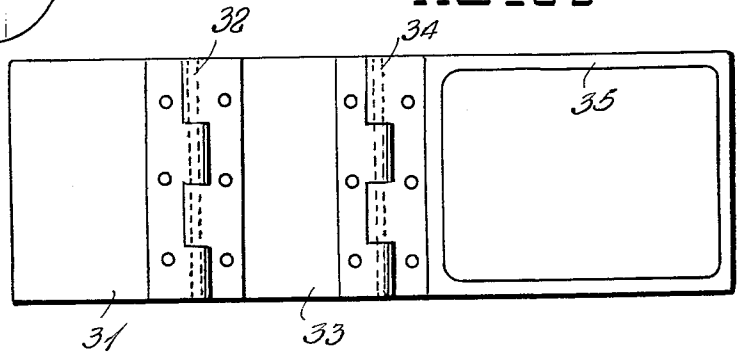


FIG. 26



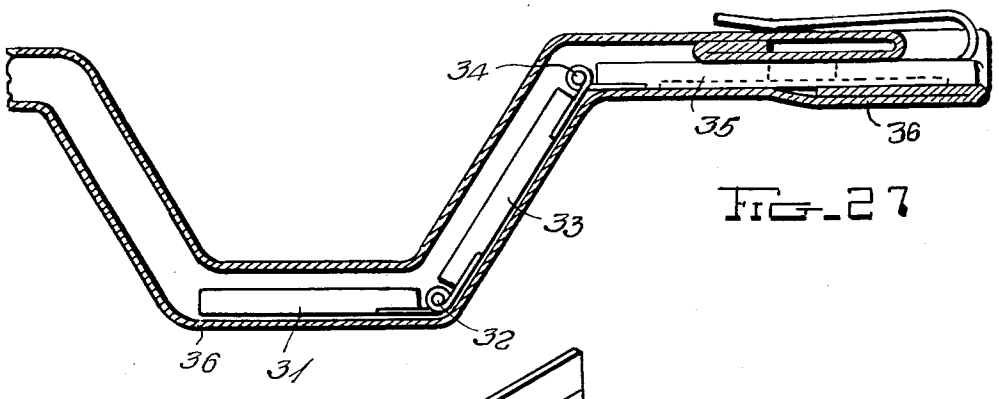


FIG. 27

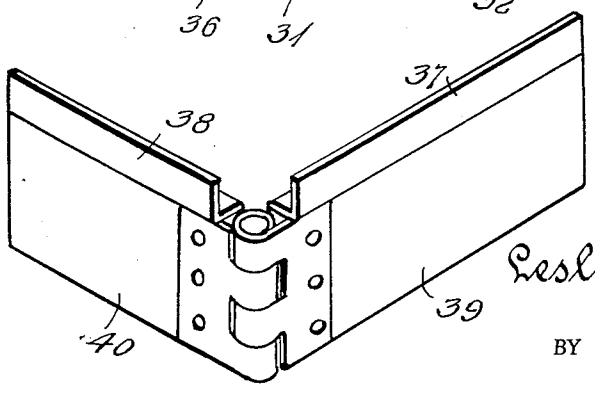


FIG. 28

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United States Patent Office 3,001,578 Patented Sept. 26, 1961

3,001,578

DRAPERY SPACER AND PLEAT FORM

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Filed Sept. 24, 1959, Ser. No. 842,078
6 Claims. (Cl. 160—126)

My invention relates broadly to means for holding the terminating overlapping edges of draperies together, and more particularly to a coacting pair of magnetic spacer members for insertion in the drapery hems for holding the overlapping drapery hems together when the draperies are in the closed or drawn position.

One of the objects of my invention is to provide a pair of spacer members for drapery hems which carry coacting magnetic means thereon for coupling the overlapping terminating ends of the drapery together when it is disposed in the closed position.

Another object of my invention is to provide a construction of easily detachable coupling means for the overlapping bottom portions of draperies which also provide means for forming the first drapery pleat.

Another object of my invention is to provide a construction of drapery edge holder which simultaneously serves as a drapery weight and drapery shaper member.

Still another object of my invention is to provide a construction for a pair of magnetically coupled drapery edge holders which permits selective shaping of the front of the drapery in various ways.

A further object of my invention is to provide a combination drapery weight, shaper and edge holder which is easily attachable and detachable from the drapery hem.

Still a further object of my invention is to provide a construction of drapery edge couplers which carry hinged portions thereon for imparting a more aesthetic appearance to the manner in which the front drapery edges hang.

Other and further objects of my invention reside in the manner in which the mitered drapery hem coacts with the magnet carrying portion of one of the spacer members and in the manner in which the magnetic portions of each spacer are disposed to coact with each other as set forth more fully in the specification hereinafter following by reference to the accompanying drawings, in which:

FIG. 1 is a front elevational view of a pair of draperies in the closed position showing the manner in which the drapery spacers are carried in the drapery hems;

FIG. 2 is a back elevational view of a fragmentary portion of the bottom overlapping edges of a pair of draperies, the view showing the draperies slightly open and the manner in which the spacer members are secured in the drapery hems;

FIG. 3 is an end elevational view taken substantially along line 3—3 of FIG. 2 and particularly showing the manner in which the magnets are projected beyond the hem thickness by the spacer portion;

FIG. 4 is an end elevational view taken substantially along line 4—4 of FIG. 2;

FIG. 5 is a longitudinal sectional view taken substantially along line 5—5 of FIG. 1 and particularly showing the manner in which the pair of spacer members coact to hold together the lower overlapping drapery edges;

FIG. 6 is a front elevational view of the left hand drapery spacer of the coacting pair of drapery spacer members of my invention;

FIG. 7 is a back elevational view of the left hand drapery spacer of FIG. 6;

FIG. 8 is a top plan view of the left hand drapery spacer shown in FIG. 6;

FIG. 9 is a longitudinal section view taken substantially along line 9—9 of FIG. 6;

FIG. 10 is a longitudinal section view taken substantially along line 10—10 of FIG. 6;

FIG. 11 is an end elevational view of the left hand spacer member of FIG. 6 looking at the clip end thereof;

FIG. 12 is a vertical section view taken substantially along line 12—12 of FIG. 6;

FIG. 13 is a vertical section view taken substantially along line 13—13 of FIG. 6;

FIG. 14 is a front elevational view of the right hand drapery spacer of the coacting pair of drapery spacer members of my invention;

FIG. 15 is a back elevational view of the right hand drapery spacer member;

FIG. 16 is a top plan view of the right hand drapery spacer shown in FIG. 14;

FIG. 17 is a horizontal sectional view taken substantially along line 17—17 of FIG. 14;

FIG. 18 is a horizontal sectional view taken substantially along line 18—18 of FIG. 14;

FIG. 19 is a vertical section view taken substantially along line 19—19 of FIG. 14;

FIG. 20 is a fragmentary longitudinal sectional view similar to FIG. 5 and particularly showing the movable body portion of each spacer member pivoted to a forward position to form forwardly depending first pleats on each of the overlapping draperies;

FIG. 21 is a fragmentary longitudinal sectional view similar to FIG. 20 bu showing the movable body portions of the spacer members pivoted to rearward positions to form rearwardly depending first pleats on each drapery;

FIG. 22 is a back elevational view of a fragmentary portion of the bottom edges of a pair of draperies similar to FIG. 2 but particularly showing a modified form of my invention in the positioning of the spring clip members;

FIG. 23 is a rear elevational view of a modified form of the right hand drapery spacer of my invention inserted in the drapery hem;

FIG. 24 is a fragmentary top plan view of the modified right hand drapery spacer shown in FIG. 23, the view showing the drapery hem is cross-section to show the manner in which the pivotally sprung spacer portion engages the drapery hem;

FIG. 25 is a perspective view of a left hand spacer member and particularly showing a modified construction of movable body portion;

FIG. 26 is a front plan view of a modified form of left hand spacer member particularly showing a pair of movable body portions consecutively coupled to the main body portion;

FIG. 27 is a top plan view partly in section showing the manner in which the modified form of spacer member shown in FIG. 26 is utilized to form drapery pleats; and

FIG. 28 is a perspective view of a drapery spacer member particularly showing a modified construction for attaching the drapery spacers to the drapery.

My invention is directed to the construction of a coacting pair of drapery spacer members which are fastened into the hems of the draperies adjacent the lower overlapping edges thereof.

Each spacer member carries a main body portion and a movable body portion hingedly attached thereto for imparting different aesthetic formations to the first pleat of the drapery in whose hem it is secured. The body portions of the spacer members are of thin construction so they can slip into the mitered hems of the draperies. The spacer members are each secured to the drapery hems by a spring clip carried on the back surface of the main body portion positioned to engage the mitered edge of the drapery hem. The spring clips beside securing the spacer members to the draperies also hold the corners of the drapery hems in the mitered position, thus saving the seamstress from the time and labor of sewing them down.

The left hand drapery spacer member in the hem of the left hand drapery carries a metal plate on the front surface of the main body portion. A small magnet is disposed behind the metal plate for imparting magnetic qualities to the entire plate surface. When the left hand drapery spacer member is secured in the drapery hem the front of the drapery covers the metal plate and the entire member is hidden behind the drapery.

The right hand spacer member in the hem of the left hand drapery is likewise hidden behind the drapery. A spacer portion carrying small magnets is attached to the rear surface of the right hand spacer member adjacent the edge of the drapery. One edge of the spacer portion is mitered substantially the same as the drapery hem so it can project the magnets behind the drapery hem in the mitered corner of the hem.

When the draperies are closed they overlap a given amount and the magnets protruding from the back of the right hand spacer member make magnetic contact with the metal plate of left hand spacer member through the left hand drapery covering it. The spacer members can then be adjusted so that the drapery edges are perfectly straight and so that they overlap the same amount at the bottom as at the top to give the draperies a neat appearance. Thus the lower overlapping drapery edges are held in alignment by magnetic attraction.

The movable body portions of each spacer member can then be selectively positioned to impart the desired form to the first pleat of each drapery. Thus the spacer members of my invention each serves as a combination weight, shaper and drapery edge holder.

Referring to the drawings in greater detail reference character **1** designates the left hand drapery while reference character **2** represents the overlapping right hand drapery as shown in FIG. 1. The hems **3** and **4** of draperies **1** and **2** respectively hold spacer members **5** and **6** fastened therein by spring clip members **7** and **8** as shown in the fragmentary back elevation view of FIG. 2.

In FIGS. 6–13 I have shown the left hand spacer member **5** which is inserted in the hem of the left hand drapery **1**. The spacer member **5** basically consists of the main rectangular body portion **9** having an adjustable body portion **10** pivotally attached to one end thereof by hinge member **11**. The body portions **9** and **10** are relatively thin so as to easily slip into the hem of a curtain and are constructed of plastic, wood, or other suitable lightweight material. The hinge member **11** is of the piano or other suitable type and the mounting flanges **12** and **13** thereof are respectively connected to the body portions **9** and **10** by rivets **14**, or other suitable attaching means such as mastic, etc., the means of attaching the hinge mounting flanges depending largely upon the body portion material. The mounting flanges **12** and **13** are preferably recessed flush with the surfaces of the body portions. The thickness of the hinge member **11** and the body portions **9** and **10** is substantially the same thus permitting free pivotal movement of adjustable body portion **10** to the same extent in both forward and rearward directed arcs.

The front surface of the main body portion **9** carries a recessed plate shown at **15** constructed of a magnetically responsive material. The plate **15** is disposed so that it is flush with the front surface of the main body portion **9** and is secured in the recess by a layer of mastic **18**, as shown in FIG. 12, or other suitable attaching means. When the body portion **9** is constructed of plastic the plate **15** can be molded into the body portion. The body portion **9** carries a centrally disposed aperture **16** beneath the plate **15**, the aperture carrying a magnet **17** securely fastened therein so as to abut the rear surface of the plate **15**. Since the plate **15** is constructed of a magnetically responsive material the entire plate takes on magnetic qualities with the magnet **17** in abutting contact therewith. Thus spacer member **5** provides a large coacting magnetically attractive surface for spacer member **6**.

Spring clip **7** is provided on the lower rear surface adjacent the vertical edge of the body portion **9**; the clip **7** extending longitudinally with the body portion **9**. The attaching arm of the clip **7'**, as shown in FIG. 12, is mounted flush with the rear surface of body portion **9**, the clip arm being secured to the body portion by a layer of mastic as shown at **18** or other suitable attaching means. Spring clip **7** engages the mitered edge **19** of the drapery hem simultaneously securing spacer **5** in the drapery hem and mitering the corner of hem **3** quickly, thus relieving the seamstress from the task of sewing the mitered edges down, saving time and labor.

In FIGS. 14–19 I have shown the right hand spacer member **6** which is inserted in the hem **4** of the right hand drapery **2**. Spacer member **6** is comprised of a rectangular main body portion shown at **21** having a smaller body portion **22** pivotally attached thereto through mounting flanges **24** and **25** of hinge member **23**. Mounting flanges **24** and **25** of hinge member **23** are respectively connected to body portions **21** and **22** by rivets **26** or other suitable attaching means. The body portions, hinge member and spring clip of the spacer members **5** and **6** are similarly constructed so that the movable body portion of each spacer member is free to be pivoted in forward or rearward arcs of substantially the same magnitude for selective forming of the first drapery pleat at the hem line into various configurations.

Drapery spacer portion **27**, having a mitered edge **28** corresponding to the mitered corner of the hem, is carried by the upper right hand corner of the rear surface of main body portion **21**. Spacer portion **27** is secured to body portion **21** by glue, mastic, or other suitable bonding material.

Diagonally disposed magnets **29**, extending substantially parallel with the mitered edge **28**, are secured in recesses carried by spacer portion **27** so as to be mounted flush with the rearward facing surface of said spacer portion or to project slightly beyond the spacer portion rear surface. Spring clip **8** carrying attaching arm **8'** is secured to the rear surface of body portion **21** adjacent the lower right hand and beneath the terminating horizontal edge of mitered spacer portion **27**. Clip arm **8'** is attached to body portion **21** by a layer of mastic indicated at **29'** or other suitable means in the same manner that clip arm **7'** is attached to body portion **9**.

As shown in FIGS. 2 and 3, when spacer member **6** is inserted in the hem **4** of drapery **2**, the spring clip **8** engages the hem **4**, thus securing the spacer member in the hem and simultaneously mitering the corner of the hem thus eliminating the necessity of sewing the mitered edge. The hem **4** is thus held by spring action between the spring clip **8** and the rear surface of body portion **21**. When the spacer member is thus inserted the mitered edge **20** of drapery hem **4** is disposed in abutting contact with the correspondingly mitered edge **28** of the spacer portion **27**.

Thus the spacer portion **27** must be of slightly greater thickness than the hem portion **4** so as to project the magnets **29** beyond the material thickness of the hem to en-

able them to make flat abutting magnetic contact with the coacting magnetically attractive plate **15** through drapery **1** when the draperies are closed as shown in FIG. 5.

FIG. 5 is a horizontal sectional view taken substantially on line 5—5 of FIG. 1 showing the spacer members **5** and **6** secured in their respective hems and holding the overlapping drapery edges together by the magnetic attraction between magnets **29** and plate **15**. As shown in FIG. 5 drapery **1** is disposed between magnets **29** and plate **15** so that left hand spacer member **5** is completely concealed by drapery **1** at all times. In FIG. 5 the movable body portions **10** and **22** of spacer members **5** and **6** respectively are disposed in alignment with body portions **9** and **21** to give a flat or vanishing effect to the first pleat of each drapery toward the bottom edge thereof. Two different pleat-forming effects are shown in FIGS. 20 and 21 which are views similar to FIG. 5. In FIG. 20 I have shown the movable body portions **10** and **22** pivoted to a forward position with respect to body portions **9** and **21**, that is, disposed at obtuse angles to body portions **9** and **21**, to provide forward projecting first pleats on each drapery. In FIG. 21 I have shown the movable body portions **10** and **22** pivoted to a rearward position with respect to body portions **9** and **21**, such as to form rearwardly projecting first pleats. The movable body portions **10** and **22** can be pivoted to many positions to impart different forming effects to the first pleats of the draperies to give a more aesthetic appearance thereto.

In FIG. 22 I have shown a modified arrangement of placing spring clips **7'** and **8'** on the back surfaces of spacer members **5'** and **6'**, respectively. In this modified form of my invention the spring clips substantially extend from the top of the rear surfaces of the spacer members in a downward direction in the vertical plane, the spring clips being disposed at acute angles to the hinge members. In this arrangement a modified form of spacer portion **27'** is also utilized as shown in FIG. 22.

In FIGS. 23 and 24 I have shown a modified form of right hand spacer member secured to the hem **4** of right hand drapery **2** by triangular spacer portion **27''** which is pivotally connected to main body portion **21'** by spring loaded hinge member **30**. Spacer portion **27''** carrying magnets **29'** is thus biased toward the rear surface of main body portion **21'** enabling the mitered edge of hem **4** to be securely spring clamped intermediate the two members as shown in FIG. 24.

FIG. 25 shows a modified form of movable body portion **10'** hingedly attached to main body portion **9'**. In this modified form the movable body portion **10'** has a smooth flowing outwardly surved surface for forming a gracefully curved first pleat in the drapery. This modified construction of movable body portion is applicable to both the right and left hand spacer members.

In FIGS. 26 and 27 I have shown another modified construction of movable body portion applicable for both the right and left hand body portions. In this form of my invention each spacer member carries a movable body portion **31** pivotally hinged at **32** to another movable body portion **33** which is pivotally hinged at **34** to main body portion **35**. With this arrangement box-shaped and other pleat forms can be imparted to the drapery **36**, as shown in FIG. 27, which are not obtainable with a single movable body portion. If required in a particular application a multiplicity of movable body portions can be linked together to obtain a desired drapery pleat form.

In FIG. 28 I have shown a modified arrangement of fastening the spacer members to the drapery hems. In this construction I provide attaching tabs **37** and **38** protruding upwardly from body portions **39** and **40**, respectively. These attaching tabs can be constructed of plastic or fabric, or other material capable of being sewn, secured to the body portions by mastic or other suitable bonding means. The tabs are then sewn to the rear surface of the drapery hem line to fasten the spacer members to their respective draperies.

I have constructed a pair of the drapery spacer members of my invention and have found them very practical and useful in keeping draperies neat and tailored-looking at all times.

While I have described my invention in certain preferred embodiments I realize that modifications can be made and I desire that it be understood that no limitations upon my invention are intended other than may be imposed by the scope of the appended claims.

What I claim as new and desire to secure by Letters Patent of the United States is as follows:

1. In combination, a drapery section provided at its lower edge with a tubular hem opening through a vertical edge of the drapery section, said tubular hem being mitered adjacent said vertical edge, a substantially rigid plate-like element engaging longitudinally within said hem adjacent said vertical edge, a resilient clip secured to said body portion and engaging the mitered edge of said hem for anchoring the body portion therein, and permanent magnet means carried by said body portion between said vertical edge of the drapery section and said mitered edge and exposed for coaction with magnetically attractable means on a companion drapery section adapted to overlap said first named drapery section and hem.

2. The combination as set forth in claim 1 in which said permanent magnet means extends outwardly from said plate-like element for a distance greater than the thickness of the mitered edge of said hem.

3. In a device of the character described, a drapery section having a hem at its lower free edge, said hem open adjacent one vertical edge of the drapery section, said hem diagonally cut at its open end, a substantially rigid body portion insertable in the hem and clampingly engaging the hem for anchoring the body portion therein and including a permanent magnet part exposed for coaction with a magnetically attractable part of a companion drapery section, said permanent magnet part disposed between said vertical edge and the diagonally cut edge of said hem.

4. In a device of the character described, a drapery section having a hem at its lower free edge, said hem open adjacent one vertical edge of the drapery section, said hem diagonally cut at its open end, a substantially rigid body portion insertable in the hem and clampingly engaging the hem for anchoring the body portion therein and including a permanent magnet part exposed for coaction with a magnetically attractable part of a companion drapery section, said permanent magnet part disposed between said vertical edge and the diagonally cut edge of said hem, and substantially rigid movable body portions hingedly connected to said first body portion and to said magnetically attractable part for selectively forming the first pleats in said drapery section and the companion drapery section.

5. In a drapery device, a drapery section, a hem carried by the lower end of the drapery section and being open at one vertical edge of the drapery section, said hem being mitered at its open end, a substantially rigid plate-like element insertable within the open end of said hem, and a permanent magnet part carried by said plate-like element and constituting a clip and clampingly engaging said hem and being exposed between said vertical edge and the mitered edge of said hem.

6. In a drapery device, a drapery section, a hem carried by the lower end of the drapery section and being open at one vertical edge of the drapery section, said hem being mitered at its open end, a substantially rigid plate-like element insertable within the open end of said hem, a resilient clip secured to said plate-like element and engaging the mitered edge of said hem for anchoring the plate-like element therein, a spacer element carried by said plate-like element between the drapery vertical edge and the mitered edge of said hem, permanent magnet means carried by said spacer element, a com-

panion drapery section adapted to overlap said first named drapery section and hem, a hem carried by the lower end of the companion drapery section and being open at one vertical edge, said second mentioned hem being mitered at its open end, a substantially rigid companion plate-like element insertable within the open end of said hem, a resilient clip secured to said companion plate-like element and engaging the mitered edge of said hem for anchoring the companion plate-like element therein, a magnetically attractable plate carried by said

companion plate-like element, and the permanent magnet means being exposed for coaction with said magnetically attractable plate for holding said overlapping drapery sections in spaced relation.

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