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# United States Patent [19]

Hong

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[54] **GRIP OF BADMINTON RACKET**

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[51] **Int. Cl.**[6] ..... **A63B 49/08**

[52] **U.S. Cl.** ..... **473/521**; 473/538; 473/549

[58] **Field of Search** ..... 273/73 R, 73 J, 273/75

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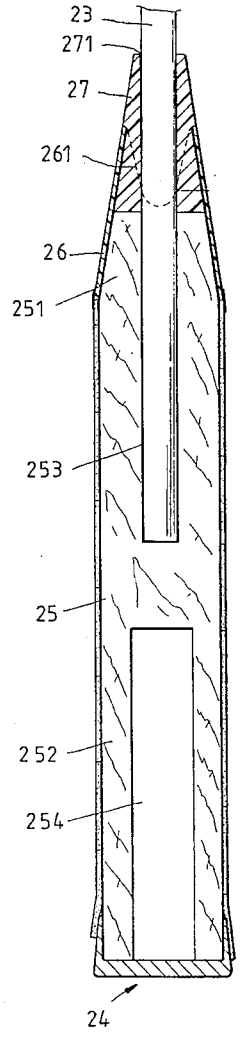
[57] **ABSTRACT**

A badminton racket comprises a head frame, a gut, a shaft and a grip. The grip comprises a main body and a grip portion having a length of 15.5 centimeters or more. The main body is provided in the interior thereof with a slot extending from the free end of the main body in the direction toward the shaft for reducing the weight of the main body so as to cause the center of gravity to move toward the junction between the shaft and the tapered end of the main body of the grip. The tapered end of the main body is provided with a front jacket which is fitted thereover and is provided with a V-shaped cut for forming a receiving space between the front jacket and the above tapered end of the main body. A shock-absorbing body is received in the receiving space such that the tapered end of the shock-absorbing body and the front jacket form together a tapered end of the grip.

**1 Claim, 2 Drawing Sheets**



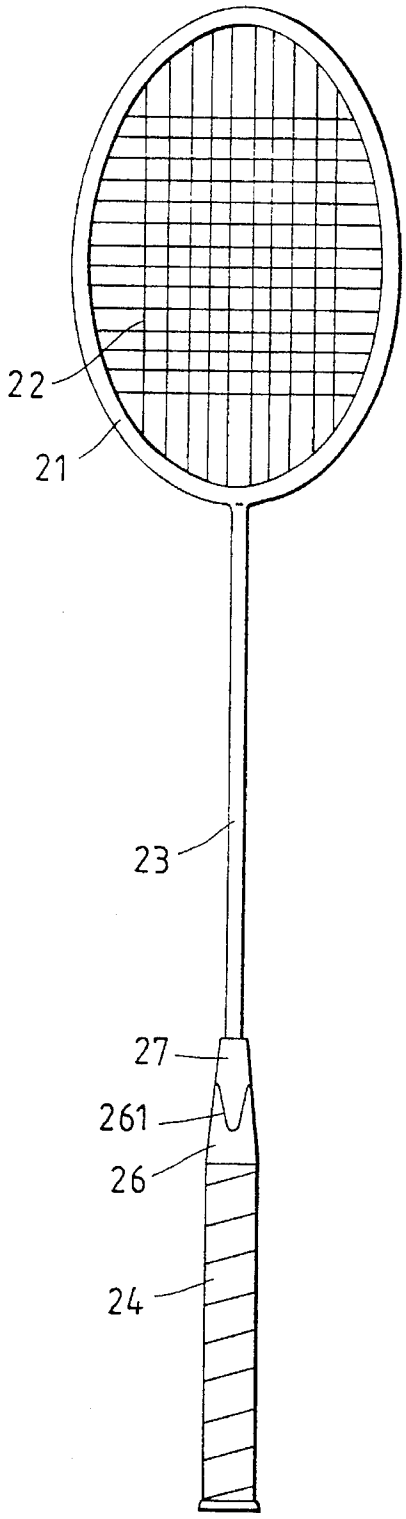



FIG. 2

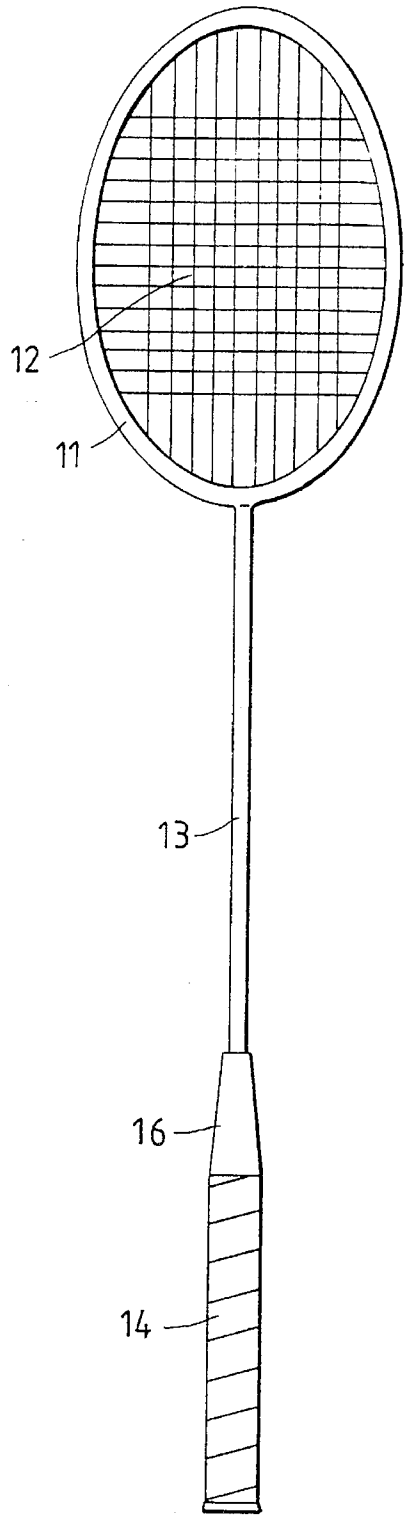



FIG. 1
PRIOR ART

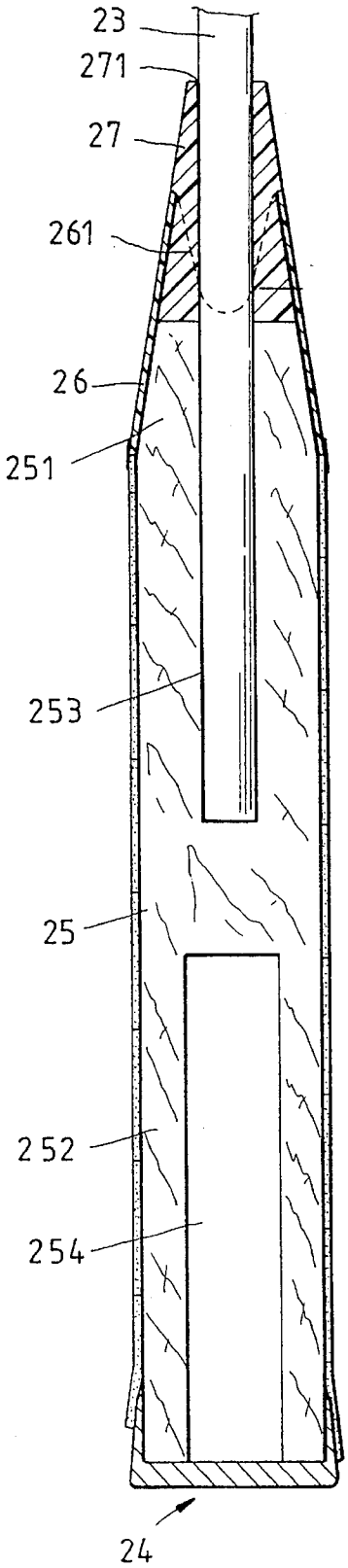



FIG. 4

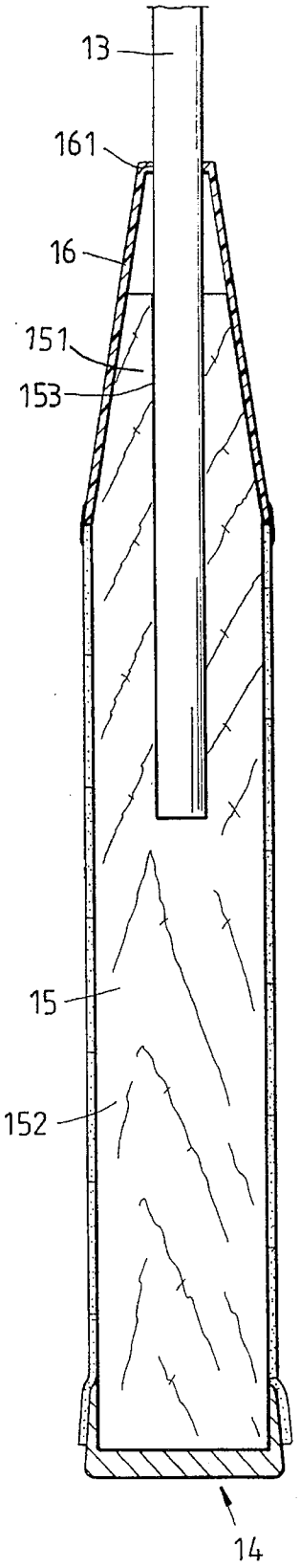



FIG. 3
PRIOR ART

# GRIP OF BADMINTON RACKET

## FIELD OF THE INVENTION

The present invention relates generally to a badminton racket, and more particularly to an improved grip of the badminton racket.

## BACKGROUND OF THE INVENTION

In an offensive move of the badminton game, the center of gravity is preferably located on the head frame of the badminton racket. On the other hand, it is desirable that the center of gravity is located on the grip of the badminton racket at the time when the player is engaged in a defensive move. The conventional badminton rackets fall short of these two expectations described above.

## SUMMARY OF THE INVENTION

The primary objective of the present invention is to provide a badminton racket with an improved hand grip enabling the player to engage in an offensive move and a defensive move vigorously and effectively.

The objective of the present invention is attained by an improved hand grip of badminton racket. The length of the hand grip is increased such that the overall length of the badminton racket is not increased, and that the length of the flexible portion of the grip is increased, and further that the center of gravity of the grip is relocated toward the head frame of the racket. As a player is engaged in an offensive move, he or she may hold the free end portion of the grip so as to cause the center of gravity to move toward the head frame. On the other hand, when the player is engaged in a defensive move, he or she may hold the portion contiguous to the front jacket located near the junction between the shaft and the grip.

## BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** shows a plan view of a badminton racket of the prior art.

FIG. **2** shows a plan view of a badminton racket of the present invention.

FIG. **3** shows a sectional view of a grip of the prior art badminton racket.

FIG. **4** shows a sectional view of a grip of the badminton racket of the present invention.

## DETAILED DESCRIPTION OF THE INVENTION

Before describing the features of the present invention, it is desirable that the prior art badminton racket is reviewed briefly. As shown in FIG. **1**, the prior art badminton racket **10** has an overall length of 66 centimeters (26 inches) and comprises a head frame **11**, a gut **12**, a shaft **13** extending from the head frame **11**, and a grip **14** having a tapered end which is fastened with the free end of the shaft **13**.

Now referring to FIG. **3** showing a sectional view of the prior art grip **14** which has an overall length of 20 centimeters. The grip **14** comprises a main body **15** having a tapered end portion **151** and a grip **152** having a length of 14.5 centimeters. The tapered end portion **151** has a length of 3.5 centimeters. The main body **15** further has a shaft hole **153** extending from the tapered end portion **151** along the center line of the main body **15** into a predetermined depth of the grip **152** for receiving the shaft **13**. A front jacket **16** of a rigid plastic material is fitted over the tapered end portion **151** of the main body **15**. The front jacket **16** has an overall length of 5.5 centimeters and a through hole **161** for receiving therein the shaft **13**.



The flexibility length of the prior art shaft **13** begins at the tapered end of the front jacket **16**. The fixed point of the shaft **13** is located at a point which is 20 centimeters away from the free end of the grip **14**.

As shown in FIG. **2**, a badminton racket **20** of the present invention has an overall length of 66 centimeters and comprises a head frame **21**, a gut **22**, a shaft **23**, and a grip **24**. The head frame **21**, the gut **22** and the shaft **23** are similar in construction to those of the prior art badminton racket described above.

As shown in FIG. **4**, the grip **24** of the badminton racket **20** of the present invention has an overall length of 21 centimeters, with the overall length of the badminton racket **20** remaining the same as that of the badminton racket **10** of the prior art. In addition, the flexibility length of the shaft **23** of the present invention is not shortened.

The grip **24** of the present invention comprises a main body **25** and a front jacket **26**. The main body **25** has a tapered end portion **251**, a grip portion **252** and a shaft hole **253**. The front jacket **26** of a rigid plastic material is fitted over the tapered end portion **251** of the main body **25**. The grip portion **252** of the main body **25** has an overall length of 15.5 centimeters or more and a slot **254** for reducing the weight of the grip portion **252** and causing the center of gravity to move toward the tapered end portion **251** which is shortened to an extent that it can be fitted over with one end portion of the front jacket **26**. The front jacket **26** is provided with a V-shaped cut **261** corresponding in location to the longitudinal center line of the gut **22** such that a receiving space is formed between the front jacket **26** and above the end portion **251** of the main body **25**. An elastic shock-absorbing body **27** of a tapered construction is received in the receiving space such that the tapered end of the shock-absorbing body **27** is extended beyond the top end of the front jacket **26**, and that the tapered end of the shock-absorbing body **27** and the front jacket **26** form together the tapered end of the grip **24**. The shock-absorbing body **27** is provided with an axial hole **271** for receiving therein the shaft **23**.

The overall length of the hand grip **24**, including the shock-absorbing body **27**, is 21 centimeters. The grip portion **252** has a length of 15.5 centimeters. The flexibility length of 3 centimeters is measured from the tapered end of the shock-absorbing body **27** to the bottom end of the cut **261** of the front jacket **26**. That is to say that the flexibility length of the shaft **23** is measured from the bottom end of the cut **261** of the front jacket **26**. The fixed point of the shaft **23** is therefore located at a point which is 18 centimeters away from the free end of the hand grip **24**.

By comparing FIGS. **3** and **4**, it is readily apparent that the length of the grip portion **252** of the hand grip **24** of the present invention is increased, and that the fixed point of the shaft **23** is lowered so as to result in an increase in the flexibility length of the shaft **23**.

The overall weight of the hand grip **24** of the present invention is reduced, thanks to the slot **254** of the main body **25**. In the meantime, the center of gravity is moved toward the head frame **21**, thanks to the weight of the shock-absorbing body **27**. For this reason, a player will have a better serving or an offensive move by holding the free end of the hand grip **24** in view of the fact that the center of gravity is caused to move toward the head frame **21**, and that

a greater moment of inertia is made available, and further that the flexibility length of the shaft **23** is increased. On the other hand, when the player is engaged in a defensive move, he or she should hold the portion contiguous to the front jacket **26** so that the center of gravity is located near the portion held by the hand of the player.

What is claimed is:

**1**. A badminton racket comprising:

a head frame;

a gut located in said head frame;

a shaft of an elongated construction and extending from said head frame in a direction away from said head frame; and

a handle of a rodlike construction and having a tapered end fastened with a free end of said shaft, said handle comprising a main body with a grip portion, said main body provided with a tapered end which is fitted over with a front jacket, said main body further provided with an axial hole extending from said tapered end into said grip portion for receiving securely said shaft;

wherein said grip portion of said main body has a length of 15.5 centimeters or more; wherein said main body is provided in an interior thereof with a slot of a predetermined length and extending from a free end of said main body in a direction toward said tapered end of said main body; and wherein said front jacket is provided with a V-shaped cut corresponding in location to a longitudinal center line of said gut to form a receiving space between said front jacket and over said tapered end of said main body, said receiving space intended for accommodating a shock-absorbing body such that a tapered end of a shock-absorbing body and said front jacket form together a tapered end of said handle.

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