(No Model.)

# W. MILLSPAUGH.

## DRAW SHAVE.

No. 325,759. Patented Sept. 8, 1885.

FIG. 1.

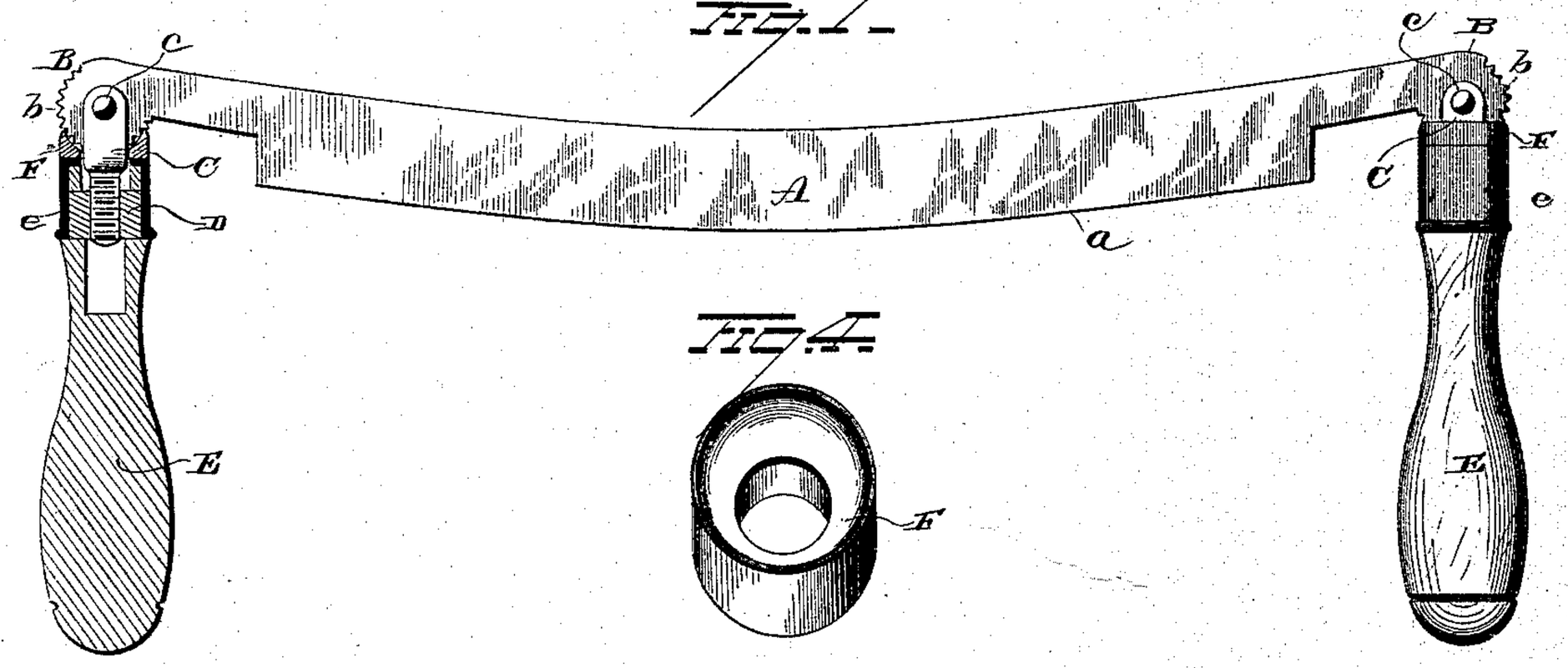



FIG. 4.




FIG. 2.

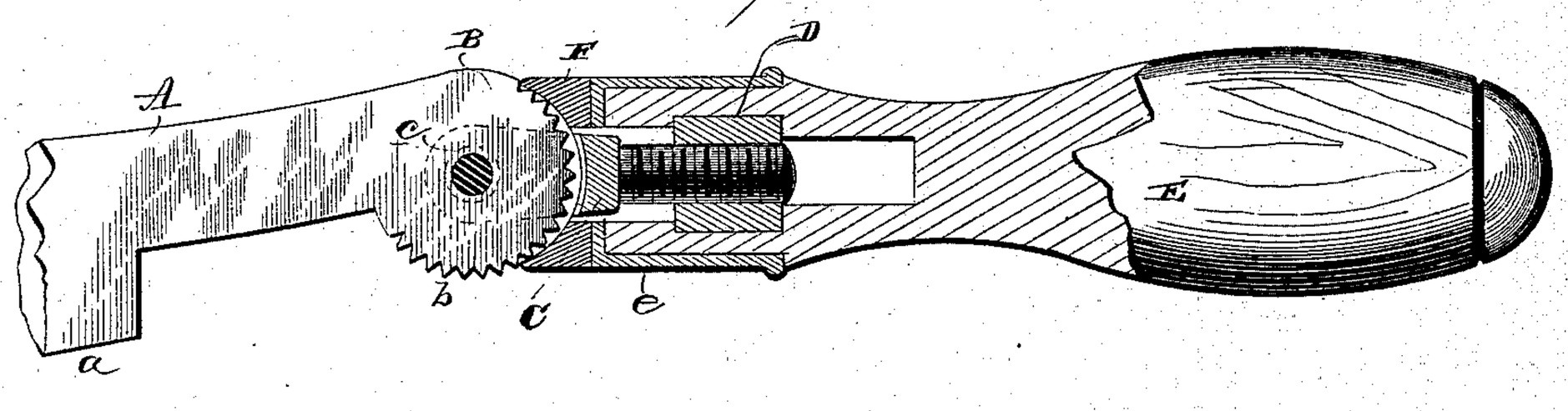
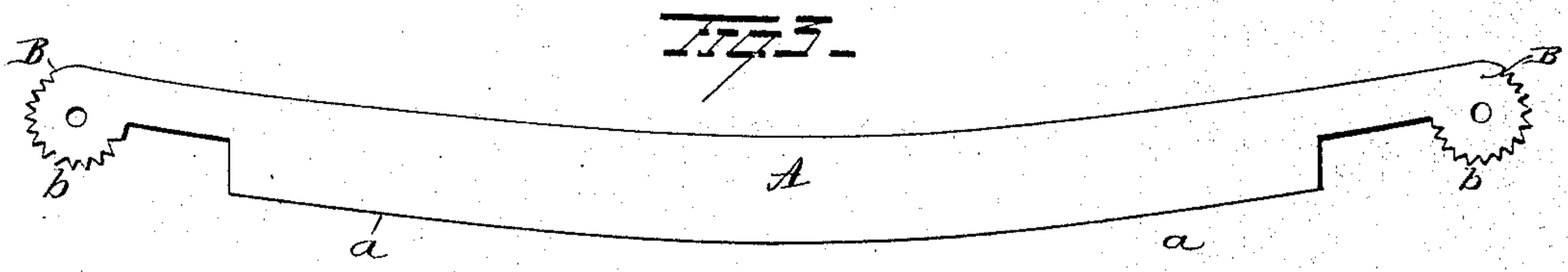



FIG. 3.




WITNESSES

D. Mottingham

Geo. F. Downing.

INVENTOR

Wm Millspaugh.

By H. A. Seymour Attorney.

# UNITED STATES PATENT OFFICE.

WILLIAM MILLSPAUGH, OF MIDDLETOWN, NEW YORK.

## DRAW-SHAVE.

SPECIFICATION forming part of Letters Patent No. 325,759, dated September 8, 1885.

Application filed July 3, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM MILLSPAUGH, of Middletown, in the county of Orange and State of New York, have invented certain new and useful Improvements in Draw-Knives; 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.

My invention relates to an improvement in draw-knives.

The object is to provide a draw-knife in which the handles may be conveniently and securely adjusted at any angle to the knife-blade in the plane of the said blade and readily detached therefrom for packing or other purposes.

With these ends in view my invention consists in certain features of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view of the knife with handles adjusted for ordinary use, one of the handles being in section. Fig. 2 shows the handle in a convenient adjustment for grinding the knife. Fig. 3 is a detached view of the knife-blade, and Fig. 4 is a detached view of the concave-faced washer.

A represents the knife-blade, constructed in curved form, as is usual, and provided with the cutting-edge *a*. The ends of the blade A are of circular form, as shown at B, and are provided on their curved edges with series of saw-tooth projections *b*.

The above construction of the blade admits of forming it of solid steel, and as the tangs for securing it to the handle are formed separate the blade can be made from the solid steel cheaper than it can be forged from iron and steel, as is commonly the case.

The tangs C are provided with bifurcated heads, the branches of which embrace the sides of the circular ends B, and are pivotally secured thereto at the centers of the circular ends by pins or rivets *c*. The stems of the tangs C are screw-threaded, and adapted to engage stationary nuts D, located within the handles E. The handles E are of ordinary form, and are provided with cap-ferrules *e*. The socket ends of the handles are thus made perfectly smooth, and form seats for the bases of solid concave-faced washers F, interposed between the handles and the ends of the blade. The washers F loosely surround the tangs, and the curves of their concave faces conform to the curve of the circular ends B. Thus wher the threaded end of the tang is in engagement with the stationary nut within the handle the washer B may be forced into contact with the sharp teeth on the ends B by turning the handle.

As several of the teeth simultaneously engage the concave surface of the washer, the handle is secured thereto in a firm manner and with but slight exertion upon the screw, and by unscrewing the handle a very short distance it may be swung outwardly or inwardly at pleasure.

The shifting of the handles at different angles to suit different cuts is well known to be a decided advantage, and the turning of the handle into a position in a line with the blade, or nearly so, enables the person holding the knife on a grindstone to exert his pressure to advantage and hold the edge steadily in the desired position. The removal of the handles for packing purposes is also a feature calculated to lessen the cost of the article.

The projections on the ends B are represented and described as saw-tooth projections; but while the form shown is considered the most desirable, on account of the fine degree of adjustment which it allows and the ease with which a firm contact is established, I do not wish to limit myself strictly to that form of projection, as they might be formed with rounded points, or even flat points, and at longer intervals apart, and yet prove quite effective; or the edges of the circular ends might be left perfectly smooth. I would have it understood, therefore, that I do not wish to limit myself strictly to the construction herein set forth, but reserve the privilege of making such changes as fairly fall within the spirit and scope of my invention.

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

1. The combination, with a blade provided with rounded ends, of threaded tangs pivotally secured at the centers of the rounded ends, and handles adapted to engage the tangs and turn into locked adjustment against the

edges of the rounded ends, substantially as set forth.

2. The combination, with a blade provided with rounded ends having teeth or projections on the edges, of threaded tangs pivotally secured at the centers of the rounded ends, and handles provided with female screw-threads adapted to engage the threaded tangs, and thereby move the handles into and out of locked adjustment with the toothed edges of the rounded ends, substantially as set forth.

3. The combination, with a blade provided with circular-shaped ends having sharp teeth on their edges and threaded tangs pivotally secured at the centers of the circular-shaped ends, of handles adapted to screw on the tangs, and concave-faced washers located between the handles, and circular ends adapted to be forced into contact with the sharp teeth, and thereby lock the handles in the desired angular adjustments, substantially as set forth.

4. The combination, with a blade having rounded ends and handles, substantially as described, adjustably secured to said rounded ends, of concave-faced washers interposed between the handles and blades, substantially as set forth.

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

WILLIAM MILLSPAUGH.

Witnesses:
W. K. STANSBURY,
C. I. HUMPHREY.