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Hammer Throwing

During the past 20 years, our country's hammer throwers have performed extremely well in international competitions. They have had the combination of necessary physical assets and special technical skills.

As the number of successes in the sport has increased, there have been significant changes in training methodology and technique of the top hammer throwers.

Let's look at the sequence, included with this article, of Yuri Sedykh, the champion at the 21st Olympic Games and the USSR record holder. We can follow the key modifications in hammer throwing technique that have occurred during recent years. The sequence is of Yuri's 75.64 m throw at the 1976 Montreal Olympics.

First, let's look at the length of time of the double-support phases in each rotation and Yuri's movements in the single-support phases. Take special note of the moment as he places his right foot down on the circle.

It's not necessary for us to consider all the details and elements of Yuri's technique in the sequence mentioned in this article. Yuri's technique is the same as what was used by throwers in the past.

An exceptional characteristic is the overall position throughout the entire throw. Yuri's arms are perfectly straight during every rotation and his balance is excellent in each phase.

Let's start with the double-support phases. Pic 4 is the 1st turn, pic 12, the 2nd and pic 20 the 3rd. It's evident that Yuri stays in his double-support position long enough to square up his shoulders and hips axes.

In every rotation, Yuri turns left to 90. This is something that has not been the case for other throwers. It's true that R. Klen and A. Bondarchuk turned to 90, but only during the first rotation. Others lifted their right foot earlier which resulted in a sort of dragging the hammer behind them, like in the discus throw. This hinders the rotational speed of the thrower's body and obviously negatively affects the results. It's possible to drag a discus behind your body, but not a hammer. This is because the centrifugal force on the thrower can get extremely high, significantly higher than the bodyweight of the thrower.

Another aspect of Yuri's hammer technique, which is seen in the new generation of throwers, is the perceptible use of the hammer ball's force of inertia. Inertia is generated during the execution of the double-support phases and continues during the single-support phases.

The major link in [the chain] of the hammer-and-thrower system is not the body of thrower, but instead, the hammer ball. Pics 6, 7, 14, 15, 24 and 25, the thrower goes with the hammer ball until the ball passes the highest point in the rotational plane. Yuri does this without actively moving his lower body, his hips, and legs. After the ball passes its highest point, the thrower starts to actively turn himself around his point of support, the front of his left foot, by using his right foot. He tries to move the ball as soon as possible after his right foot touches the circle. See how Yuri pulls away from the hammer ball, not by actively

twisting his hips and legs, as was taught in the past, but with his whole body, except for his arms. The differences between the axes of the shoulders, hips and legs should be decreased in the front.

This moment is the key and most important element of modern hammer throwing technique. Something similar, but not quite as successful was done by the author of this article.

By performing the final part of the single-support phases in this way, makes it possible to shorten the length of time of them and with this, increase the active movement of the ball by increasing the length of time of the double-support phases.

The most active part of thrower's body in this phase is the right leg and not the hips as was thought in the past. This can be explained by the fact that to get ahead of the ball as it travels during the final part of the single-support phases, the thrower's body needs to increase its rotational speed at a rate a little more than the movement of the advancing ball. It's practically impossible to do this by turning the hips, because the hips are loaded, particularly on the left side.

This means that an early catching of the ball happens because of the active movement of the right foot. The earlier the right foot touches down on the circle, the more the thrower can actively move the ball at the start of each double-support phase of each turn.

Increasing the length of time of the double-support phases of every turn enables the thrower to rotate the hammer-and-thrower system perfectly around a vertical axis of rotation. This gives the system of the hammer-and-thrower balance during the single-support phases.

Remember this, the effective use of these changes to hammer throwing technique can be attained only by a group of throwers who have developed an adequately high level of ability to move quickly. This is because this throwing technique, with a deliberate increase in the length of time of the double-support phase with squaring up of the axes of the shoulders and hips at the neutral position and then turning to the left to 90, requires lightning speed when picking up and setting down the right foot.

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One thing to point out: when the right foot touches down on the circle in the first and second turns, pics 9 and 16, Yuri commits a serious mistake by landing on his heel and not the toes and ball of the foot. Eliminating this mistake will be an additional plus in the continuing advancement of Yuri's athletic results.

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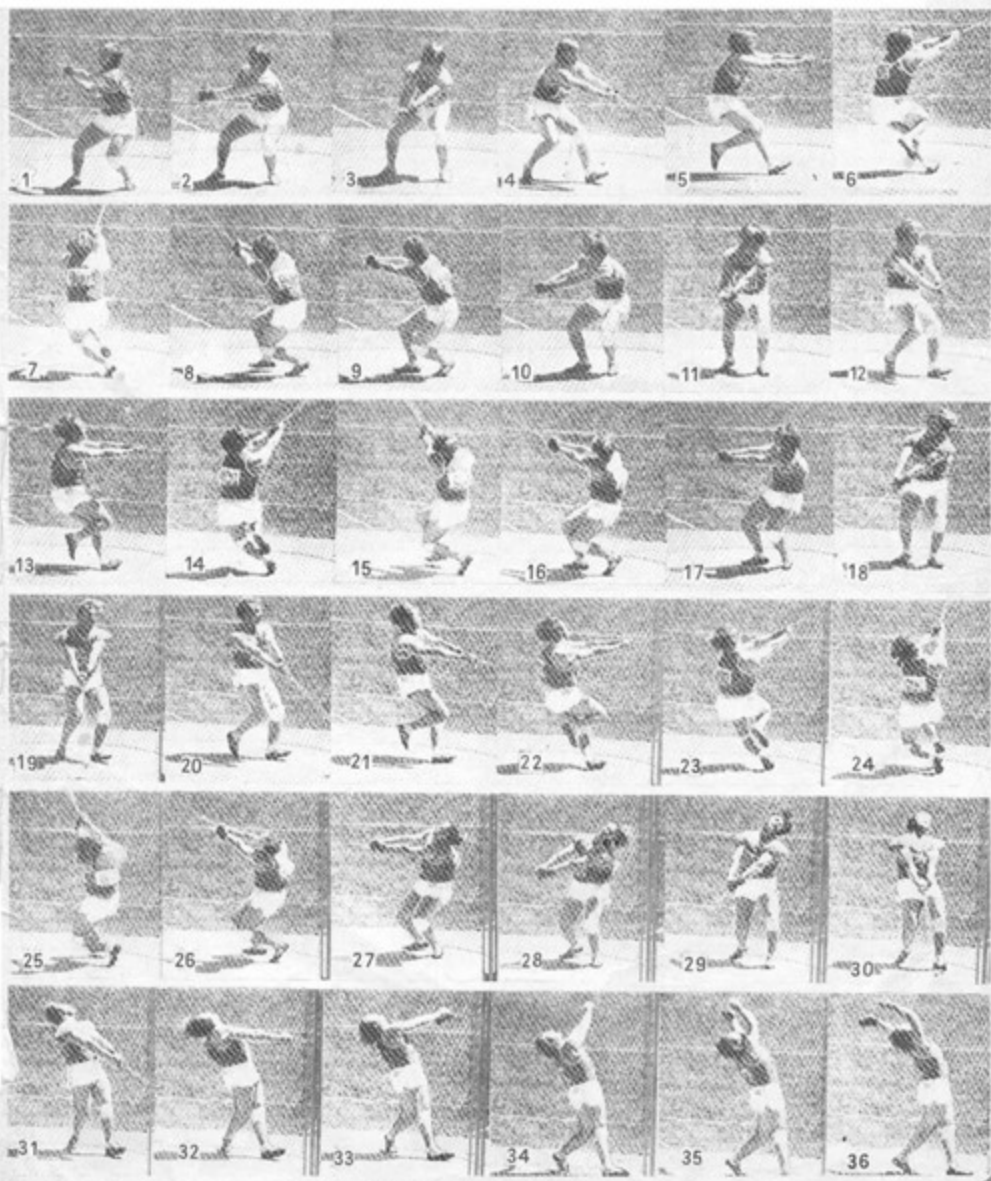
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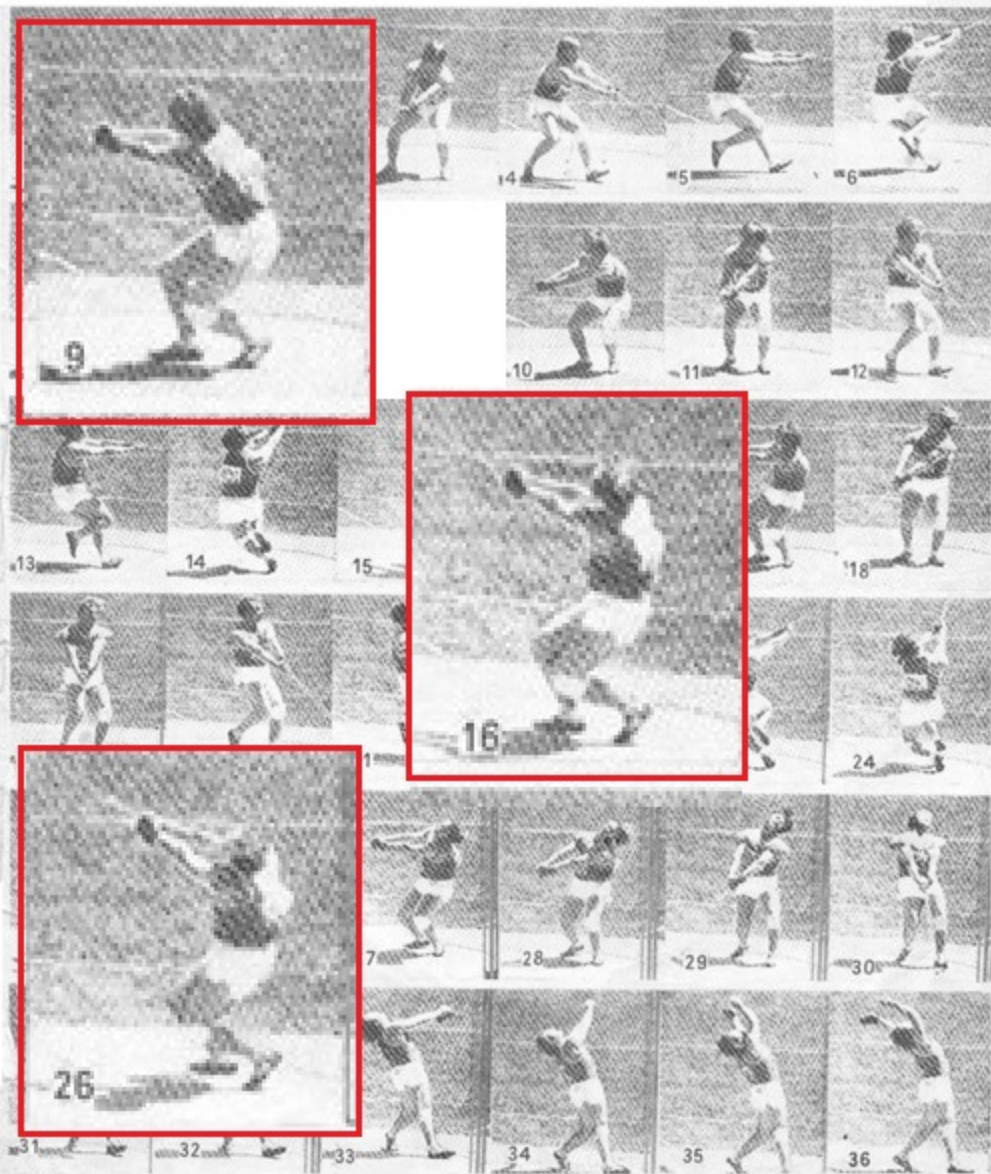
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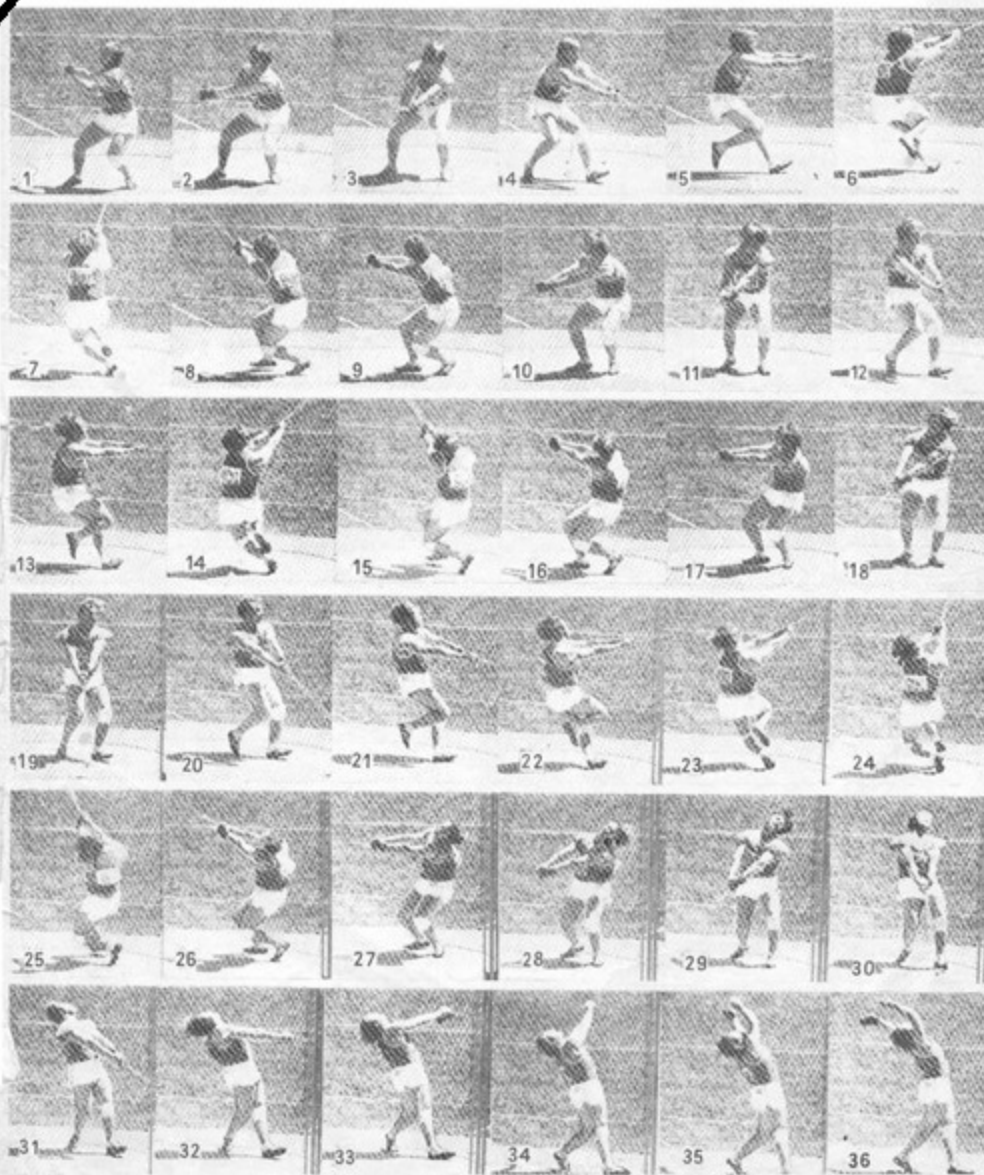
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Let's start with the double-support phases. Pic 4 is the 1st turn, pic 12, the 2nd and pic 20 the 3rd. It's evident that Yuri stays in his double-support position long enough to square up his shoulders and hips axes.

In every rotation, Yuri turns left to 30°. This is something that has not been the case for other throwers. It's true that R. Klen and A. Bondarchuk turned to 90°, but only during the first rotation. Others lifted their right foot earlier which resulted in a sort of dragging the hammer behind them, like in the discus throw. This hinders the rotational speed of the thrower's body and obviously negatively affects the results. It's possible to drag a discus behind your body, but not a hammer. This is because the centrifugal force on the thrower can get extremely high, significantly higher than the bodyweight of the thrower.

Another aspect of Yuri's hammer technique, which is seen in the new generation of throwers, is the perceptible use of the hammer ball's force of inertia. Inertia is generated during the execution of the double-support phases and continues during the single-support phases. The major link in [the chain] of the hammer-and-thrower system is not the body of thrower, but instead, the hammer ball. Pics 6, 7, 14, 15, 24 and 25, the thrower goes with the hammer ball until the ball passes the highest point in the rotational plane. Yuri does this without actively moving his lower body, his hips, and legs. After the ball passes its highest point, the thrower starts to actively turn himself around his point of support, the front of his left foot, by using his right foot. He tries to move the ball as soon as possible after his right foot touches the circle. See how Yuri pulls away from the hammer ball, not by actively

twisting his hips and legs, as was taught in the past, but with his whole body, except for his arms. The differences between the axes of the shoulders, hips and legs should be decreased in the front.

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By performing the final part of the single-support phases in this way, makes it possible to shorten the length of time of them as well with this, increase the active movement of the ball by increasing the length of time of the double-support phases.

The most active part of the thrower's body in this phase is the right foot and not the hips as was thought in the past. This can be explained by the fact that to go ahead of the ball as it travels during the final part of the single-support phases, the thrower's body needs to increase its rotational speed at a rate a little more than the movement of the advancing ball. It's practically impossible to do this by turning the hips, because the legs are loaded, particularly on the left side.

This means that an early catching of the ball happens because of the active movement of the right foot. The earlier the right foot touches down on the circle, the more the thrower can actively move the ball at the start of each double-support phase of each turn.

Increasing the length of time of the double-support phases of every turn enables the thrower to rotate the hammer-and-thrower system perfectly around a vertical axis of rotation. This gives the system of the hammer-and-thrower balance during the single-support phases.

Remember this, the effective use of these changes to hammer throwing technique can be attained only by a group of throwers who have developed an adequately high level of ability to move quickly. This is because this throwing technique, with a deliberate increase in the length of time of the double-support phase with squaring up of the axes of the shoulders and hips at the neutral position and then turning to the left to 90°, requires lightning speed when picking up and setting down the right foot.

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One thing to point out: when the right foot touches down on the circle in the first and second turns, pics 9 and 36, Yuri commits a serious mistake by landing on his heel and not the toes and ball of the foot. Eliminating this mistake will be an additional plus in the continuing advancement of Yuri's athletic results.

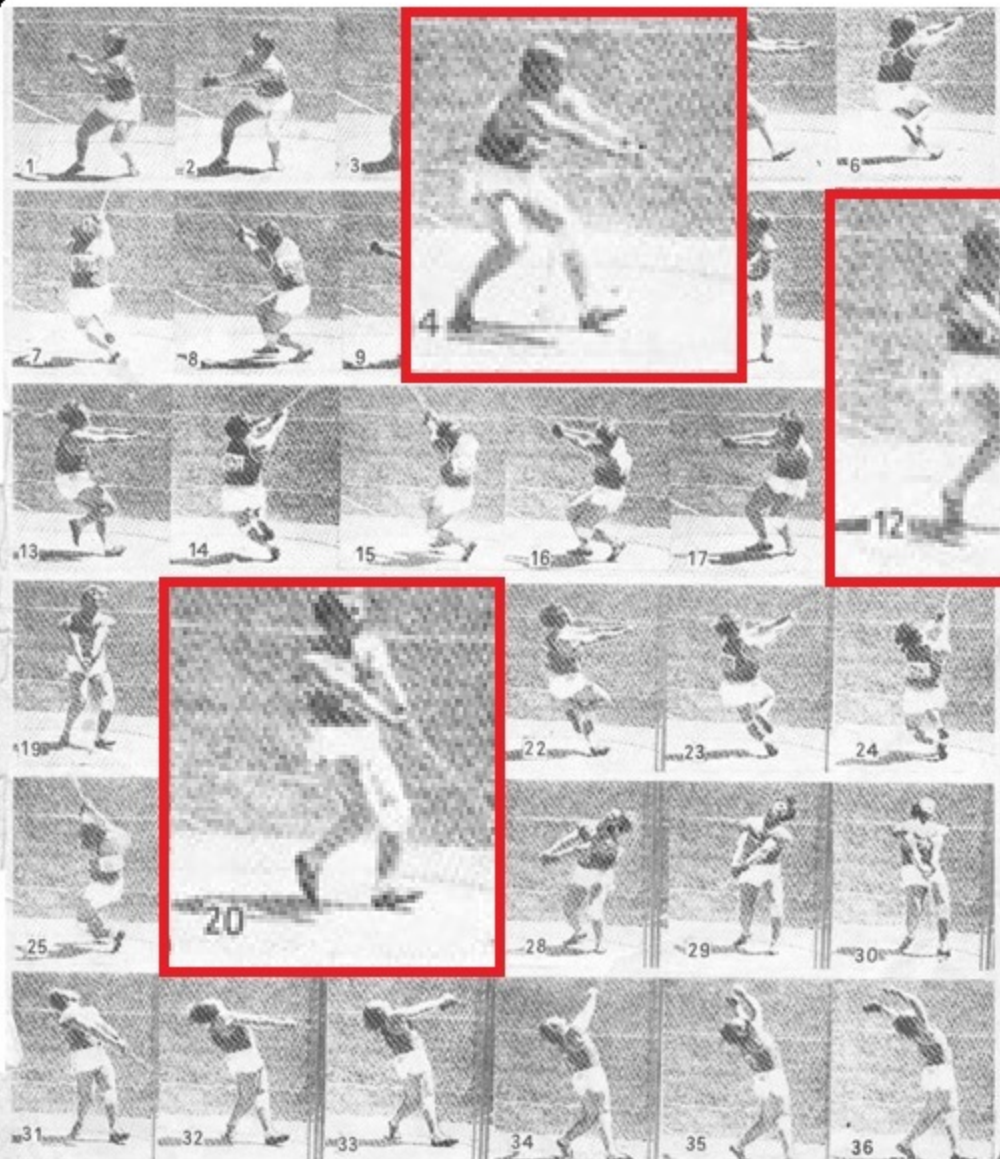
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Legkaya
Atletika
January

77

Yuri
Sedikh
throws

Hammer

By
Anatoliy
Bondarchuk

A. Bondarchuk
Distinguished Master of Sports
Distinguished Coach of the USSR
PhD in Pedagogy

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Орден «Знак Почета» Министерство «Физкультура и спорт»

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НАША ОБЛОЖКА:

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In every rotation, Youri turns left to 90. This is something that has not been the case for other throwers. It's true that R. Klim and A. Bondarchuk turned to 90, but only during the first rotation.

Other throwers' right foot action would result in a sort of dragging the hammer behind them, like in the discus throw. This hinders the rotational speed of the thrower's body and obviously negatively affects the results. It's possible to drag a discus behind your body, but not a hammer. This is because the centrifugal force on the thrower can get extremely high, significantly higher than the bodyweight of the thrower.

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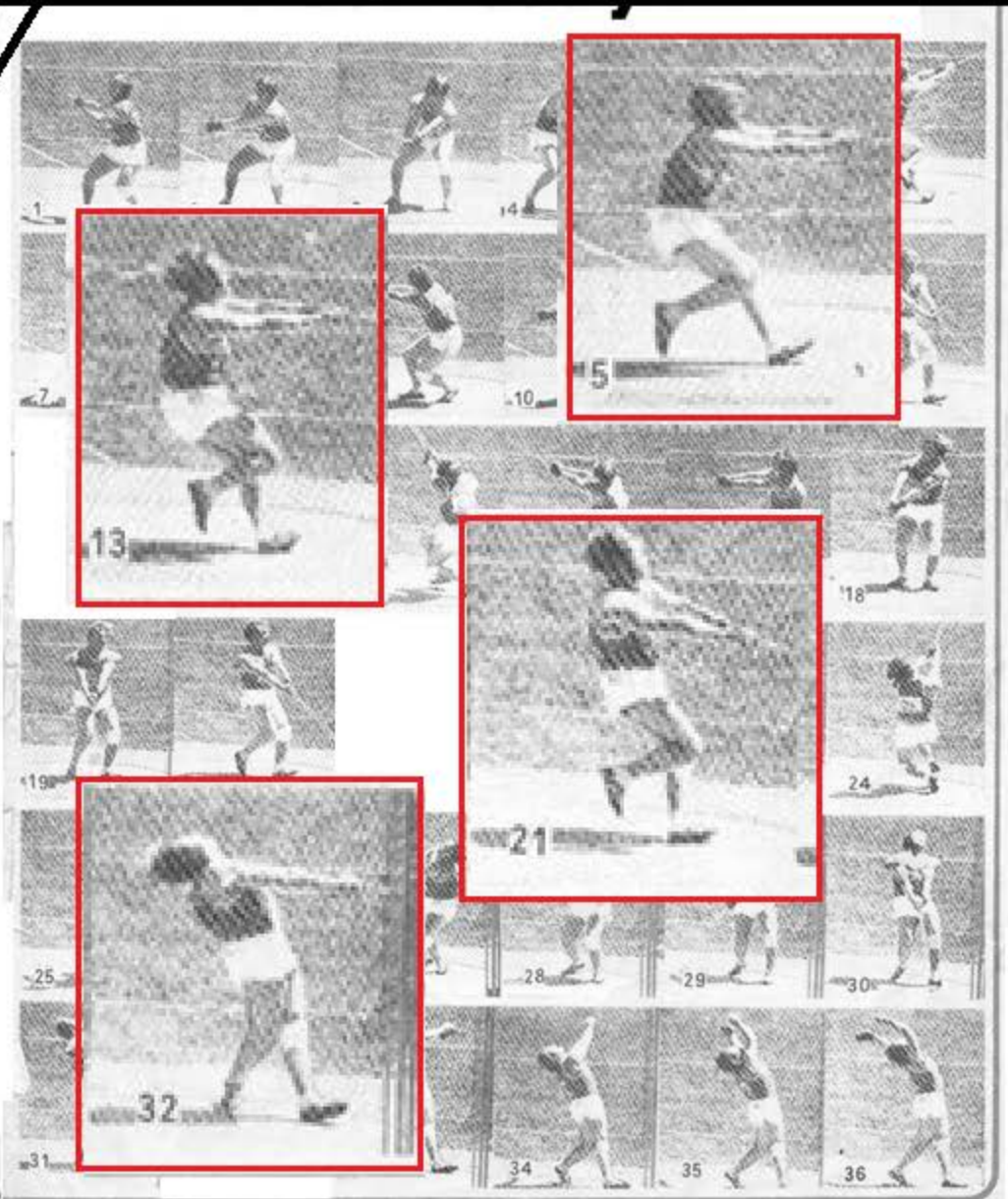
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A. Bondarchuk
 Distinguished Master of Sports
 Distinguished Coach of the USSR
 PhD in Pedagogy



Legkaya
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 January
 1977

Youri
 Sedykh
 Throws
 the
 Hammer

By
 Anatoliy
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Another aspect of Yuri's hammer technique, which is new in the new generation of throwers, is the perceptible use of the hammer ball's force of inertia. Inertia is generated during the execution of the double-support phases and continues during the single-support phases.

The major link is [the chain] of the hammer-and-thrower system is not the body of thrower, but instead, the hammer ball. Pics 6, 7, 14, 15, 24 and 25, the thrower goes with the hammer ball until the ball passes the highest point in the rotational plane. Yuri does this without actively moving his lower body, his hips, and legs. After the ball passes its highest point, the thrower starts to actively turn himself around his point of support, the front of his left foot, by using his right foot. He tries to move the ball as soon as possible after his right foot touches the circle. See how Yuri pulls away from the hammer ball, not by actively

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By performing the final part of the double-support phases in this way, makes it possible to shorten the length of time of them and without, increase the active movement of the ball by increasing the length of time of the double-support phases.

The most active part of thrower's body in this phase is the right leg and the hips as was thought in the past. This can be explained by the fact that to get ahead of the ball as it travels during the final part of the single-support phases, the thrower's body needs to increase its rotational speed at a rate a little more than the movement of the revolving ball. It's practically impossible to do this by turning the hips, because the hips are loaded particularly on the left side. This means that an early catching of the ball happens because of the active movement of the right foot.

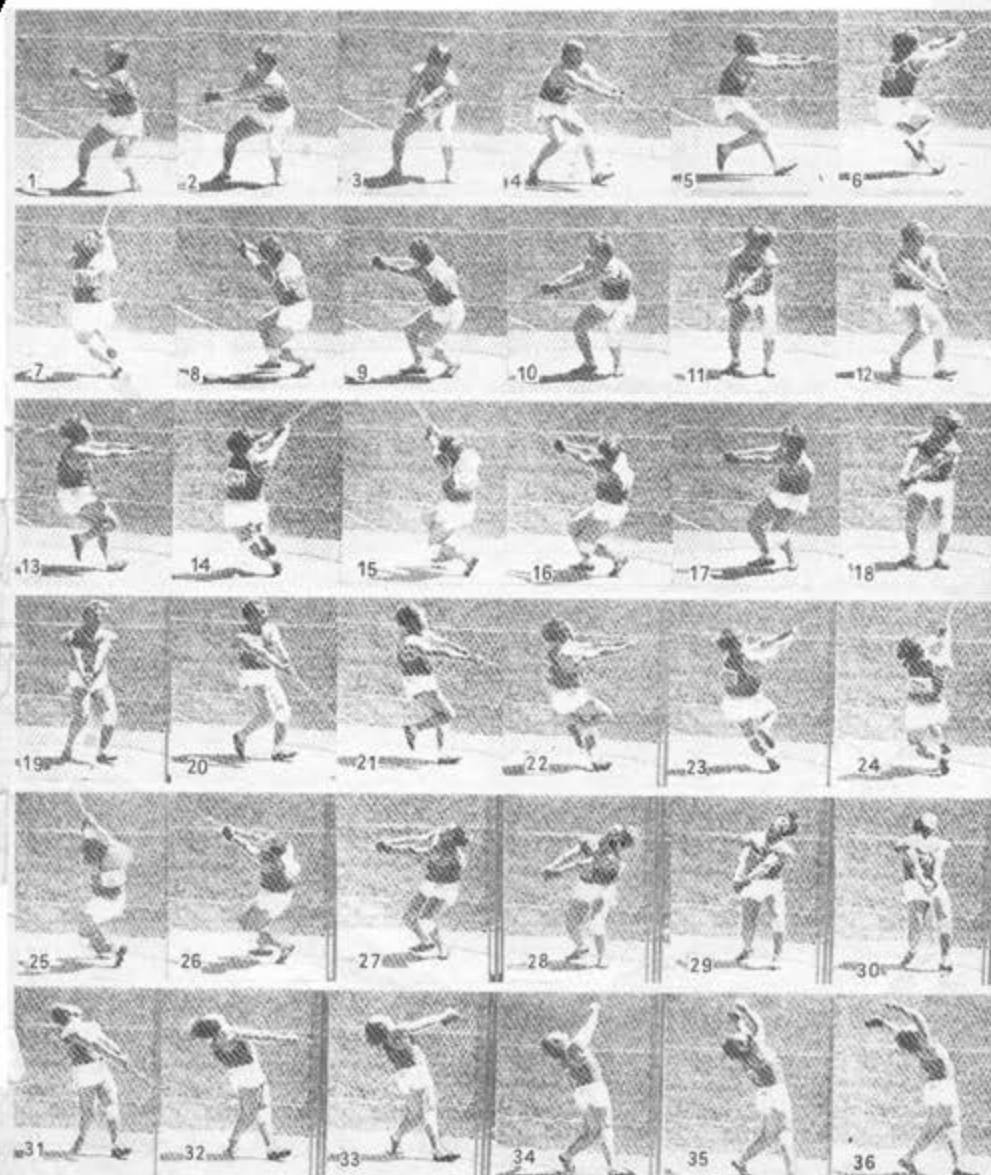
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One thing to point out: when the right foot touches down on the circle in the first and second turns, pics 9 and 16, Youri commits a serious mistake by landing on his heel and not the toes and ball of the foot. Eliminating this mistake will be an additional plus in the continuing advancement of Youri's athletic results.

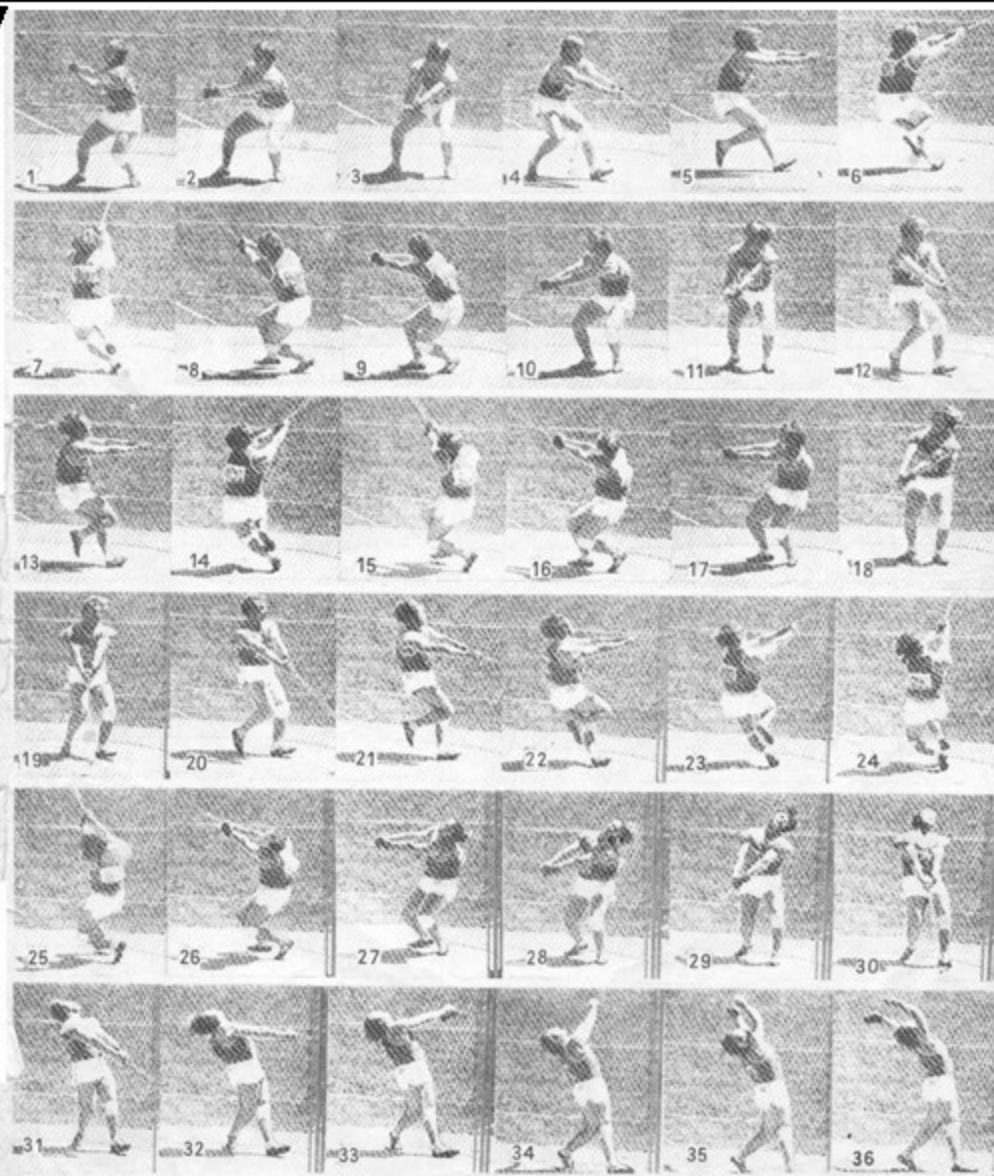
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Distinguished Master of Sports
Distinguished Coach of the USSR
PhD in Pedagogy

Legkaya
Atletika
January
1977

Youri
Sedykh
Throws
the
Hammer

By
Anatoliy
Bondarchuk

The major link in [the chain] of the hammer-and-thrower system is not the body of thrower, but instead, the hammer ball. Pics 6, 7, 14, 15, 24 and 25, the thrower goes with the hammer ball until the ball passes the highest point in the rotational plane. Youri does this without actively moving his lower body,

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As the number of successes in the sport has increased, there have been significant changes in training methodology and technique of the top hammer throwers.

Let's look at the sequence, included with this article, of Yuri Sedikh, the champion at the 21st Olympic Games and the USSR record holder. We can follow the key modifications in hammer throwing technique that have occurred during recent years. The sequence is of Yuri's 75.64 m throw at the 1976 Montreal Olympics.

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Another aspect of Yuri's hammer technique, which is seen in the new generation of throwers, is the perceptible use of the hammer ball's force of inertia. Inertia is generated during the execution of the double-support phases and continues during the single-support phases.

The major link in [the chain] of the hammer-and-thrower system is not the body of thrower, but instead, the hammer ball. Pics 6, 7, 14, 15, 24 and 25, the thrower goes with the hammer ball until the ball passes the highest point in the rotational plane. Yuri does this without actively moving his lower body, his hips, and legs. After the ball passes the highest point, the thrower starts to actively turn himself around his point of support, the front of his left foot, by using his right foot. He tries to move the ball as soon as possible after his right foot touches the circle. See how Yuri pulls away from the hammer ball, not by actively

twisting his hips and legs, as was taught in the past, but with his whole body, except for his arms. The differences between the axes of the shoulders, hips and legs should be decreased to the front.

This moment is the key and most important element of modern hammer throwing technique. Something similar, but not quite as successful, was done by the author of this article.

By performing the final part of the single-support phases in this way, makes it possible to shorten the length of time of them and with this increase the active movement of the ball by increasing the length of time of the double-support phases.

The most active part of thrower's body in this phase is the right leg and not the hips as was thought in the past. This can be explained by the fact that to get ahead of the ball as it travels during the final part of the single-support phases, the thrower's body needs to increase its rotational speed at a rate a little more than the movement of the advancing ball. It's practically impossible to do this by twisting the hips, because the hips are loaded, particularly on the left side.

This means that an early catching of the ball happens because of the active movement of right foot. The earlier the right foot touches down on the circle, the more the thrower actively moves the ball at the start of each double-support phase of each turn.

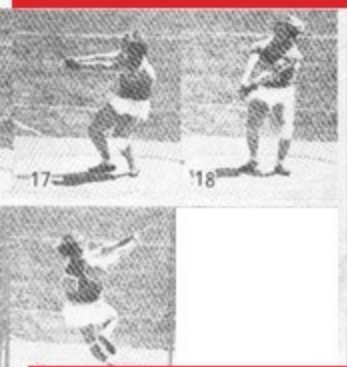
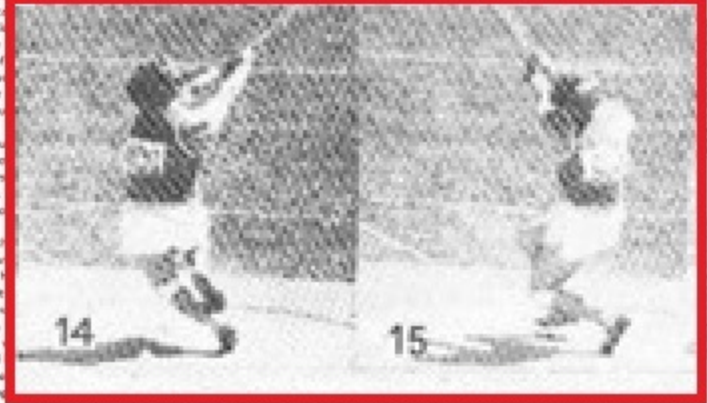
Increasing the length of time of the double-support phases of every turn enables the thrower to rotate the hammer-and-thrower system perfectly around a vertical axis of rotation, gives the system of the hammer-and-thrower balance during the single-support phases.

Remember this, the effective use of technique in hammer throwing technique can be attained only by a group of throwers who have developed an adequately high level of athletic movement ability. This is because this technique, with a deliberate increase in length of time of the double-support phase, stepping up of the axes of the shoulders and arms in a neutral position and then turning to the left, requires lightning speed when picking up the right foot.

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Sedykh
Throws
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Hammer

By

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Международный спортивно-методический журнал

Организатор Комитета по физической культуре и спорту при Совете Министров СССР

Ордена «Знак Почета» издательство «Физкультура и спорт»

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He tries to move the ball as soon as possible after his right foot touches the circle.

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Hammer Throwing

During the past 20 years, our country's hammer throwers have performed extremely well in international competitions. They have had the combination of necessary physical assets and special technical skills.

As the number of successes in the sport has increased, there have been significant changes in training methodology and technique of the top hammer throwers.

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It's not necessary for us to consider all the details and elements of Yuri's technique in the sequence. The reason is, except for the elements mentioned in this article, Yuri's technique is the same as what was used by throwers in the past. An exceptional characteristic is the overall position throughout the entire throw. Yuri's arms are perfectly straight during every rotation and his balance is excellent in each phase.

Let's start with the double-support phases. Pic 4 is the 1st turn, pic 12, the 2nd and pic 20 the 3rd. It's evident that Yuri stays in his double-support position long enough to square up his shoulders and hips axis.

In every rotation, Yuri turns left to 90. This is something that has not been the case for other throwers. It's true that R. Kim and A. Bondarchuk turned to 90, but only during the first rotation. Others lifted their right foot earlier which resulted in a sort of dragging the hammer behind them, like in the discus throw. This hinders the rotational speed of the thrower's body and obviously negatively affects the results. It's possible to drag a discus behind your body, but not a hammer. This is because the centrifugal force on the thrower can get extremely high, significantly higher than the bodyweight of the thrower.

Another aspect of Yuri's hammer technique, which is seen in the new generation of throwers, is the perceptible use of the hammer ball's force of inertia. Inertia is generated during the execution of the double-support phases and continues during the single-support phases. The major link in [the chain] of the hammer-and-thrower system is not the body of thrower, but instead, the hammer ball. Pics 6, 7, 14, 15, 24 and 25, the thrower goes with the hammer ball until the ball passes the highest point in the rotational plane. Yuri does this without actively moving his lower body, his hips, and legs. After the ball passes its highest point, the thrower starts to

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The most active part of thrower's motion in this phase is the right leg and not the hip, as was thought in the past. This can be explained by the fact that to get ahead of the ball, the right leg travels during the final part of the single-support phases, the thrower's body needs to increase its rotational speed at a rate a little more than the movement of the advancing ball. It's practically impossible to do this by turning the hips, because the hips are loaded, particularly on the left side. This means that an early casting of the ball happens because of the active movement of the right foot. The earlier the right foot touches down on the circle, the more the thrower can actively move the ball at the start of each double-support phase of each turn.

Increasing the length of time of the double-support phases of every turn enables the thrower to rotate the hammer-and-thrower system perfectly around a vertical axis of rotation. This gives the system the hammer-and-thrower balance during the single-support phases. Remember this, the effective use of these changes to hammer throwing technique can be attained only by a group of throwers who have developed an adequately high level of ability to move quickly. This is because this throwing technique, via a deliberate increase in the length of time of the double-support phase with squaring up the axes of the shoulders and hips at the neutral position and then turning to the left to 90, requires lightning speed when picking up and setting down the right foot.

In the opposite situation, the ball might outpace the thrower and the results will be much worse than those previously attained by throwers during the execution of double-support phases, early picking up of the right foot from the circle. One thing to point out: when the right foot touches down on the circle in the first and second turns, pics 9 and 16, Yuri commits a serious mistake by landing on his heel and not the toes and ball of the foot. Eliminating this mistake will be an additional plus in the continuing advancement of Yuri's athletic results.

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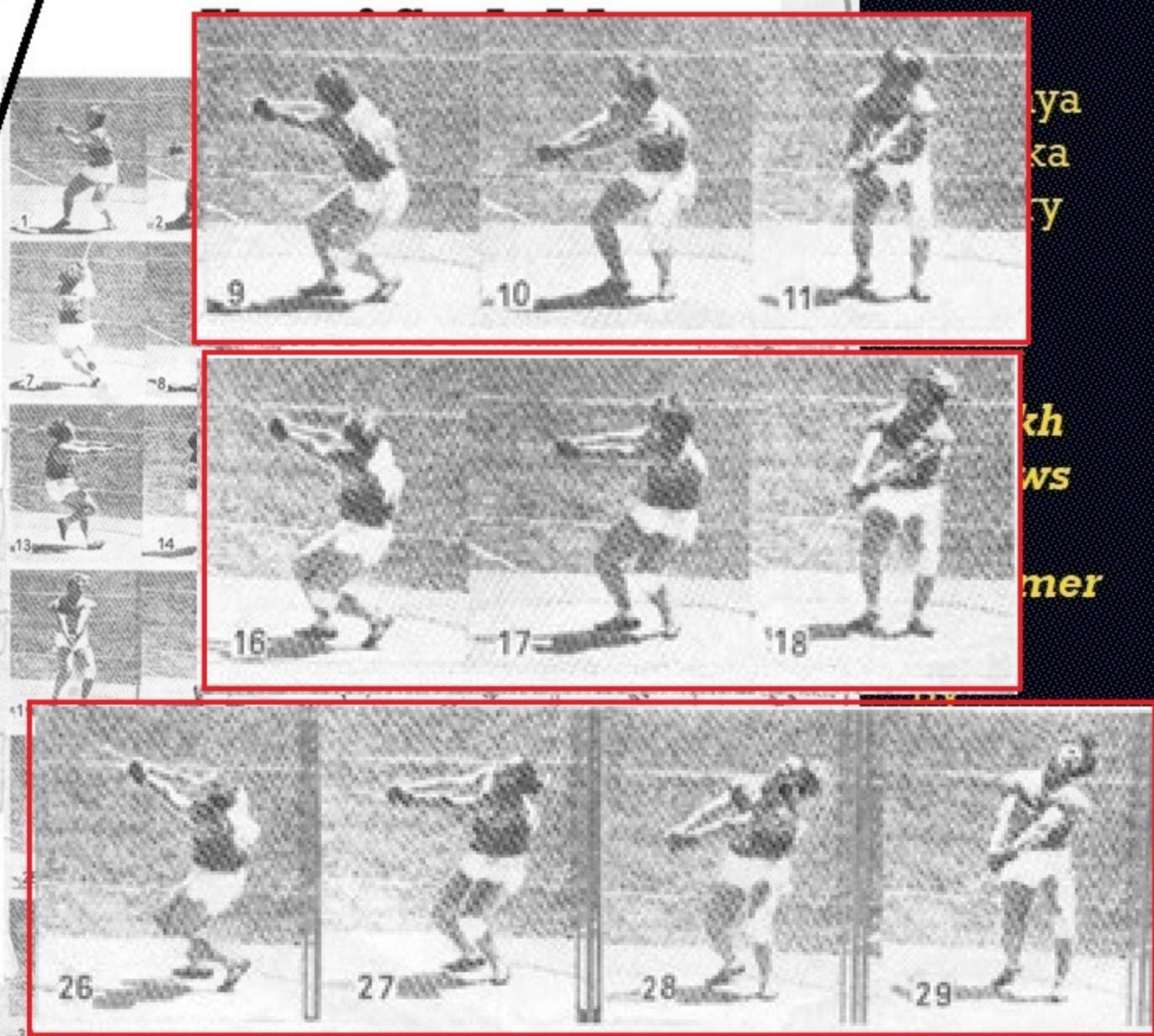
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See how Yuri pulls away from the hammer ball, not by actively twisting his hips and legs, as was taught in the past, but with his whole body, except for his arms.

СПОРТИКА

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It's not necessary for us to consider all the details and elements of Yuri's technique in the sequence. The reason is, except for the elements mentioned in this article, Yuri's technique is the same as what was used by throwers in the past. An exceptional characteristic is the overall position throughout the entire throw. Yuri's arms are perfectly straight during every rotation and his balance is excellent in each phase.

Let's start with the double-support phases. Pic 4 is the 1st turn, pic 12, the 2nd and pic 20 the 3rd. It's evident that Yuri stays in his double-support position long enough to square up his shoulders and hips axis.

In every rotation, Yuri turns left to 90. This is something that has not been the case for other throwers. It's true that R. Klein and A. Bondarchuk turned to 90, but only during the first rotation. Others lifted their right foot earlier which resulted in a sort of dragging the hammer behind them, like in the discus throw. This hinders the rotational speed of the thrower's body and obviously negatively affects the results. It's possible to drag a discus behind your body, but not a hammer. This is because the centrifugal force on the thrower can get extremely high, significantly higher than the bodyweight of the thrower.

Another aspect of Yuri's hammer technique, which is seen in the new generation of throwers, is the perceptible use of the hammer ball's force of inertia. Inertia is generated during the execution of the double-support phases and continues during the single-support phases.

The major link in [the chain] of the hammer-and-thrower system is not the body of thrower, but instead, the hammer ball. Pics 6, 7, 14, 15, 24 and 25, the thrower goes with the hammer ball until the ball passes the highest point in the rotational plane. Yuri does this without actively moving his lower body, his hips, and legs. After the ball passes its highest point, the thrower starts to actively turn himself around his point of support, the front of his left foot, by using his right foot. He

right foot touches the circle. See how Yuri pulls away from the hammer ball, not by actively

twisting his hips and legs, as was taught in the past, but with his whole body, except for his arms.

The differences between the axes of the shoulders, hips and legs should be decreased in the front.

This moment is the key and most important element of modern hammer throwing technique. Something similar, but not quite as successful was done by the author of this article. By performing the final part of the single-support phases in this way, makes it possible to shorten the length of time of them and with this, increase the active movement of the ball by increasing the length of time of the double-support phases.

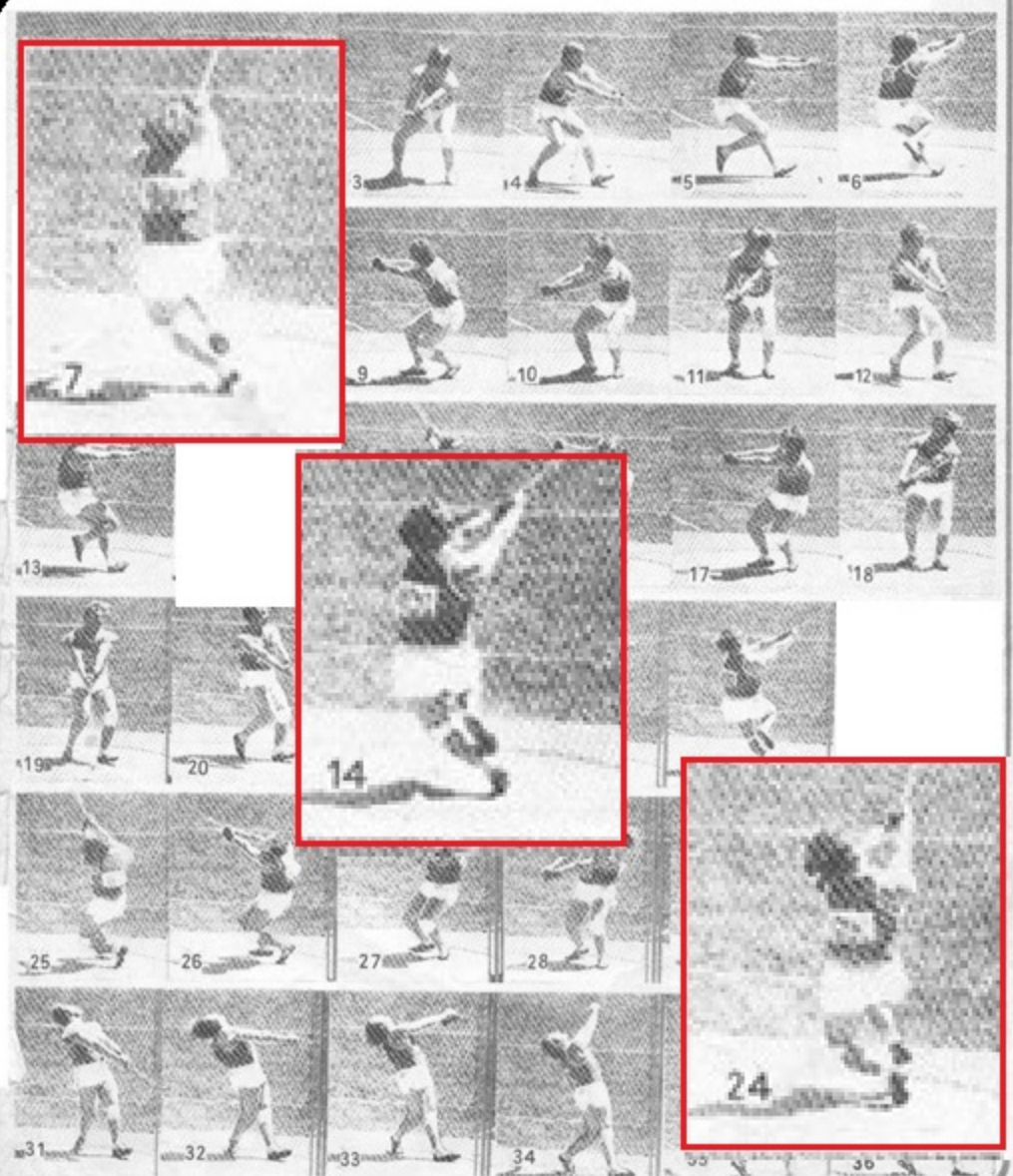
The most active part of thrower's body in this phase is the right leg and not the hips as was thought in the past. This can be explained by the fact that to get ahead of the ball as it travels during the final part of the single-support phases, the thrower's body needs to increase its rotational speed at a rate a little more than the movement of the advancing ball. It's practically impossible to do this by turning the hips, because the hips are loaded, particularly on the left side. This means that an early catching of the ball happens because of the active movement of the right foot. The earlier the right foot touches down on the circle, the more the thrower can actively move the ball at the start of each double-support phase of each turn.

Increasing the length of time of the double-support phases of every turn enables the thrower to rotate the hammer-and-thrower system perfectly around a vertical axis of rotation. This gives the system of the hammer-and-thrower balance during the single-support phases.

Remember this, the effective use of these changes to hammer throwing technique can be attained only by a group of throwers who have developed an adequately high level of ability to move quickly. This is because this throwing technique, with a deliberate increase in the length of time of the double-support phase with squaring up of the axes of the shoulders and hips at the neutral position and then turning to the left to 90, requires lightning speed when picking up and setting down the right foot.

In the opposite situation, the ball might outpace the thrower and the results will be much worse than ones previously attained by throwers during the execution of the double-support phases, early picking up of the right foot from the circle. One thing to point out: when the right foot touches down on the circle in the first and second turns, pics 9 and 16, Yuri commits a serious mistake by landing on his heel and not the toes and ball of the foot. Eliminating this mistake will be an additional plus in the continuing advancement of Yuri's athletic results.

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Yuri
Sedykh
Throws
the
Hammer

By
Anatoliy
Bondarchuk

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During the past 20 years, our country's hammer throwers have performed extremely well in international competitions. They have had the combination of necessary physical assets and special technical skills.

As the number of successes in the sport has increased, there have been significant changes in training methodology and technique of the top hammer throwers.

Let's look at the sequence, included with this article, of Yuri Sedykh, the champion at the 21st Olympic Games and the USSR record holder. We can follow the key modifications in hammer throwing technique that have occurred during recent years. The sequence is of Yuri's 75.64 m throw at the 1976 Montreal Olympics.

First, let's look at the length of time of the double-support phases in each rotation and Yuri's movements in the single-support phases. Take special note of the moment as he places his right foot down on the circle.

It's not necessary to consider all the details and elements of Yuri's technique in the sequence. The reason is, one of the elements mentioned in this article, Yuri's technique is the same as what was used by throwers in the past. An exceptional characteristic is the heel position throughout the entire throw. Yuri's arms are perfectly straight during every rotation and his balance is excellent in each phase.

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twisting his hips and legs, as was taught in the past, but with his whole body, except for his arms. The differences between the axes of the shoulders, hips and legs should be decreased in the front.

This moment is the key and most important element of modern hammer throwing technique. Something similar, but not quite as successful was done by the author of this article.

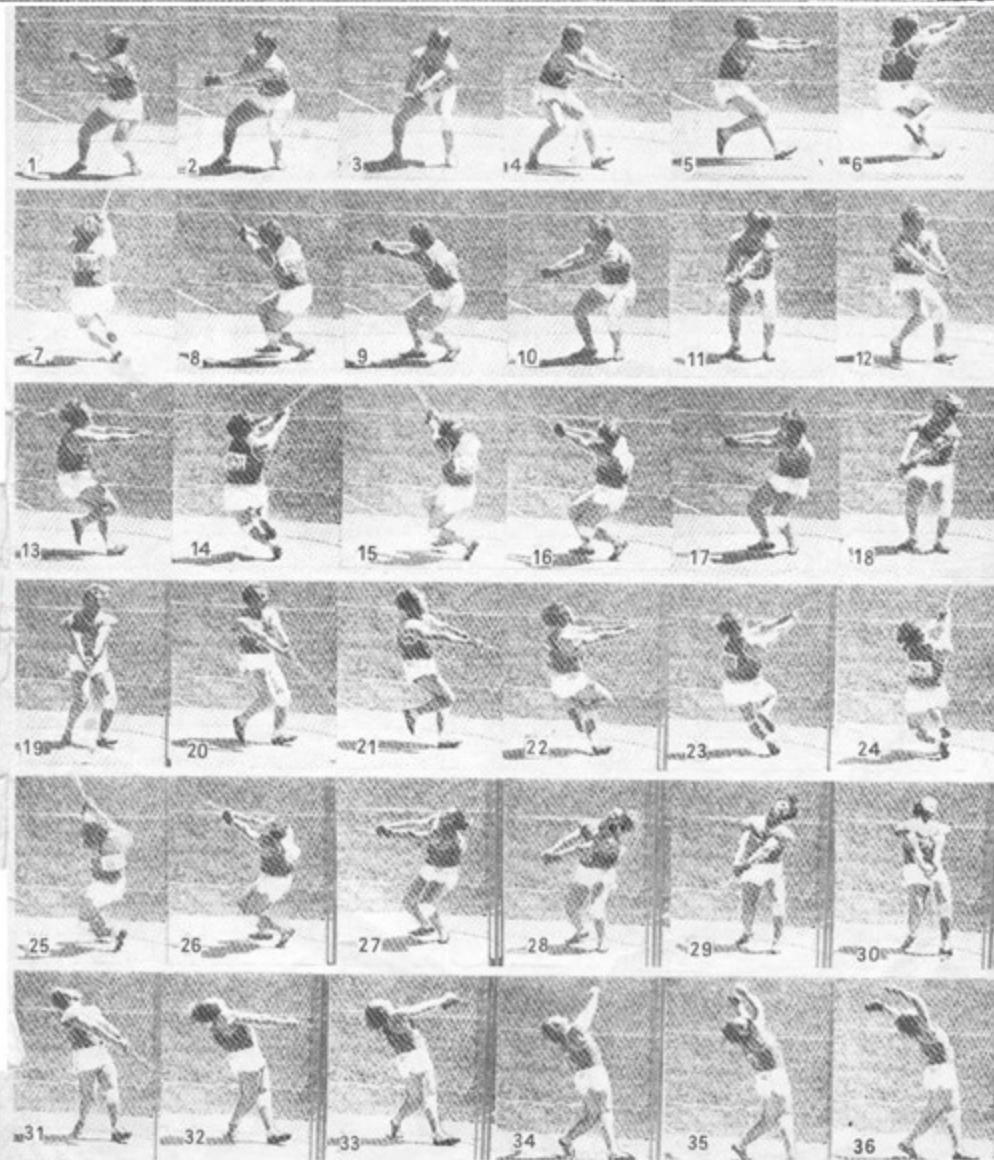
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