No. 793,094. PATENTED JUNE 27, 1905.

E. PRIMROSE.

MATCHING MACHINE FOR KNIFE HANDLES.

APPLICATION FILED OCT. 24, 1904.

Fig. 1.

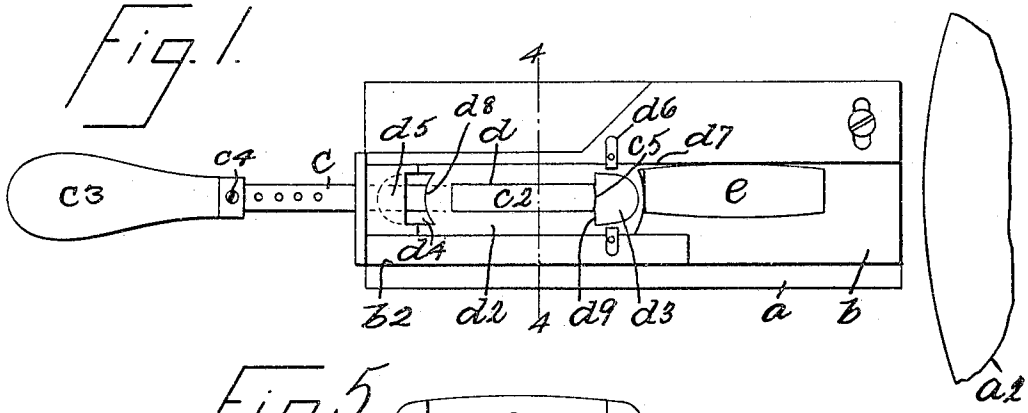


Fig. 5

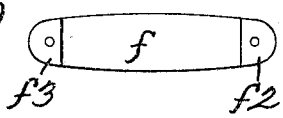


Fig. 2

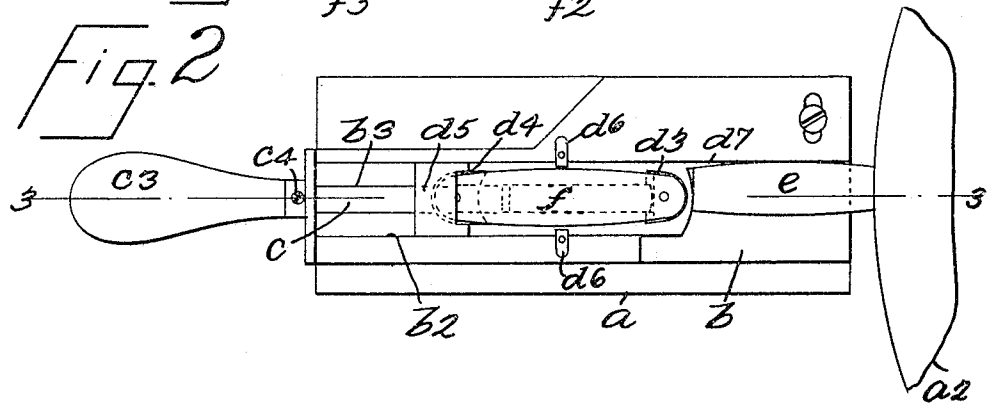


Fig. 3

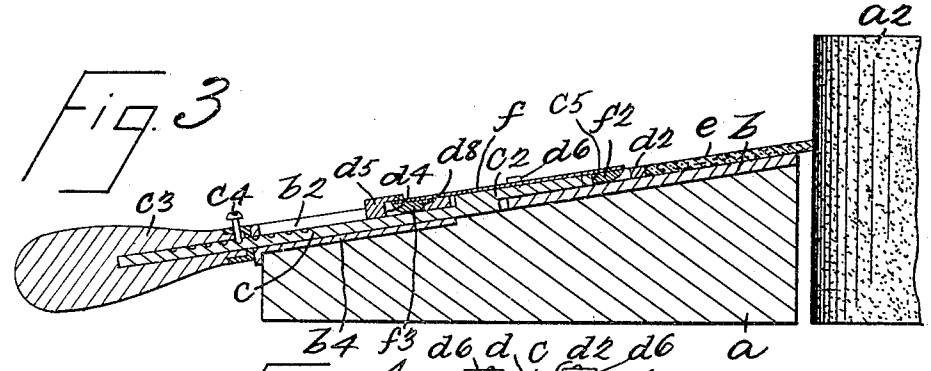
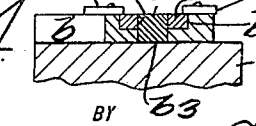


Fig. 4



WITNESSES

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UNITED STATES PATENT OFFICE.

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MATCHING-MACHINE FOR KNIFE-HANDLES.

SPECIFICATION forming part of Letters Patent No. 793,094, dated June 27, 1905.

Application filed October 24, 1904. Serial No. 229,750.

To all whom it may concern:

Be it known that I, EDWARD PRIMROSE, a citizen of the United States, residing at Camillus, in the county of Onondaga and State of New York, have invented certain new and useful Improvements in Matching-Machines for Knife-Handles, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

The object of this invention is to provide a mechanical matching-machine to be used in the fitting of the coverings for knife-handles—as, for instance, the horn covering of a pocket-knife—mounted between the cap and the bolster, which are secured on the knife-scale in the usual manner, a further object being to provide a mechanical device of this class whereby the covering for any particular knife-handle is automatically fitted to the portion of the handle upon which it is desired to mount the same, said device adapting itself automatically to the increased or decreased distance between the cap and bolster; a still further object being to provide a device of this class which is simple in construction and operation, is capable of comparatively great variations in the sizes of said coverings, and is very inexpensive.

Knife-coverings have heretofore been trimmed at the ends thereof by a workman holding the same against a grinding-wheel, and when one end is so ground to fit the bolster against which it is to rest on the knife-handle the other end is ground and fitted to engage the cap at the other end of said knife, and this operation consumes considerable time and requires a skilled workman; and my invention is particularly designed to permit the accurate trimming and fitting of said coverings by an unskilled person, such as a boy or girl, and whereby a large number of said coverings may be so fitted in a comparatively short time.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which—

Figure 1 is a plan view of my matching-machine with the parts in what may be called their "initial" positions; Fig. 2, a similar view thereof and showing the parts in final position; Fig. 3, a longitudinal section thereof on the line 3 3 of Fig. 2; Fig. 4, a transverse section thereof on the line 4 4 of Fig. 1, and Fig. 5 a view of a knife-scale with the usual cap and bolster thereon.

In the drawings forming part of this specification I have shown at a a support for my matching-machine constructed in any desired manner and placed adjacent to a grinding-wheel a^2, and in the construction of my machine I provide a base-plate b, provided with a longitudinal recess or channel b^2, and centrally arranged in said channel b^2 is a slot or recess b^3, in which is slidably mounted a flat bar c, and the base-plate b is provided with a covering b^4 at the bottom thereof for said slot b^3.

The bar c is provided for a portion of its length with a raised member c^2, which is adapted to slide in a slot d in a carrier d^2, said carrier being provided at its outer end with an enlarged recess d^3, which is connected with the slot d and at its other end with a recess d^4, provided with a covering d^5 for a portion of the length of said recess d^4, said covering being preferably higher than the surface of the carrier d^2, as plainly shown in Fig. 3, and the carrier d^2 is adapted to slide in the recess b^2 of the base-plate b, being held therein by means of cleats d^6, secured to the base-plate b, and said carrier is also provided with a finger d^7 at the outer end thereof and the reason for which will be hereinafter explained.

The bar c is provided with an adjustable handle c^3 at the end adjacent to the operator or at the end opposite the grinding-wheel a^2, said handle c^3 being adapted to be secured in any desired position to the bar c by means of a screw c^4 or in any other suitable manner, and when said handle c^3 is so secured the bar c may be moved thereby in the slot b^3 of the base-plate b and the slot or recess d in the carrier d^2, and when it has reached the limit of its movement in said slot d of the carrier d^2 said carrier is moved thereby, as will be readily understood.

In Figs. 1, 2, and 3 of the drawings I have indicated at e a covering for a pocket-knife handle, which is placed in the recess b^2 of the base-plate b and the end of which rests against the outer end of the carrier d^2, and when said carrier is moved outwardly the covering e is also moved until it reaches the grinding-wheel a^2, at which time the outer end of said covering e is ground or cut at a slight angle, as shown in Fig. 3, said angle extending downwardly and inwardly, and is also cut in a slightly-curved form, according to the diameter of the grinding-wheel a^2, the object of which is to insure a perfect fit on its surface with the bolster of the knife-scale, which is frequently prevented by a roughness or obstruction on the bottom of said bolster; but by cutting said covering at a slight angle a perfect fit is assured.

In Fig. 5 of the drawings I have shown a knife-scale f, which is generally composed of brass and upon one end of which is mounted a cap f^2 and on the other end a bolster f^3, and in practice either the bolster f^3 or the cap f^2 is inserted into the recess d^4 of the carrier d^2, as plainly shown in Fig. 3, and is held therein by the covering d^5 thereof, and the outer cap f^2 or bolster f^3, as the case may be, is then placed in the recess d^3, said recess being large enough to receive the caps or bolsters of any knife-scale for which my matching-machine is adapted, and when so placed therein the end c^5 of the bar c is in its inmost position, as shown in Fig. 1, and the handle c^3, bar c, and carrier d^2 are all in the initial position shown in said figure, and when in this position the untrimmed covering e is placed in the position shown in Fig. 1, and the finger d^7 serves to hold said covering e against movement while in this position, as such movement would result from the curved edges of the said covering e, and because of the finger d^7 the outer end of the covering e may be squarely trimmed, as will be seen. If the space between the cap f^2 and the bolster f^3 be slightly greater than usual and the bolster f^3 when placed in position, as shown in Fig. 3, rests against the outer edge d^8 of the recess d^4, the inner edge of the cap f^2 will not rest against the inner edge d^9 of the recess d^3, because of the excess length, and if the handle c^3 be at this time moved the outer end c^5 of the bar c is first moved against the inner edge of the cap f^2 of the scale f, this movement of the bar c independent of the carrier d^2 being greater or less, according to the space between the cap f^2 and the bolster f^3, and this movement may be described as "lost motion," as its only result is to engage the end c^5 of the bar c with the head f^2; but the extreme movement of the bar c being limited by the position of the handle c^4, which in its forward position bears against the base-plate b, and the slight movement of the bar c having already occurred to engage the cap f^2 the further movement of the handle c^3 is thereby curtailed correspondingly, and when the handle c^3 is moved after the end c^5 engages the cap f^2 the carrier d^2 is moved thereby, as will be understood, said carrier also moving the covering e against the grinding-wheel a^2.

In practice the covering e and the parts of my matching-machine are placed in the position shown in Fig. 1, at which time the scale f is placed in position, as shown in Figs. 2 and 3, and the handle c^3 is moved forwardly until the outer end of the covering e comes in contact with the grinding-wheel a^2, and this end of the covering e is ground to fit against the bolster or cap of the scale, after which the covering e is turned end for end and the parts returned to the position shown in Fig. 1, and when the handle c^3 is again moved outwardly the bar c moves a short distance to engage the cap f^2, neither the carrier d^2 nor the covering e having been affected by this movement, and the handle c^3 is then forced forwardly until the covering e bears against the grinding-wheel a^2 and is held against the same until the end thereof is ground sufficiently to permit the handle c^3 striking against the end of the base-plate b, at which time the parts are withdrawn to the position shown in Fig. 1, the scale f removed from the carrier, and the covering e is ready for mounting on said scale, this operation insuring a perfect fit at each end of said scale for the reason hereinbefore explained, and the lost motion of the handle c^3 permitting lessened continued movement thereof the said covering has not been ground away as much as though there had been less or no lost motion, and this movement of the bar c independent of the carrier d^2 regulates the length of the covering, as will be readily understood.

Although I have shown my matching-machine adapted for use in connection with knife-scales having rounded caps and bolsters, it will be evident that the same may be adapted for use in connection with scales having caps or bolsters of any shape or with scales provided only with a cap at one end thereof, and various other changes in and modifications of the construction herein shown and described may be made in order to adapt my matching-machine for use in connection with any form of knife-scale, and the machine may be mounted in any suitable manner, at any suitable angle, and permitting any suitable movement of the handle c^3, and with this reservation

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

1. A matching-machine for knife-handle coverings, comprising a base upon which a covering rests, a grinding device adjacent to said base, a carrier on said base and bearing against said knife-covering, and means for limiting the movement of said carrier and said knife-covering, substantially as shown and described.

2. A matching-machine for knife-coverings, comprising a base upon which a knife-covering rests, a carrier slidably mounted on said base and bearing against said knife-covering, a bar in operative connection with said carrier and a handle adjustably mounted on said bar and limiting the movement thereof, substantially as shown and described.

3. A machine for matching knife-coverings to knife-scales, comprising a base adapted to support one of said coverings, a carrier on said base and bearing against said covering, a bar in operative connection with said carrier, said carrier being provided with recesses into which the cap and bolster of a knife-scale are adapted to pass, and means connected with said bar for moving said carrier and said knife-covering to a position whereby said covering is ground to fit between said cap and said bolster of said scale, substantially as shown and described.

4. A machine for matching knife-coverings to knife-scales, comprising a base upon which one of said coverings is adapted to rest, a carrier slidably mounted on said base, a handle in operative connection with said carrier and devices connected with said carrier whereby said knife-covering is moved a predetermined distance, substantially as shown and described.

5. A machine for fitting knife-coverings to knife-scales, comprising a base upon which one of said knife-coverings is adapted to rest, a carrier slidably mounted on said base and bearing against said knife-covering, a handle in operative connection with said carrier, said carrier being adapted to receive said knife-scale, and means connected with said carrier for moving the same a greater or less distance according to the distance between the cap and bolster on said knife-scale, substantially as shown and described.

6. A machine for fitting knife-coverings to knife-scales between the caps or bolsters thereof, comprising a base upon which one of said knife-coverings is adapted to be moved, a carrier on said base, said carrier being adapted to receive a knife-scale, a bar in operative connection with said carrier, a handle adjustably mounted thereon and limiting the forward movement of said bar, said bar and handle being capable of movement independent of said carrier a distance equal to the difference in length of the knife-scale between the cap and bolster thereof, and the length thereof between a normal knife-scale, substantially as shown and described.

7. A machine for fitting knife-coverings to knife-scales between the caps or bolsters thereof, comprising a base upon which one of said knife-coverings is adapted to be moved, a carrier on said bar, said carrier being adapted to receive a knife-scale, a bar in operative connection with said carrier, a handle adjustably mounted thereon and limiting the forward movement of said bar, said handle and said bar being capable of movement independent of said carrier, substantially as shown and described.

8. A machine for fitting knife-coverings to knife-scales, comprising a base upon which one of said knife-coverings is adapted to be moved, a carrier slidably mounted on said base, a bar movable in said base and carrier, and means for limiting the movement of said bar, substantially as shown and described.

9. A machine for fitting knife-coverings to knife-scales comprising a base upon which one of said knife-coverings is adapted to be moved, a carrier slidably mounted on said base, a bar movable in said base and carrier, devices for limiting the movement of said bar, said carrier being adapted to receive one of said knife-scales and means connected with said carrier and said knife-scale for permitting independent movement of said bar, substantially as shown and described.

10. A machine for fitting knife-coverings to knife-scales, comprising a base for supporting one of said knife-coverings, a device for receiving one of said knife-scales and in operation with said knife-covering and means for moving said scale-receiving device, the distance of said movement being determined by the length of said scale, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 17th day of October, 1904.

EDWARD PRIMROSE.

Witnesses:
EARL E. ELLIS,
CORA L. ELLIS.