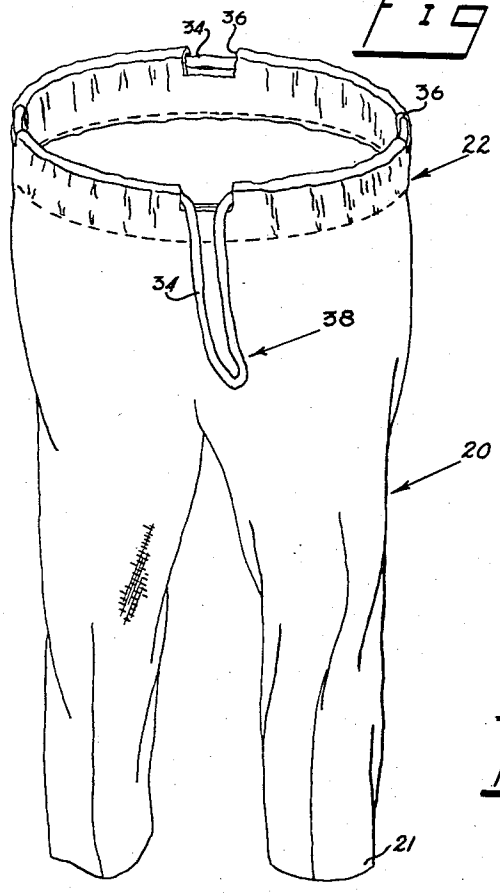
Oct. 7, 1958 E. P. NACCASH 2,854,670

ADJUSTABLE WAISTBANDS

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2 Sheets-Sheet 1

Fig 1



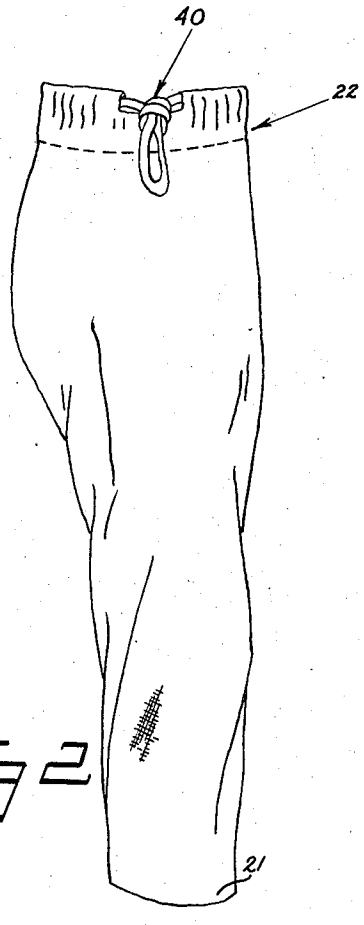


Fig 2

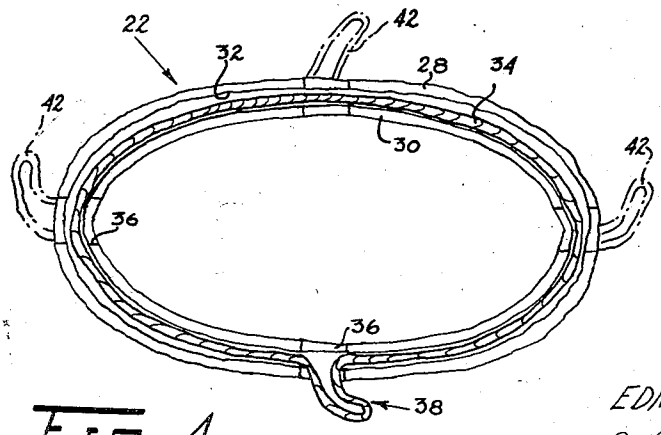


Fig 4

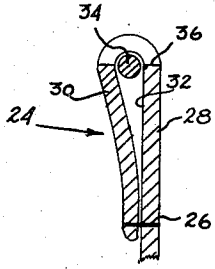


Fig 3

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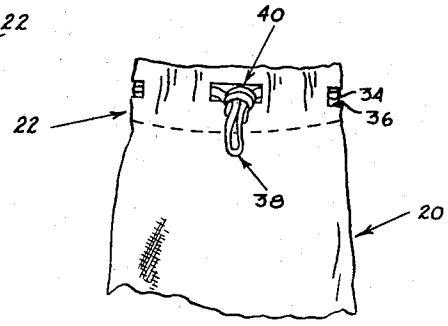
Oct. 7, 1958 E. P. NACCASH 2,854,670

ADJUSTABLE WAISTBANDS

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Fig 6



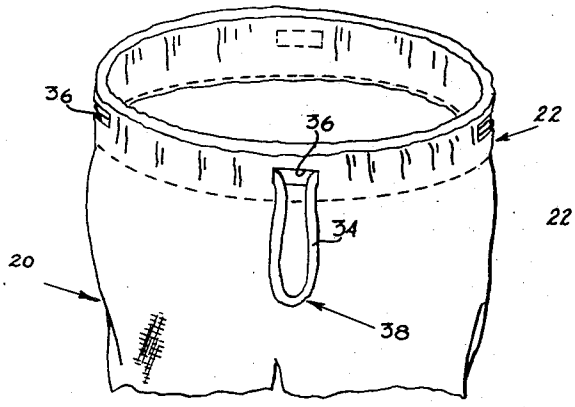
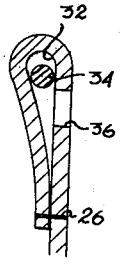
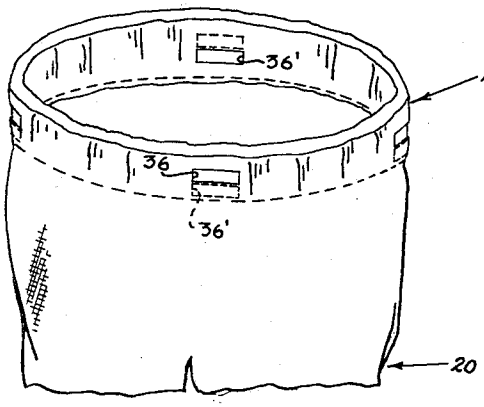


Fig 5

Fig 7





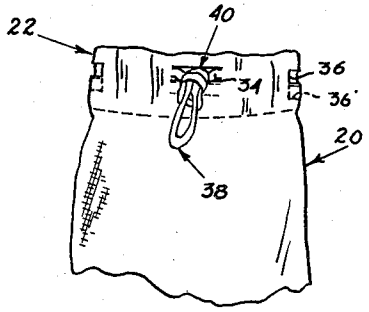


Fig 8

Fig 9

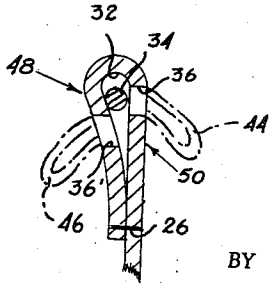


Fig 10

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ADJUSTABLE WAISTBANDS

Edmund P. Naccash, Falls Church, Va.

Application January 27, 1956, Serial No. 561,904

1 Claim. (Cl. 2—237)

This invention relates to clothing and more particularly to adjustable waistbands for trousers.

Adjustable waistbands, to properly size a pair of trousers to the wearer, have been known in the art of trousers for a long time, as for example; the use of free end draw type cords in the waistbands of pajamas, or the elastic type waistbands most commonly used in such items as; slacks, Bermuda shorts, pajamas, and the like.

In most applications of the adjustable waistband, the normal free end draw cord or the elastic type waistband are completely acceptable, since in most instances the trousers are purchased to fit a particular size person and the amount of adjustment required is virtually negligible. Further, where a free end draw cord is used as an adjusting means for trousers, such items of clothing are usually laundered at home or by a private cleaning institution, where reasonable care is taken, so that there is very little danger of the cord either getting lodged within the hem of the trouser and becoming useless, or becoming totally disengaged from the hem of the garment.

However, there is one form of garment wherein it is absolutely necessary to have an adjustable waistband, and these particular garments are subjected to mass institutional laundering, where little care is taken, thus these garments are particularly susceptible to the aforementioned loss or rendering useless of the draw cord. Such garments are known as medical or doctor's scrub suits or trousers, and must be completely adjustable to fit a number of different physical sizes, since it is common practice to purchase such garments in but three sizes, namely; small, medium, and large. The scrub suit is usually made of ordinary heavy-duty white cotton having uncuffed trouser legs and the conventional free end type of draw cord about the waist.

In many instances a doctor, preparatory to entering the operating room, will select a scrub suit from the clean linen supply only to find that in the course of sometimes its very first laundering that the adjustable cord has either gotten lodged within the hem of the waistband and is unretrievable, or else the cord has become completely disengaged from the hem of the trouser. In either case the trouser is virtually useless for the immediate needs of the doctor. It has been a common occurrence when the aforedescribed happens that the doctor will take the useless scrub suit and throw it into the dirty laundry bin. As a result the useless garment will proceed to the laundry and will eventually reappear in the clean linen supply where it will ultimately be selected again, and again found to be useless. Many times such a useless garment will continue in the vicious circle of being discarded without use, relaundered, and will reappear in the clean linen supply, and as a result the garment will be worn out merely by laundering and without use.

It is obvious that as a result of the foregoing that the hospitals go through needless expense of maintaining large inventories of scrub suits, laundering garments continually that are never worn, and suffering the expense of having perfectly good garments ruined without proper use.

United States Letters Patent issued to G. R. Eager, No. 181,155, on August 15 1876, is representative of an advance in the art of adjustable waistbands for trousers. In the form of the invention disclosed by the Eager patent one end of the draw cord is securely fastened to the inner side of the waistband while the other end of the cord is alternately threaded in and out of a plurality of waistband loops. The cord is then pulled by the free end to tighten the waistband about the waist of the wearer and then suitably secured to the trouser. In this manner the draw cord of the Eager invention can never become dislodged or lost. A further form of the invention discloses a pair of cords each having an end fixedly secured to the inner side of the waistband while the other ends of the cords are threaded from opposite directions through waistband loops about the waist of the trouser until the free ends of the cords meet at the front of the trouser. The wearer can draw on the free ends of the cords tightening the waistband, and then knot the free ends of the cords together. In this later described form of the Eager invention the cord is impossible of loss or being rendered useless.

The present invention is directed to new and novel improvements in the construction and function of adjustable waistbands for trousers, and finds particular applicability to the adjustable waistbands of doctor's scrub suits to effectively prevent the difficulties, heretofore described, experienced with such scrub suits, thereby materially lowering the cost to the hospitals, and also providing the maximum useful life from such scrub suits.

The novel adjustable waistband of the present invention comprises a novel hemming of the upper end or waistband of the trouser or scrub suit over a unique endless waistband draw cord, so that when the cord is assembled into the scrub suit it is absolutely impossible for the cord to ever become lodged within or totally removed from the waistband of the scrub suit. Also the aforedescribed scrub suits are reversible, that is they are capable of being worn with either side out, and the novel adjustable waistband cord of the present invention novelly provides for adjustment regardless of which side is turned out.

Therefore, it is a primary object of the present novel invention to provide improvements in clothing.

Another object of the present novel invention is to provide improvements in trousers.

Still another object of the present invention is to provide trousers with novel improved adjustable waistbands.

An additional object of the present invention is to provide a doctor's scrub suit trouser with a novel cord type adjustable waistband wherein the cord can never become dislodged from the trouser, or in any way rendered useless.

A further object of the present invention is to provide a novel adjustable waistband for doctor's scrub suit trousers wherein the waist can be adjusted or sized regardless which side of the trousers is worn next to the body of the wearer.

Another object of the present invention is to provide the waistband of trousers with novel adjustment means that can be adjusted at a plurality of locations about the periphery of the waist of the wearer.

Yet another object of the present invention is to provide a pair of washable, reversible trousers with a novel waist hem mounting a unique endless type adjusting cord for adjusting the waist of the trousers to various sizes.

These and other objects will readily appear and become more apparent from a reading of the following detailed

description in conjunction with the attached drawings, wherein:

Figure 1 is a front elevational view of a pair of trousers provided with the novel waistband and endless draw cord of the present invention;

Figure 2 is a side elevational view of the trousers shown in Figure 1, and further showing how the novel draw cord may be knotted at the side of the trouser;

Figure 3 is a fragmentary vertical sectional view of the novel waistband of the present invention showing the mounting of the endless draw cord therein;

Figure 4 is a horizontal sectional view through the novel waistband of the trousers showing the mounting of the endless cord therein, and the manner in which the cord can be adjusted at a plurality of locations about the periphery of the waistband;

Figure 5 is a fragmentary front elevational view of a further embodiment of the present invention showing a variation in the disposition of the waistband openings;

Figure 6 is a fragmentary side elevational view of the trousers shown in Figure 5;

Figure 7 is a fragmentary vertical sectional view of the waistband of Figure 5;

Figure 8 is a fragmentary front elevational view of still a further embodiment of the present novel invention showing a plurality of waistband openings on both sides of the waistband hem;

Figure 9 is a fragmentary side elevational view of the trousers shown in Figure 8; and

Figure 10 is a fragmentary vertical sectional view of the waistband of the trousers shown in Figure 8.

The present novel invention is primarily concerned with what are known as doctor's scrub suits, however, it will be readily appreciated from the following detailed description that the present novel invention is equally applicable to any type of trouser requiring an adjustable waistband.

It is the purpose of the present novel invention to obviate all the difficulties heretofore encountered with the free end type of draw string or cord, as heretofore described in detail.

These difficulties are obviated by mounting within a novel hem of the trouser a unique draw cord of endless construction, so that once the hem is securely stitched the draw cord is incapable of removal therefrom. As a result of this unique construction, the details of which will be more fully described hereinafter, the draw cord of the present invention can never be withdrawn from the waistband hem, nor can it ever become lodged within the hem and irretrievable.

Turning now to the drawings, and particularly to Figures 1 through 4, there will now be described a preferred embodiment of the present novel invention, wherein the numeral **20** generally designates a pair of white, washable, cotton type pants, commonly known as a doctor's scrub suit. As clearly seen in Figures 1 and 2 the lower edges of the pants **20** are formed without cuffs as indicated by the numeral **21**, while upper end of pants **20** is formed with a hem generally designated **22**. In the present novel invention the hem **22** is relatively wide and is formed by folding the upper end of the trouser **20** over on itself, as indicated at **24**, and then stitching the two layers of material together as by stitching **26**. In this manner there is formed between layers **28** and **30** of hem **22** a continuous open area or channel **32** about or encircling waistband of the trousers **20**. Prior to the stitching of layers **28** and **30** an endless cord **34** is mounted between these layers to encircle the waistband of the trousers in channel **32**. Once cord **34** is mounted within channel **32** and the layers **28** and **30** have been stitched together it is obvious that the cord **34**, by virtue of its endless construction, will be incapable of being removed from the waistband of the trousers and of course also incapable of being lost. As clearly seen in Figures 1 and 4, the hem **22** of pants **20** is formed with four

equally spaced openings at the uppermost end of the hem **22**, as designated by the numeral **36**, thereby exposing portions of endless cord **34** about the periphery of hem **22** for a purpose which will hereinafter appear. Openings **36** are of sufficient width to permit a pair of fingers of the doctor to be inserted therein to grasp the cord **34** and pull it therefrom as indicated by the extended loop generally designated by the numeral **38** in Figure 1. Once the doctor has donned the pants **20** he places his fingers into one of the openings **36** and withdraws the loop **38** therefrom. The choice of which opening **36** to draw the loop **38** from is one of strictly a personal preference. The withdrawn loop is then pulled to draw the cord **34** snugly about the body of the wearer and is then knotted with an ordinary overhand knot as generally designated by the numeral **40** in Figure 2, or other suitable knot.

The provisions of the four openings **36** is to permit the drawal of loop **38** from any one of them and to allow knotting of the cord **34** at any one of four locations; namely, either side, front, or back. This has been provided for since it is known that the preference of the doctor as to the location of the knotted cord varies considerably.

As clearly seen in Figure 4, the novel endless draw string or cord **34** completely encircles the waist of the pants **20** within the channel **32**, and by virtue of stitching **26** can never be withdrawn therefrom. Also by virtue of relatively wide openings **36** the cord **34** is always accessible, and can never become irretrievably lodged within the hem **22** of trousers **20**. As a result of the novel mounting of the unique endless draw cord **34**, the heretofore described difficulties encountered with the use of free end draw cords is completely, novelly, and inexpensively obviated, and the subject scrub suit of the present novel invention can be subjected to any type of institutional mass laundering or maltreatment without any fear of losing such draw strings. Consequently with the use of the novel scrub suit of the present invention the expense to the hospitals in replacing unusable scrub suits is materially lowered.

Turning now to Figures 5, 6, and 7 there is shown a further embodiment of the present novel invention. In this form of the invention the openings **36** are formed in the hem **22**, midway in the width thereof or between the marginal edges of hem **22**, as clearly seen in Figure 5. The purpose of this form of the invention being to provide a backing for the cord **34**, when it is drawn tightly about the waist of the wearer; namely, the panel or portion **30**, to prevent chafing of the wearer's body. In all respects the function of the form of the invention shown in Figures 5 through 7 is exactly similar to that shown in Figures 1 through 4, and heretofore described.

Turning now to Figures 8 through 10 there is shown still a further embodiment of the present novel invention. This embodiment of the present invention takes into account that the doctor's scrub suits are ordinarily reversible; that is, the scrub suit pants can be worn with either side out. Therefore, the draw string or cord should, necessarily, be easily accessible regardless of which side of the trousers are worn outwardly. And, this fact is uniquely taken care of by the form of Figures 8 through 10. As clearly seen in Figures 8 through 10 the outer panel or layer **28** of hem **22** is formed with four equally spaced openings **36** intermediate the sides or marginal edges of the hem. The inner panel **30** is also formed with four equally spaced openings located intermediate the marginal edges of hem **22**, and designated **36'**. As clearly seen in Figure 8, the openings **36** and **36'** are offset one above the other for a purpose which will hereinafter appear. Turning now to Figure 10, it will be seen by phantom lines **44** and **46** that the draw string or cord **34** can be withdrawn through openings **36** or withdrawn through openings **36'** depending upon which openings are on the outside of the wearer's

body, thereby facilitating the putting on and adjusting the garment in either of its reversible positions. The purpose of offsetting the draw string openings **36** and **36'** can be best explained with reference to Figure 10. Assuming the cord **34** is withdrawn through openings **36**, it will be seen that as the cord **34** is tightened about the wearer's waist that the cord will bear against that portion of inner panel or layer **30** generally designated by the numeral **48**. Should the trousers be reversed and the cord **34** withdrawn from the openings **36'**, the cord would then bear against that portion of panel or layer **28** generally designated **50**. In this manner, that is by offsetting openings **36** and **36'**, the cord **34** will never bear directly against the skin of the wearer to cause an uncomfortable chafing condition.

It will be readily appreciated from the foregoing description that there is herein provided a novel adjustable waistband particularly adaptable to doctor's scrub suits, as well as other forms of adjustable waistband trousers, wherein the draw string or cord can never become lodged within the waistband and irretrievable, or totally withdrawn from said waistband, either event which if it occurred would render the trousers virtually useless as heretofore particularly described. The present novel invention is easily and simply manufactured without any major variations in present manufacturing techniques, and obviates all heretofore experienced difficulties connected with free end cord draw strings. In addition, by virtue of the fact that this draw string herein disclosed and described can never become dislodged from the trousers the cost of replacing such trousers in the hospital inventories will be materially lessened, since such replacement will occur much more infrequently.

The invention may be embodied in other forms without departing from the spirit or essential characteristics thereof. The present embodiments are therefore to be considered in all respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claim rather than by the foregoing description, and all changes which come within the meaning and range of equivalency of the claim are therefore intended to be embraced therein.

What is claimed and desired to be secured by United States Letters Patent is:

A unitary trouser garment comprising: a unitary circular body portion having integral downwardly extending divided leg portions; the upper edge of said body portion being substantially folded upon itself forming a substantially wide double layer of material encircling the waistline of said garment; a single row of stitching substantially spaced from the upper edge of said body portion and adjacent the free end of said folded portion completely encircling said garment and fixedly securing said folded portion to the adjacent body portion to define a single substantially wide unobstructed permanent waistline encircling hem; an integral one-piece inseparable endless cord irremovably mounted wholly within said hem, and freely adjustably slidably movable therein; a plurality of access openings spaced along said hem exposing at least a portion of said cord to permit a loop portion of said cord to be selectively withdrawn therethrough and knotted on itself externally of said hem to effect tightening adjustment of the waistline of said garment; and said openings are spacedly disposed at the uppermost edge of said waistline encircling hem; said access openings being defined by substantially vertically spaced sides, in both layers extending downwardly from the upper edge of said body portion; and said sides being connected by lower horizontal edges in respective layers.

References Cited in the file of this patent

UNITED STATES PATENTS

2,349,019 Terrell ---------- May 16, 1944

FOREIGN PATENTS

126,142 Germany ---------- Dec. 6, 1901