(No Model.)

G. B. DURKEE.

HARP.

No. 509,022. Patented Nov. 21, 1893.

Fig. 1

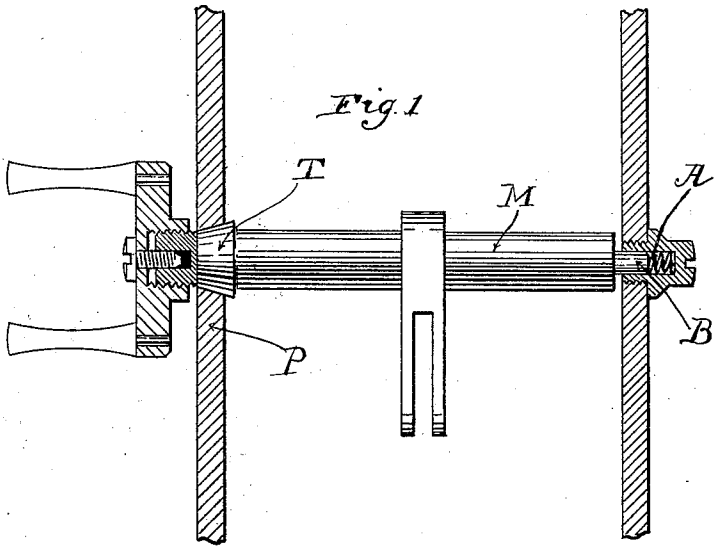

Fig. 2.

WITNESSES:

H. Grierson.

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GEORGE B. DURKEE, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE LYON & HEALY, OF SAME PLACE.

HARP.

SPECIFICATION forming part of Letters Patent No. 509,022, dated November 21, 1893.

Application filed June 15, 1893. Serial No. 477,883. (No model.)

To all whom it may concern:

Be it known that I, GEORGE B. DURKEE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in the Construction of Harps, of which the following is a specification.

The object of my invention is the production of a harp-action having a permanent, automatic adjustment of the mandrels which carry the sharping disks. This result is accomplished by means of a spiral steel spring applied to the rear end of a mandrel having a suitable taper or collar at its opposite end, substantially as hereinafter more fully described, and set forth in the accompanying drawings forming a part of this specification, in which—

Figure 1, is a sectional plan view enlarged to twice its natural size. Fig. 2, is a view of the spring drawn twice its size.

Referring to the drawings it will be seen that the spring A. holds the mandrel M. in place with a yielding pressure which readily adjusts itself to any slight change of form the metal action-frame may assume, either from climatic changes or from warping or springing from the effects of the continual strain of the strings. Instead of the taper T, a collar could be used,—as in the construction of the French harp—forming a shoulder to be pressed against the harp-plate P, but the one simple taper shown is preferable.

The advantages of this improvement over the old rigid adjustment cannot be thoroughly appreciated except by harpists, who have experienced the inconvenience of sticking pedals, or loose rattling mandrels, which this improvement entirely overcomes.

I do not claim any particular angle for the taper T, of the mandrel as it is obvious that different angles may be used in connection with a spring; nor do I claim any particular form of spring; but the spring shown pocketed in the screw nut, is undoubtedly the most compact and is the form which I have adopted as being the most practicable owing to the very limited space for parts of larger dimensions.

Having thus described my invention, what I claim is—

In a harp-action, a perpetual yielding adjustment, whereby the sharping mandrel is kept firmly in place without manual re-adjustment of parts, substantially as described and for the purpose specified.

GEORGE B. DURKEE.

Witnesses:
H. GRIERSON,
D. LAUTERMAN.