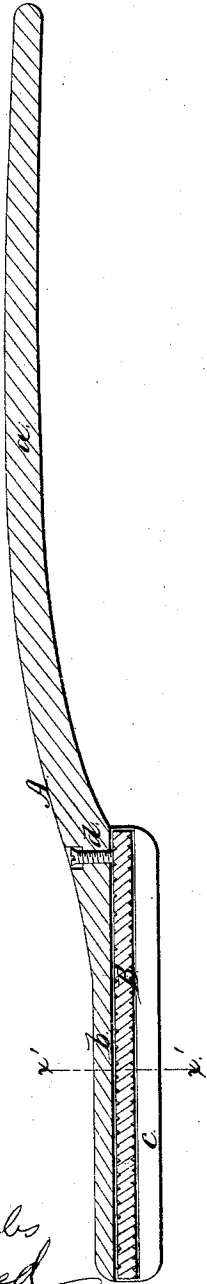


*J. P. Howell,*  
*Horse-Tooth File,*

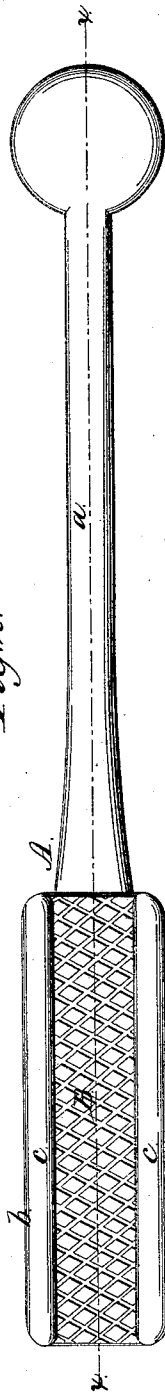
*No 38,391,*

*Patented May 5, 1863.*

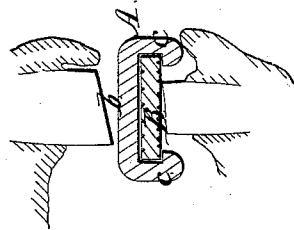
*Fig 1.*



*Fig 2.*



*Fig 3.*



*Witnesses.*

*J. W. Coombs*  
*G. W. Reed*

*Inventor.*

*J. P. Howell*  
*per M. M. H. G.*  
*attorneys*

# UNITED STATES PATENT OFFICE.

J. P. HOWELL, OF WASHINGTONVILLE, NEW YORK.

## IMPROVEMENT IN HORSE-TOOTH FILES.

Specification forming part of Letters Patent No. **38,391**, dated May 5, 1863; antedated February 21, 1863.

*To all whom it may concern:*

Be it known that I, J. P. HOWELL, of Washingtonville, in the county of Orange and State of New York, have invented a new and Improved File for Filing Horses' Teeth; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side sectional view of my invention, taken in the line *x x*, Fig. 2. Fig. 2 is a face view of the same; Fig. 3, a transverse section of the same, taken in the line *x' x'*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

This invention consists in having the file and stock made separately, and the file fitted in the stock in such a manner that it may be adjusted and secured therein and removed therefrom with the greatest facility, and a far more economical implement obtained for the purpose than those hitherto used.

The ordinary horse-tooth file is composed of a file and stock or handle made or forged out of one piece of metal, involving considerable expense in the construction, and possessing the disadvantage of becoming wholly worthless when the file portion is worn smooth by use.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the stock or handle of the implement, which is made of malleable cast-iron and of the usual form, one portion, *a*, which is grasped by the hand of the operator, being slightly curved, as shown in Fig. 1, the other portion, *b*, being shorter than *a*, perfectly flat and straight, and provided with lips *c*—one at each edge or side—of hook form, and projecting down so as to form grooves or guides to receive the file B, as shown clearly in Fig. 3.

The file B is constructed of a flat steel plate cut at both sides, and of such a width as to fit snugly between the lips *c c*, and is secured therein, so as to prevent casual movement, by means of a set-screw, *d*, which passes through the inner part of the flat portion *b* of the stock or handle, and passes against the file, as shown in Fig. 1.

The lips *c c* perform two functions, one as a means to secure the file to the stock, and

the other as guides to the implement while in use.

The teeth of the horse wear obliquely, as indicated in red outline, Fig. 3, owing to the lateral grinding motion which is given the lower jaw in masticating their food; and when a horse becomes aged the obliquity of the grinding-surfaces of the teeth becomes so great as to seriously interfere with the proper mastication of the food; hence the necessity for filing the teeth.

The application of the implement is shown in Fig. 3, the file being rubbed over the face or grinding-surfaces of the teeth, and the lips *c c* serving as guides in consequence of projecting over the edges of the teeth.

The form or shape of my invention is the same as that of the ordinary kind, and is used in precisely the same way; but as the latter is constructed or forged out of a single piece of metal, (steel,) it will be seen that the material alone will be more expensive than that used in my invention, as the file in the latter is all that requires to be of steel, the stock or handle being of malleable cast-iron.

The ordinary horse-tooth file is also attended with considerable expense in the construction. The forming of the lips *c* requires considerable time, and these lips prevent the file portion from being properly cut in consequence of the former projecting down beyond the face of the latter, and when the file is worn smooth the implement is useless.

In my invention, when one side of the file is worn smooth it may be removed from the stock or handle and reversed, so that the other side may be used; and when both sides are worn smooth a new file may be adjusted in the stock or handle, the latter lasting indefinitely. In my invention, also, the file, in consequence of being made separately from the stock or handle, may be properly cut and with the greatest facility, equally so as the ordinary files in use.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A horse-tooth file composed of a cast-metal stock or handle, A, and a file, B, made separately and fitted together, substantially as herein shown and described.

J. P. HOWELL.

Witnesses:

W. B. CHACE,

W. W. FANNING.