

No. 654,317.

Patented July 24, 1900.

T. H. MACDONALD.
GRAPHOPHONE.

(Application filed Oct. 13, 1898.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

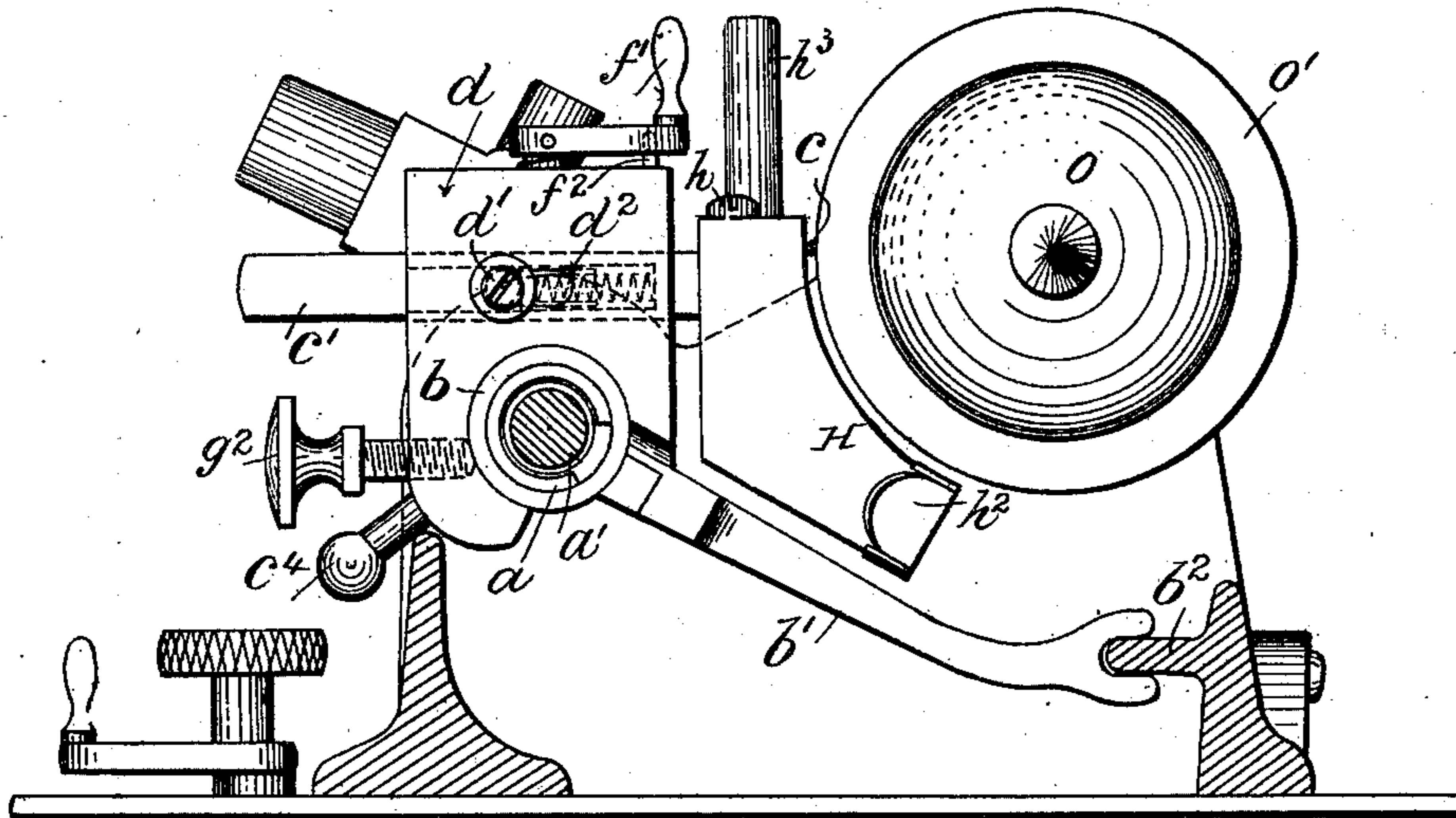


Fig. 3.

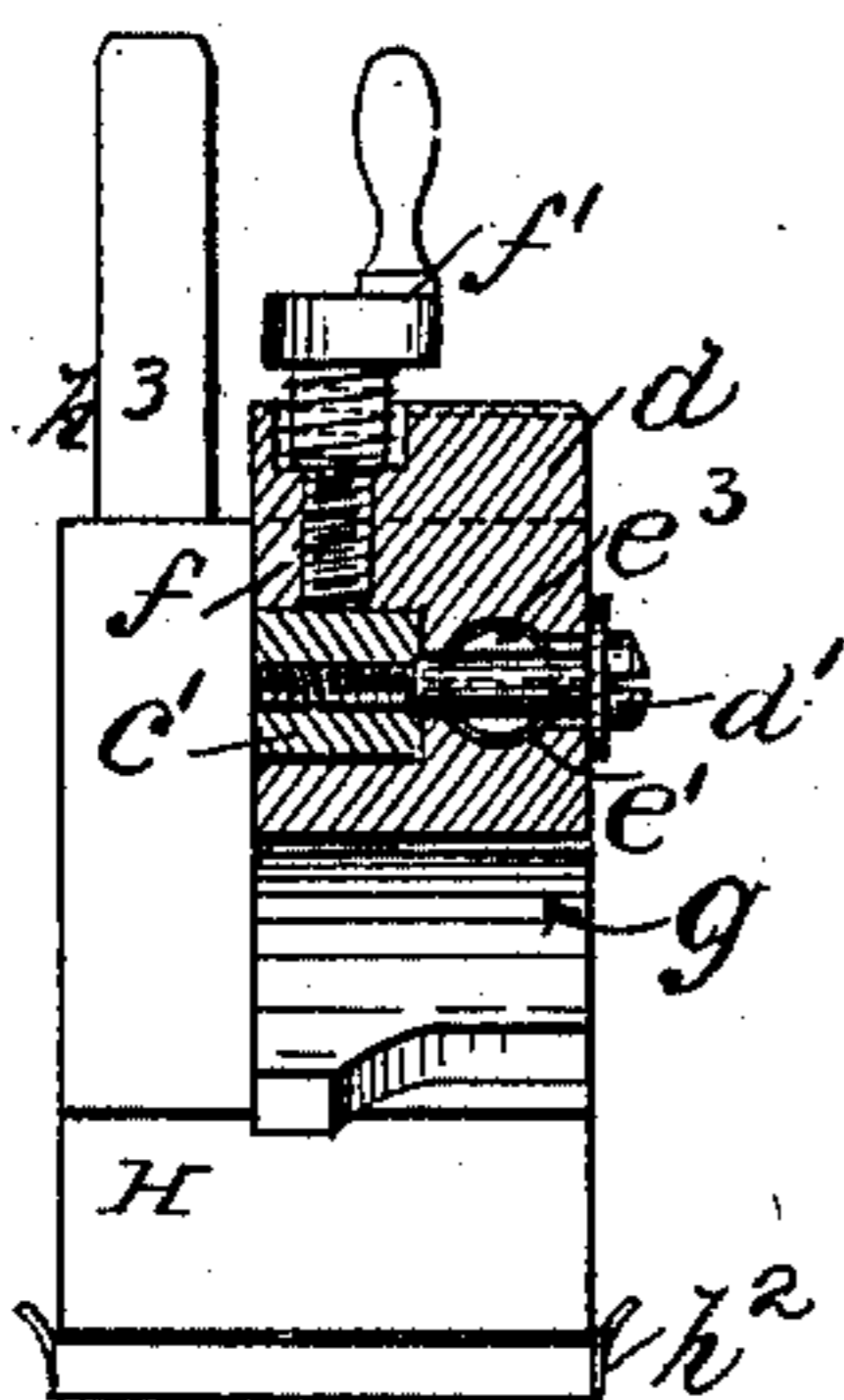
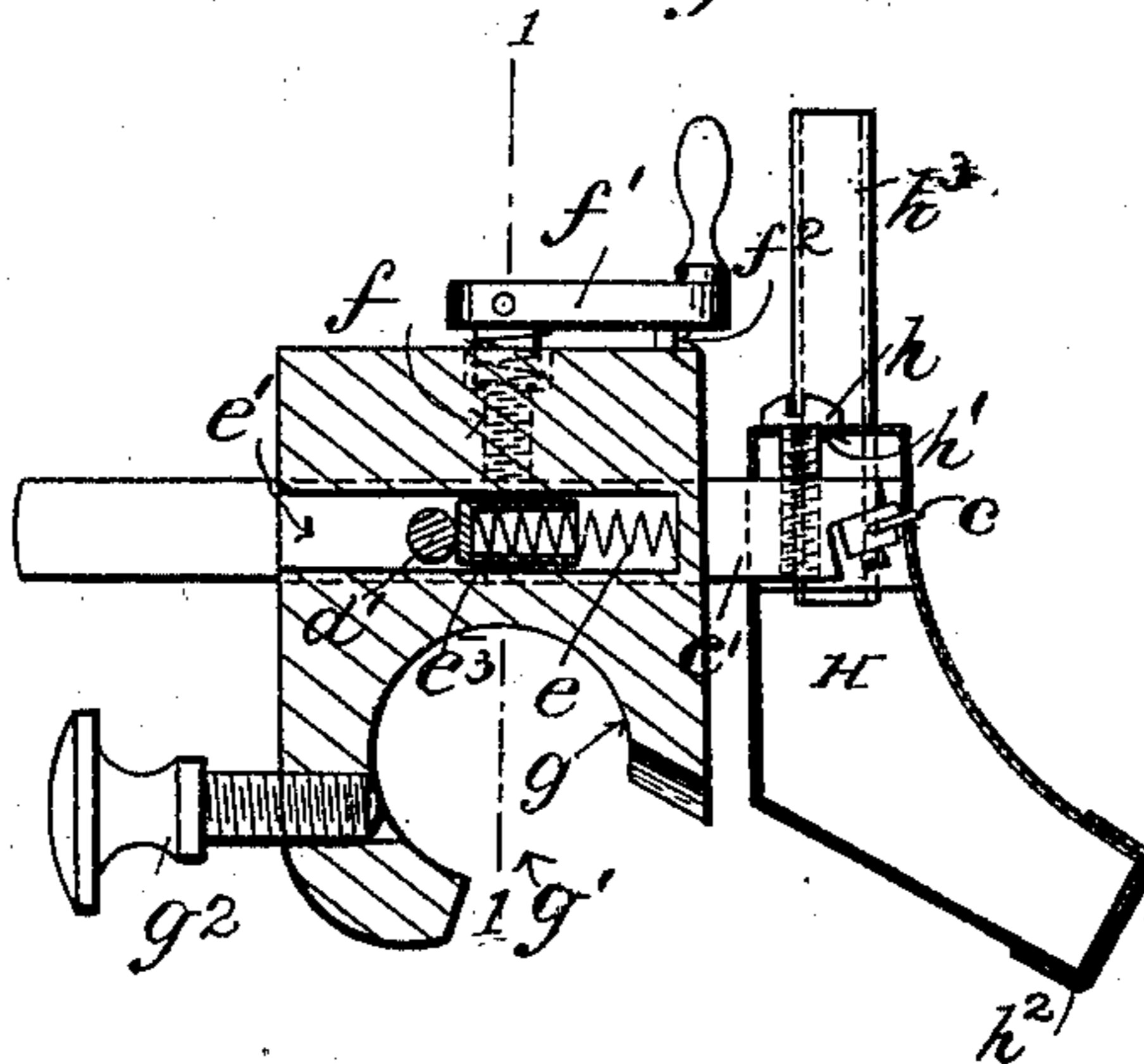


Fig. 4.



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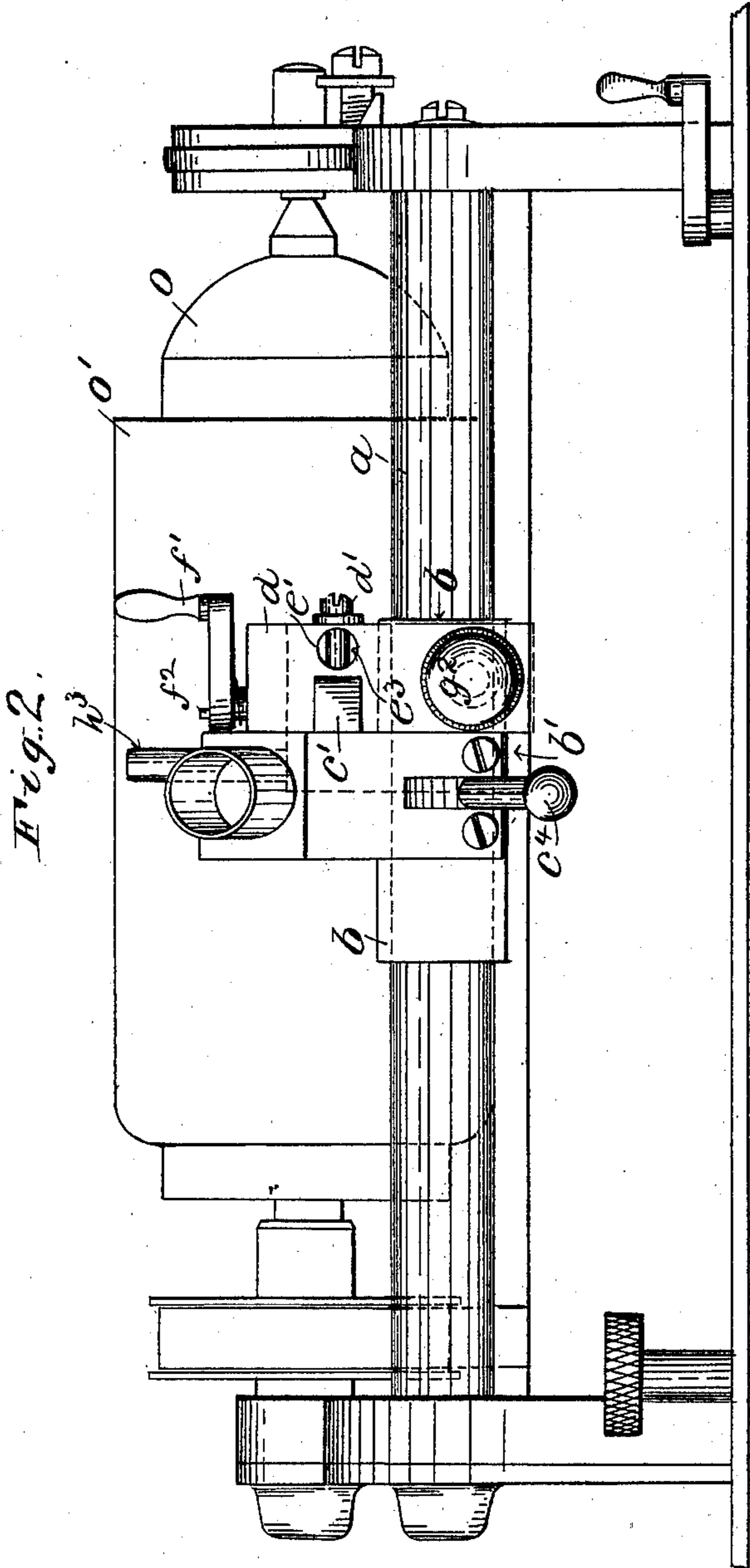
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2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

THOMAS H. MACDONALD, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO
THE AMERICAN GRAPHOPHONE COMPANY, OF WASHINGTON, DISTRICT
OF COLUMBIA.

GRAPHOPHONE.

SPECIFICATION forming part of Letters Patent No. 654,317, dated July 24, 1900.

Application filed October 13, 1896. Serial No. 608,748. (No model.)

To all whom it may concern:

Be it known that I, THOMAS H. MACDONALD, of Bridgeport, Connecticut, have invented new and useful Improvements in Graphophones, which improvements are fully set forth in the following specification.

This invention has reference generally to improvements in graphophones, but more particularly concerns the shaving knife or cutter for acting upon the record cylinder or tablet to remove an old record, and thereby present a fresh surface for the recording-style to act upon in making a new record. As ordinarily applied heretofore the shaving-knife forms a permanent part of the machine, being secured thereto in such manner as not to be readily detached, a pan extending beneath the path of the knife serving to catch the chips or shavings. While a large part of the chips fall into the pan, others fly about, falling upon and adhering to surfaces which may be covered with oil, penetrating the joints and gearing and proving otherwise objectionable.

According to my present invention the disadvantages here referred to are completely avoided by making the shaving-knife readily detachable from the machine and in combining therewith a closed receptacle (removable, of course, with the knife) in which the chips or shavings are collected as they leave the knife. After the shaving operation is completed the shaving-knife is removed from the machine and the contents of the receptacle discharged through an opening having a suitable cover. To facilitate the discharge of the chips or shavings, a tube or blowpipe is provided leading to the interior of the receptacle and through which the operator blows. Other advantages of having the shaving-knife and its associated parts detachable from the machine will be apparent.

In the accompanying drawings I have illustrated what is considered a very convenient embodiment of my invention in a practical device which is shown as applied to a machine such as illustrated in Patent No. 569,290, dated October 13, 1896.

Figure 1 is a transverse sectional view through a graphophone of the type illustrated in the patent referred to, showing the shaving-

ing-knife attachment in elevation. Fig. 2 is a front elevation thereof. Fig. 3 is a sectional view through the devices for securing the attachment to the carriage of the graphophone; and Fig. 4 is a longitudinal sectional view, partly in elevation, through the attachment.

Referring to the drawings, O represents the mandrel, and O' a record cylinder or tablet thereon.

a' is the feed-screw, about which is the longitudinally-slotted guide-tube a , upon which the sleeve b of the carriage runs.

b' is a depending leg on the carriage, embracing at its end a rail b^2 . The carriage is thrown into and out of engagement with the feed-screw by handle c^4 , all of the parts thus far mentioned being arranged and operating like corresponding parts in the patent referred to and constitute no part of the present invention.

The shaving knife or cutter attachment, which forms the subject-matter of this invention, will now be described.

c is the knife or cutter (preferably a jewel) secured to the end of a rod c' at an oblique angle. Rod c' slides in a recess in the side of a block d , in which it is held by a screw d' , passing through a slot d^2 in the opposite side of the block from that in which the rod slides. The cutter is normally withheld from contact with the record-cylinder by the action of a small spiral spring e , located in the bottom of an opening e' bored into the block, so as to intersect slot d^2 , said spring pressing against the end of a short pin e^3 , sliding in the opening e' and bearing against screw d' . Rod c' is clamped in its adjusted position by a screw-threaded pin f engaging in an interiorly-threaded opening extending downwardly from the top of the block to a point above the rod. Pin f is turned to grip and release the rod by a crank f' at its upper end, the movement of the latter being limited in one direction by a stop-pin f^2 . A circular recess g extends through the block beneath the parts above referred to, said recess being of a diameter but slightly larger than the sleeve b , which it embraces when in position on the carriage and being open on its under side, as at g' , so that it may be engaged about the guide-tube a and then slipped onto the

sleeve *b*, in which position it is secured by a thumb-screw *g*². In securing the attachment in the proper position it is tilted forward until the block rests against the leg *b'*, as

5 clearly shown in Fig. 1.

H is a chips or shavings receptacle into which the end of rod *c'* extends, the receptacle being adjustably secured to said rod by a screw *h* passing through a slot *h'*. Cutter or
10 knife *c* projects through a small opening in the side of the receptacle next to the record-cylinder, said side being made concave to conform to the contour of the cylinder. At its lower end the receptacle is provided with
15 a removable cover *h*², and at its upper end a blow-tube *h*³ leads to the interior thereof.

From the foregoing description it will be clearly understood that when it is desired to remove an old record from the surface of the
20 cylinder or tablet or for any other reason to present a fresh surface to the recording-style, the shaving-knife attachment is secured in position on the carriage and the cutter adjusted to proper contact with the cylinder by
25 means already clearly described and the machine started. The operation being completed, the attachment is removed and the cover *h*² removed from the receptacle H and the contents of the latter readily discharged
30 by blowing into the tube *h*³.

Aside from the advantages resulting from the use of the receptacle for receiving the chips or shavings it is deemed to be of great
35 advantage and broadly new to furnish a shaving-knife and its adjusting devices in the

form of a removable attachment for graphophones. By such arrangement parts which were heretofore permanent parts of the machine and were much in the way during the
ordinary running of the latter are now dis- 40
pensed with except when actually needed. Furthermore, the absence of such devices tends to much simplify the construction of the machine.

The invention is susceptible of embodiment 45
in many other forms than that here shown without departure from the spirit and principle thereof.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a graphophone, the combination with a shaving knife or cutter, of a receptacle for receiving chips or shavings removed from the record-cylinder by said knife or cutter, and
a blow-tube leading into said receptacle, sub- 55
stantially as described.

2. A removable attachment for graphophones, consisting of a shaving knife or cutter, a closed receptacle having a discharge-opening therein, a cover for said opening, 60
and a blow-tube leading to the interior of the receptacle, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

THOMAS H. MACDONALD.

Witnesses:

C. A. CHADWICK,
CLEMENT MARCH.