

June 5, 1923.

J. M. MacDONALD

1,457,710

ARM LOCK FOR GOLF PLAYERS

Filed March 10, 1922

2 Sheets-Sheet 1

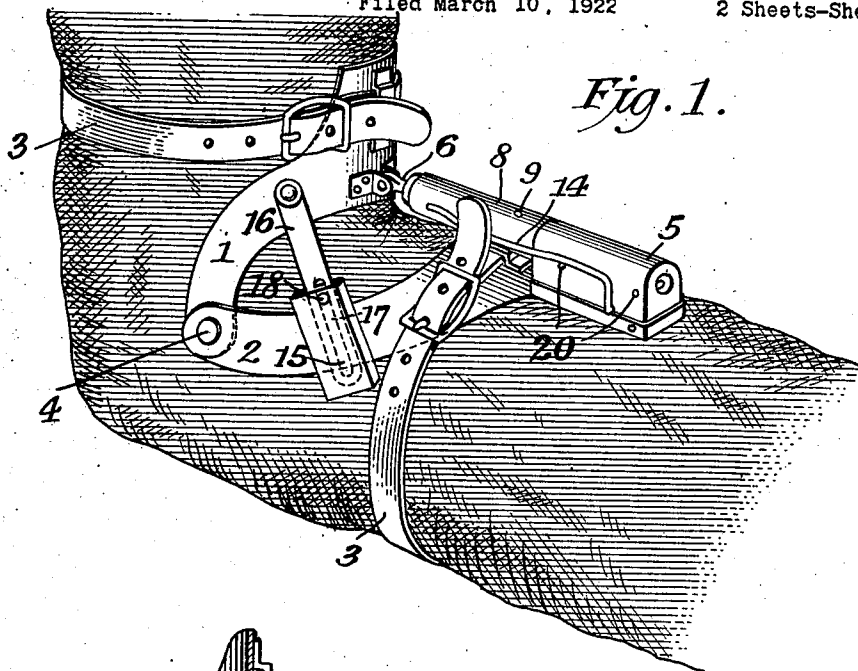


Fig. 1.

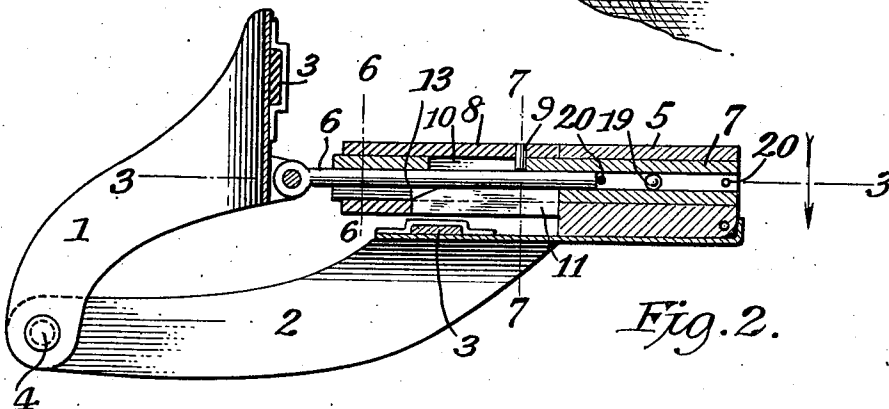


Fig. 2.

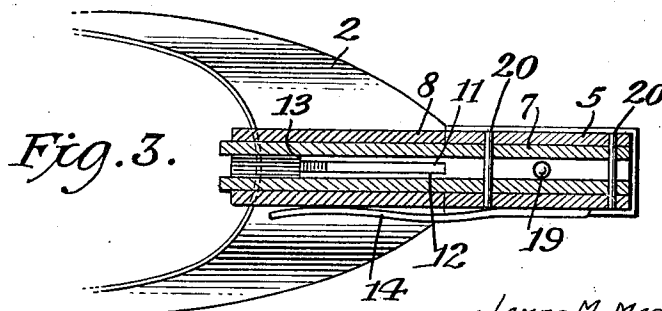


Fig. 3.

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2 Sheets-Sheet 2

Fig. 6.

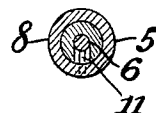


Fig. 4.

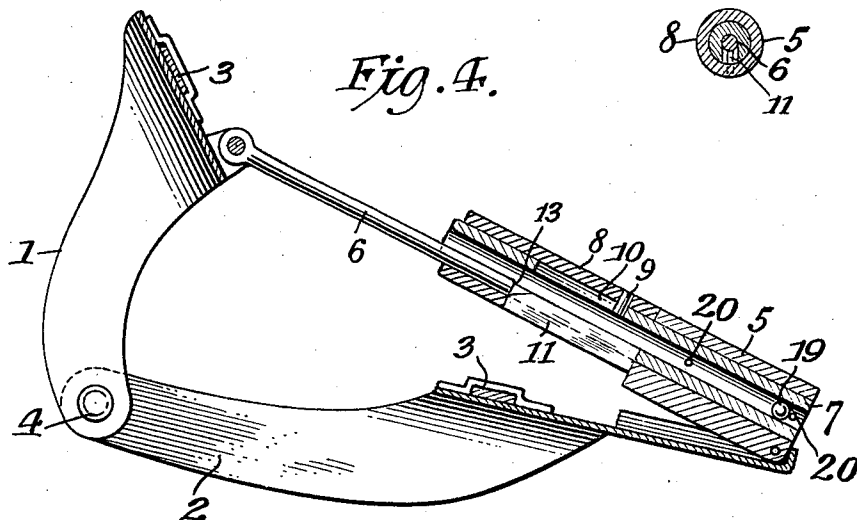


Fig. 5.

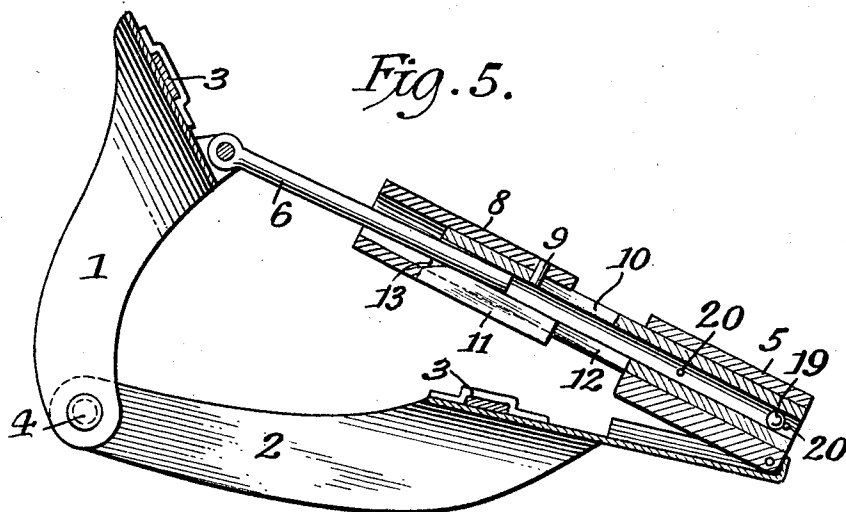
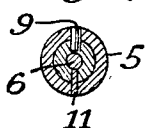


Fig. 7.



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UNITED STATES PATENT OFFICE.

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ARM LOCK FOR GOLF PLAYERS.

Application filed March 10, 1922. Serial No. 542,593.

To all whom it may concern:

Be it known that I, JAMES M. MACDONALD, a citizen of the United States of America, residing at East Orange, in the county of Essex, and State of New Jersey, have invented certain new and useful Improvements in Arm Locks for Golf Players, of which the following is a full, clear, and exact description.

10 The invention which forms the subject of this application for Letters Patent is an appliance designed as an aid, particularly for beginners, but also for erring adepts, in the teaching of correct form in the game of

15 golf. In this game one of the most essential points in the art of addressing and striking the ball, particularly with the wooden clubs, is technically known as the "follow through." That is to say, the stroke is not of the nature

20 of a hammer blow or the swing of a baseball bat, but in order that the club shall do its full work, it must, after impact of its face with the ball, be carried through its full stroke, or otherwise, the path of the ball

25 will not be true nor its travel complete.

This "follow through" is accomplished only when the arm in the course of the stroke is straightened out and kept straight until the full stroke or swing is completed. If before or after impact the arm is bent the proper stroke is not accomplished and it is not only a matter of considerable difficulty for beginners to learn and practice this, but even old and skilful players are very apt to

30 fall into the fault of not following through to the inevitable detriment of their game.

I have devised a mechanical attachment for the arm of a player which I term an arm lock, and which is so constructed and

40 operated by the player in the movement of his arm as to lock the arm in its extended or straightened position once it is brought to such position in the course of the stroke. The device comprises what may be termed a

45 supporting saddle attached to the arm above and below the elbow, and a locking element which comes into play when the arm is straightened and prevents the bending of the arm until means are operated that un-

50 lock said element. The device thus not only serves to show the player when his

stroke is such as to secure the proper "follow through" but induces him to make such strokes whether he intends to or not.

My improved arm lock is shown in the 55 accompanying drawings.

Fig. 1 is a view in perspective of the device showing the manner in which it is attached to the arm of the player.

Fig. 2 is a longitudinal section of the de- 60 vice with the parts in the position occupied by them when the arm is fully bent.

Fig. 3 is a horizontal section of the device on the line 3—3 of Fig. 2, looking down- 65 ward, or in the direction of the arrow.

Fig. 4 is a longitudinal section of the device showing the parts in the position they occupy when the arm is straight and the locking device has been rendered effective.

Fig. 5 is a similar view showing the op- 70 eration of the means for unlocking the said locking means.

Fig. 6 is a section on the line 6—6 of Fig. 2.

Fig. 7 is a section on the line 7—7 of 75 Fig. 2.

The device comprises essentially two elements or plates 1 and 2, hinged together, the first named being adapted to be strapped to the arm just above, the other to the arm just 80 below the elbow, any suitable form of straps 3 or similar means being employed for this purpose. In applying the device the plate 2 is first strapped after it is adjusted in position on the forearm with the elbow down 85 and the hinge 4 contiguous to the elbow joint or knuckle. The plate 1 is then strapped to the biceps and when the attachment is secure, the device will always lock as soon as the arm is straightened and prevent it being 90 bent until it is unlocked.

To accomplish this result a tubular member 5 is hinged to the member 2 and a rod or bar 6 is hinged or pivoted to the member 1 and works in the tube. When the 95 arm is straightened the rod is drawn out nearly to the end of the tube 5, or into the position shown in Fig. 4.

The tube 5, mainly for convenience of manufacture, contains a smaller tube 7, and 100 is made in two parts, one part 8 being adapted to slide over the inner part 7, but keyed

thereto by a pin or screw 9, that enters a longitudinal slot 10 in the tube 7. The said movable part 8 also carries a relatively thin plate 11 which slides in a slot 12 in the under side of the tube 7 and extends to or slightly beyond a shoulder 13 formed by the end of tube 7 and a wider groove extending only partially through the wall of the part 8.

Normally, therefore, the rod 6, under the movements of the arm slides back and forth in the inner part or tube 7, but when the arm is straightened the pivoted rod drops and engages the shoulder 13, which locks it and prevents its return into the tube 7 and hence prevents the arm from being bent.

To unlock the device the part 8 is grasped between the fingers and thumb and moved away from the stationary part 5 with the result that the bevelled end of the plate 11 raises the rod into line with the bore of the part 7 and permits the arm to be bent. In Fig. 5 the parts are shown in the position they occupy after the rod has been raised by the part 8 and passed back a certain distance in the part 7. After the device has been unlocked in this way the part 8 is pushed back to the position shown in Fig. 4, and it is held in this position by means of a spring 14.

For steadying the device and adding greater strength it is desirable to secure to one member, as for example 2, a socket tube 15, and to pivot to the other member a bar or rod 16 containing a slot 17, through which passes a pin 18 secured to the tube or socket 15.

Perhaps the majority of players do not hold the arms straightened to full length in addressing the ball. In such cases they would not be locked by this device, until by the force of the stroke or swing the arm is momentarily forced straight. In such cases it would not be locked until this happened, which would give the player the benefit of the full follow.

In case, however, that the player straightens his arms in addressing the ball, then the movable part 8 should be drawn back, which will prevent the device from locking. But by centrifugal force the part 8 during the stroke would be thrown back to normal position, which will allow the device to lock the moment the arm becomes straight.

In addition to the described function of a locking device a timing means for the backward stroke is employed. This consists in a metal ball 19 contained in the otherwise empty end of the inner tube 7 and restrained in its movements, due to gravity by two stops 20. Should the club be swung back quickly, the ball will be held against its forward stop and give no evidence of displacement, but a slow backward stroke, coming to a full momentary

stop, as is taught by professionals, will permit the ball to fall upon the upper or rear stop, the clicking due to the impact being distinctly audible.

So far as my information goes, this device is new of its kind and is not therefore limited to the specific construction shown and described. For example, other means than those shown may be employed to lock the device when the arm is fully extended, and other means may be employed for unlocking the same. The device may be worn over or under a sweater or other article of clothing.

Having now described my invention, what I claim is:—

1. An arm lock for golf players, comprising in combination two parts or elements adapted for attachment to the biceps and forearm respectively, and hinged together, and locking means for holding the same in fixed relative position operating upon their change of relative position due to straightening of the arm to full length.

2. An arm lock for golf players, comprising in combination two plates with a hinged connection between them, and adapted to be secured to the biceps and the forearm respectively, a part pivotally connected to one plate and a part carried by the other with respect to which the first named part moves as the arm is bent, and means for locking said parts against movement when by the straightening out of the arm they have undergone a predetermined relative movement.

3. An arm lock for golf players, comprising in combination two plates with a hinged connection between them and adapted to be secured to the biceps and forearm respectively, a tubular member carried by one plate, a pivoted rod attached to the other and movable in said tube, and a fixed stop in the tubular member with which said rod engages to lock the two plates in fixed relation when by the straightening out of the arm they have undergone a predetermined relative movement.

4. An arm lock for golf players, comprising in combination two plates hinged together and adapted for attachment to the biceps and the forearm respectively, a tube carried by one plate, a rod pivoted to the other and sliding in said tube, a notch being provided in the bore of one tube with which the end of said rod comes in engagement when by the straightening of the arm the two plates have undergone a predetermined relative movement.

5. An arm lock for golf players, comprising in combination two plates hinged together and adapted for attachment to the biceps and the forearm respectively, a tube carried by one plate, a rod pivoted to the other and sliding in said tube, a fixed stop

in the tube with which the end of the rod engages after a predetermined relative movement of the two plates, and a movable plate carried in or by said tube for lifting
5 said rod out of such engagement. movable by gravity between fixed stops in said tube, and adapted to give audible evidence of its impact with one of said stops. 10
In testimony whereof I hereto affix my signature.

6. An arm lock for golf players comprising a tube in combination with a ball

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