No. 616,631. Patented Dec. 27, 1898.

J. H. RANDALL.

FINGER AND STATIONARY BLADE FOR MOWING MACHINES.

(Application filed Apr. 29, 1897.)

(No Model.)

Fig. 1.

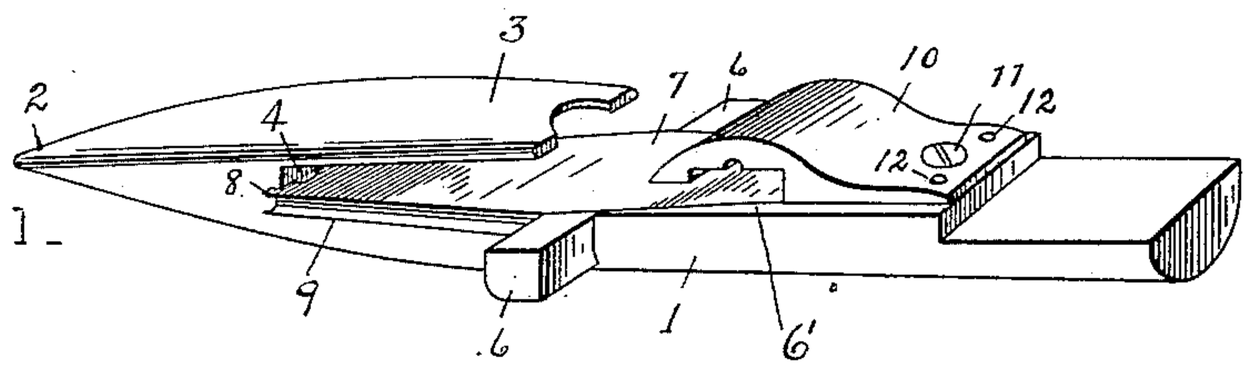


Fig. 2.

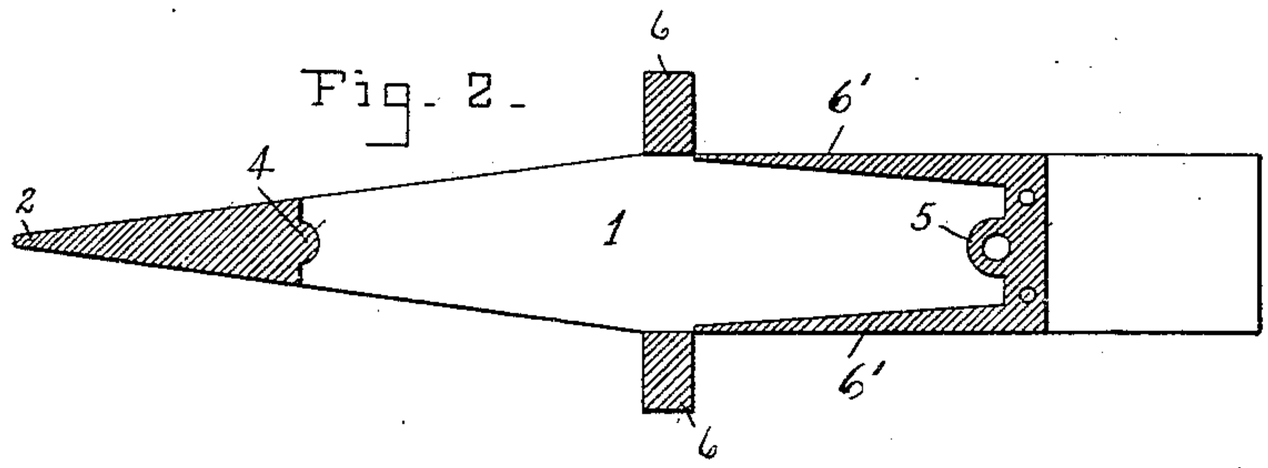


Fig. 3.

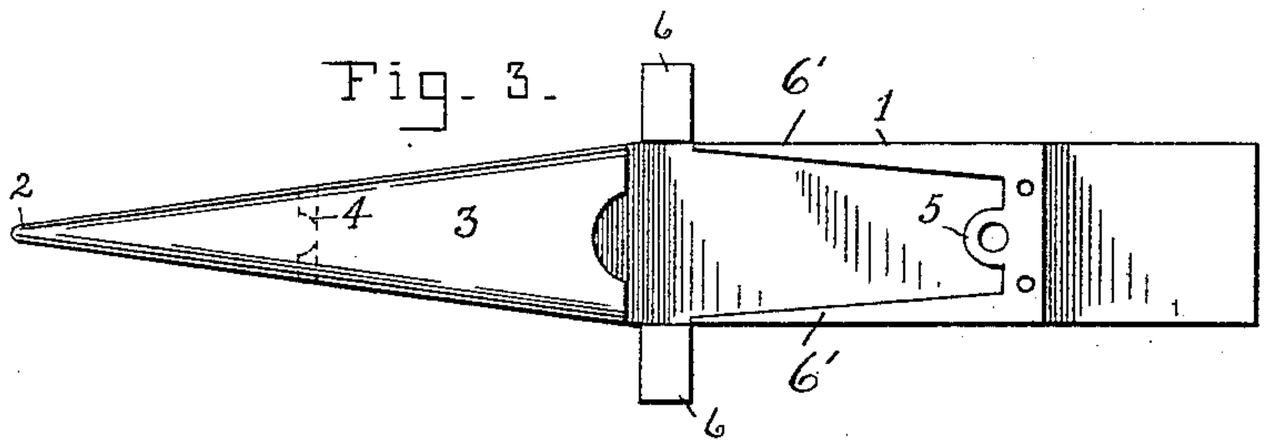
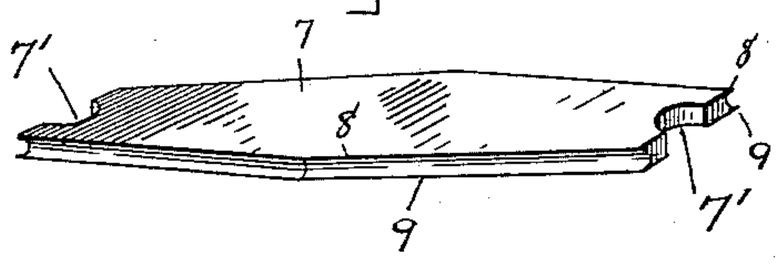


Fig. 4.



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UNITED STATES PATENT OFFICE.

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FINGER AND STATIONARY BLADE FOR MOWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 616,631, dated December 27, 1898.

Application filed April 29, 1897. Serial No. 634,333. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. RANDALL, of Ayrshire, in the county of Palo Alto and State of Iowa, have invented certain new and useful Improvements in Finger and Stationary Blades for Mowing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of this invention is to provide a cutter-guard finger for mowers in which the ledger-plate or stationary blade can be readily and conveniently reversed and also turned end for end to present new cutting edges as the ones in use become worn.

To this end the invention contemplates a particular construction of the finger to receive a particular form of ledger-plate or stationary blade, the latter being held in place by a single screw passing through the cap or part forming a guide for the cutter-bar.

With the accomplishment of this object in view the invention consists in a guard-finger having an approximately diamond-shaped recess in its upper edge, with lugs projecting into the opposite ends thereof and inclined side walls at the rear portion of the recess, in combination with a substantially double-truncated diamond-shaped ledger-plate or stationary blade fitted in said recess and having its tapered side edges formed to present four blades or knife-edges, the parts being held in rigid engagement with each other by the cap or guide for the cutter-bar and the construction being such that the two forward side edges of the plate are exposed for use, while the rear side edges thereof are protected from injury by the said inclined walls at the inner portion of the recess.

The invention further consists in the details of construction and combination of parts hereinafter more fully described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a finger and parts carried thereby constructed in accordance with my invention. Fig. 2 is a horizontal sectional view through the finger. Fig. 3 is a plan view of the finger, the ledger-plate and cutter-bar guide being removed; and Fig. 4 is a detail view of the ledger-plate or stationary blade carried by the finger.

Referring to the drawings by numerals, 1 designates the finger, which is of the general configuration used in mowers, presenting the point 2 and the upper guard 3, which overhangs the triangular blades of the cutter-bar, the said finger being formed to provide for securing it to the finger-bar. The upper face of the finger is cut away to form an approximately diamond-shaped recess adapted to receive a ledger-plate or stationary blade and having lugs 4 and 5 projecting thereinto at the opposite ends thereof. At the center of the finger are lateral projections 6 6, and the side edges of the finger taper therefrom to the point 2. The recess opens transversely through the finger in advance of said projections, but is inclosed on opposite sides in rear thereof by inclined side walls 6′ 6′. By this construction it will be seen that the front portion of the recess of the finger, which is below the guard 3, is narrower than the rear portion thereof inclosed by the side walls 6′ 6′.

7 designates the ledger-plate or stationary blade, which tapers from its central portion to each straight end thereof, thus forming a substantially double-truncated diamond-shaped plate, each of the four angular side edges of which are grooved or beveled inward to form upper and lower knife-edges 8 and 9. The ends of the plate or blade are provided with recesses 7′, adapted to receive the lugs 4 and 5 on the finger. The blade is of such a thickness that when placed in the recesses of the finger the upper edge of its rear half will lie flush or substantially flush with the upper surfaces of the inclined side walls 6′ 6′. Thus the two rear knife-edges of the plate, which are not in use, will be inclosed and protected from injury, while the two front knife-edges, owing to the reduced width of the finger in advance of the projections 6 6, will project laterally of the finger on opposite sides of the open front portion of the recess in position for use, as shown in Fig. 1. When placed in the recess, the blade is held rigid against lateral movement by the lugs 4 and 5, entering the recesses 7′ in the ends thereof. The blade is secured against vertical movement at its rear

end by a cap 10, the forward part of which is shaped to provide a guide for the cutter-bar. This guide is retained in position by a screw 11, passing through the rear part of the same, in connection with pins 12 12, which extend from the finger to engage recesses in the said guide and prevent lateral movement of the same. It will be seen that by this arrangement the stationary blade is held in rigid engagement with the finger, so that the upper edges of the forward part will present the cutting edges that coact with the triangular knives of the cutter-bar. By the particular formation of the finger and corresponding shape of the ledger-plate or stationary blade, hereinbefore described, I provide a construction in which the said ledger-plate or stationary blade can be readily and conveniently reversed to bring new edges into play when the old edge has become worn, the said blade being susceptible of a manipulation which will make four changes in each blade. For example, the blade can simply be turned over in making the first change, and then after being turned end for end the opposite end can be brought into play and also reversed when its upper edges have become worn, the particular shape of the blade making it reversible for the different purposes. When the blade is inserted, the forward end is held rigid by engagement with the lug 4, while the rear end is held in place by the cap or guide, the retaining-screw of which passes into a threaded orifice in the lug 5, which, as before stated, corresponds with the lug 4 at the opposite end of the finger.

From the foregoing description, taken in connection with the accompanying drawings, it will be seen that I provide a stationary blade for the fingers of a mowing-machine, which can be used much longer than the ordinary blade, as it will not require sharpening until all of the edges have become worn. The feature of the invention which provides for removing the ledger-plate or cutter-blade also permits of a new blade being substituted for the old one when the latter is completely worn out.

It will be understood, of course, that instead of providing the stationary blades or ledger-plates with beveled edges they could be formed into ordinary sickle-edges.

Having thus fully described the invention, what is claimed as new is—

1. A finger for the cutting apparatus of mowing-machines having its side edges tapered forwardly of its center to a point and provided with an approximately diamond-shaped recess opening through the said tapered sides and inclosed in rear thereof by inclined side walls, and retaining-lugs projecting into the ends of the recess, in combination with a substantially double-truncated, diamond-shaped ledger-plate seated in said recess, said plate being provided in its ends with recesses to receive the lugs and having its angular sides formed into knife-edges, a cap or guide overhanging the rear end of the plate, and means for attaching said cap to the finger, substantially as described.

2. A finger for the cutting apparatus of mowing-machines having its side edges tapered forwardly of its center to a point and provided with an approximately diamond-shaped recess opening through the said tapered sides and inclosed in rear thereof by inclined side walls, and retaining-lugs projecting into the ends of the recess, in combination with a substantially double-truncated, diamond-shaped ledger-plate seated in said recess, said plate being provided in its ends with recesses to receive the lugs and having its angular sides formed into knife-edges, the rear edges thereof being inclosed by said inclined side walls and the front edges exposed at the open front portion of the recess, a cap or guide overhanging the rear end of the plate, a retaining-screw passed through the cap and entering a threaded orifice in the rear lug, and pins on the cap entering recesses in the finger on opposite sides of said lug, substantially as described.

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

JOHN H. RANDALL.

Witnesses:
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