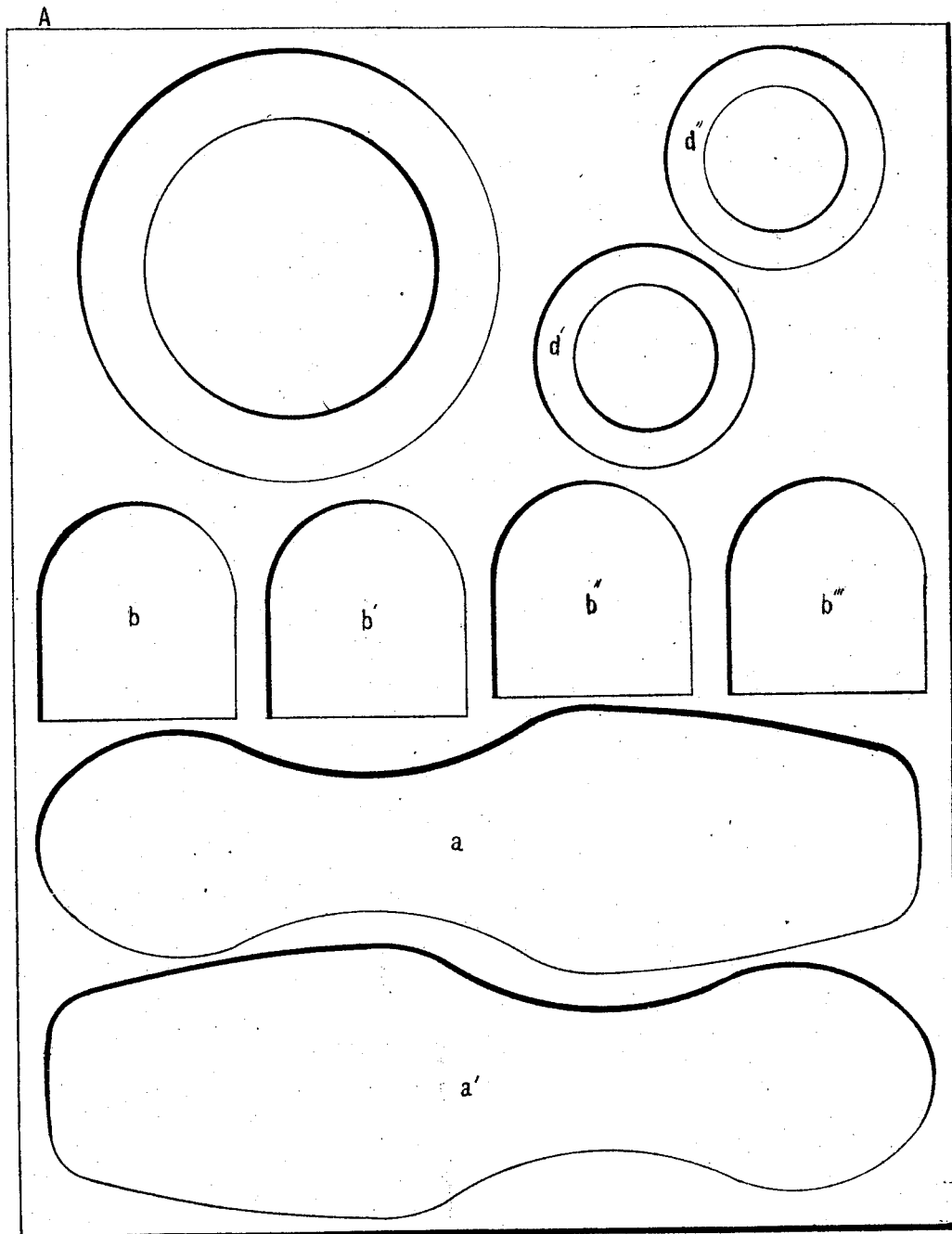


*W. Adamson.*  
*Cutting Leather.*

*No 46,061.*

*Patented Jan. 31, 1865.*



Witnesses:  
*W. Albert Steel.*  
*Charles Horner.*

Inventor:  
*Henry Howson*  
*Atty for W. Adamson.*

# UNITED STATES PATENT OFFICE.

WILLIAM ADAMSON, OF PHILADELPHIA, PENNSYLVANIA.

MODE OF ECONOMIZING THE MANUFACTURE OF ARTICLES OF LEATHER.

Specification forming part of Letters Patent No. **46,061**, dated January 31, 1865; antedated December 29, 1864.

*To all whom it may concern:*

Be it known that I, WILLIAM ADAMSON, of Philadelphia, Pennsylvania, have invented a Mode of Economizing the Manufacture of Articles of Leather; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

My invention consists in cutting from raw or untanned hides or skins, or parts of the same, pieces of the size or about the size and form required for useful articles of tanned leather, and tanning the said pieces after they have been thus cut from the raw or untanned hides.

The object of my invention is the economizing of the manufacture of the sole and heel pieces and other useful articles of leather by a saving of time, labor, and material in tanning, and by retaining the remnants, after cutting the articles from the skins, in a condition which renders them of marketable value.

The accompanying drawing will serve to illustrate my invention.

A represents a strip of ordinary sole-leather from which have to be cut the two sole-pieces *a* and *a'*, the four heel-pieces *b*, *b'*, *b''*, and *b'''*, and the three washers or packing-pieces *d*, *d'*, and *d''*.

It will be evident that however carefully and economically these pieces may be cut from the leather, a large portion of the original strips must be left as remnants.

In many cases the cutting of a number of useful articles from a strip of leather involves the sacrifice in waste of one-fifth of the entire area, and consequently of the weight of the strip.

It is true that waste leather has been used to some extent for manufacturing and chemical purposes, but its value is so trifling that it is not considered worth the cost of removal from place to place.

If we take a piece of tanned sole-leather weighing twenty pounds, and cut from it as many desired articles of utility as possible, and there be a waste of one-fifth of the entire piece—namely, remnants weighing four pounds—and if the cost of material and labor demanded in tanning the leather be calculated at the moderate estimate of six cents per pound, the loss in obtaining sixteen pounds

of useful articles of leather will be twenty-four cents. In order to avoid this loss and to render the remnants of marketable value, I take the raw hides or untanned skins and cut from the same pieces of a form suitable for any desired articles of leather, and subsequently submit these pieces to the process of tanning, leaving the remnants to be converted into glue, gelatine, or into size for paper-makers.

Now, if we suppose a piece of untanned leather to be equal in extent to and in weight one-third less than the piece of tanned leather previously alluded to, and the useful pieces cut therefrom to be the same, there will be about three pounds of untanned leather or rawhide as remnants, the present value of which may be estimated at eight cents per pound. My invention practiced on twenty pounds of merchantable rawhide will consequently have the following economical result: saving of material and labor in tanning four pounds of remnants, at six cents per pound, twenty-four cents; value of three pounds of remnants of untanned leather or rawhide, at eight cents per pound, twenty-four cents. Thus, in producing sixteen pounds of useful articles of leather, my invention effects a saving of forty-eight cents.

The estimates above given are very moderate, and, for the production of many useful articles of leather, far beneath the average results.

There is another economical result in the practice of my invention. Small pieces of leather can be tanned with greater rapidity than large pieces, and consequently there is a saving both of time and labor.

The utility and economy of my invention will, however, appear most prominent where it is practiced on raw hides and portions of hides which have hitherto been deemed too valueless to be submitted to the tanning process—such, for instance, as tanners' offal, the portions of the skin of oxen, &c., which cover the head, neck, legs, &c., which cannot be tanned with advantage; or, for instance, damaged and imperfect hides, and the raw hides which inclose packages of imported wool, indigo, bark, &c., and other articles of merchandise.

The skins covering the head and neck of oxen, &c., are generally so wounded or cut,

and have so much matter in them which cannot be tanned—as, for instance, the ears, snout, lips, and jowls—that to submit them to the expensive process of tanning for conversion into leather, would be useless, as the surface of the leather would present so many wounds and imperfections that but few useful articles could be cut from the skins compared with the amount of remnants, upon which the expensive process of tanning would be thrown away. The same remark will apply to damaged hides or raw hides in which packages of wool, &c., are inclosed, these hides being so damaged and injured by iron hoops, holes, cuts, &c., that they are of very little value.

Now, in practicing my invention on these offal, injured or damaged skins, I cut from the most perfect parts of them, while in their raw state, as many articles of the desired form as possible, and submit these articles to the tan-

ning process, leaving the remnants to be converted into glue or size. I thus obtain from these imperfect skins, hitherto discarded for tanning purposes, valuable articles of leather.

I claim as my invention and desire to secure by Letters Patent—

Cutting from raw or untanned hides or skins, or parts of the same, pieces of the size or about the size and form required for useful articles of tanned leather, and tanning the said pieces after they have been thus cut from the raw or untanned hides, as and for the purpose herein set forth.

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

WM. ADAMSON.

Witnesses:

JAMES MCCALUN,  
CHARLES HOWSON.