(Model.)

P. F. CHANDLER.

GAGE FOR DRAWING KNIVES.

No. 322,040. Patented July 14, 1885.

Fig. 1

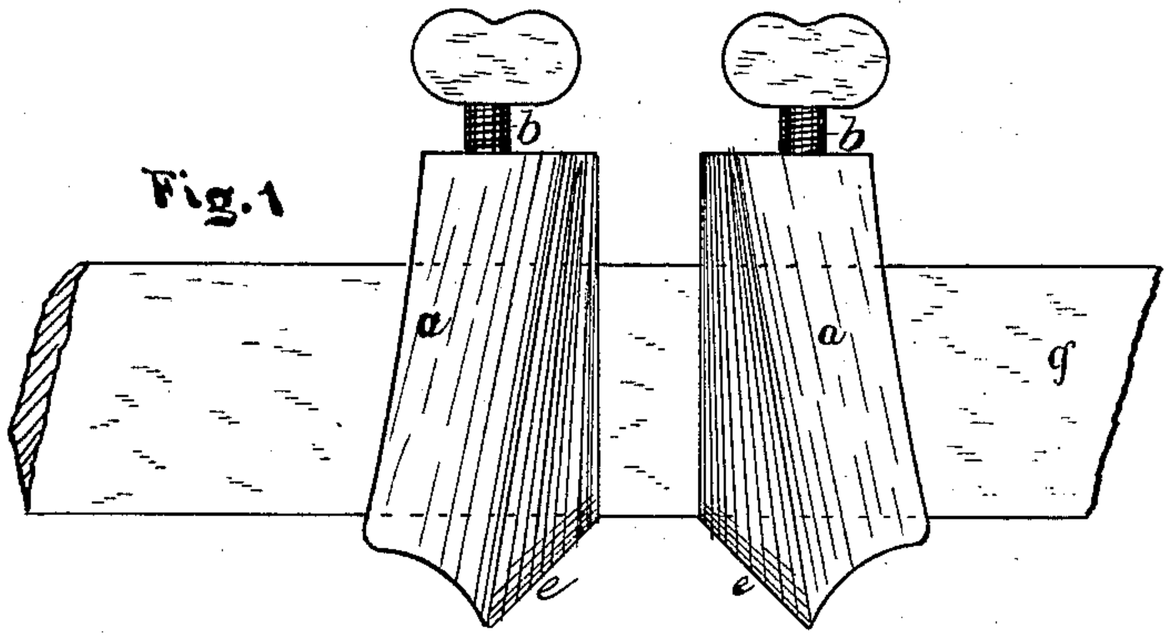


Fig. 2

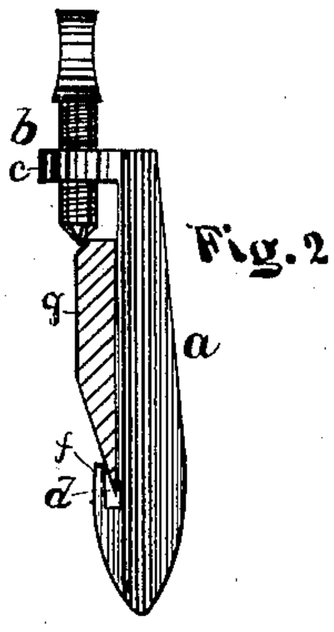


Fig. 3

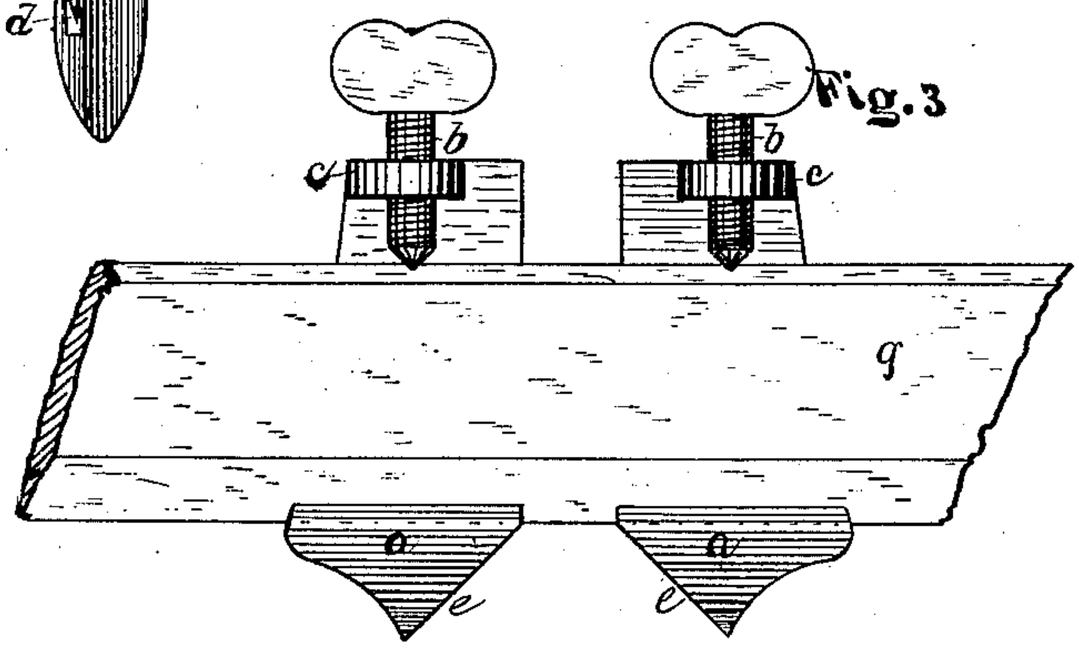
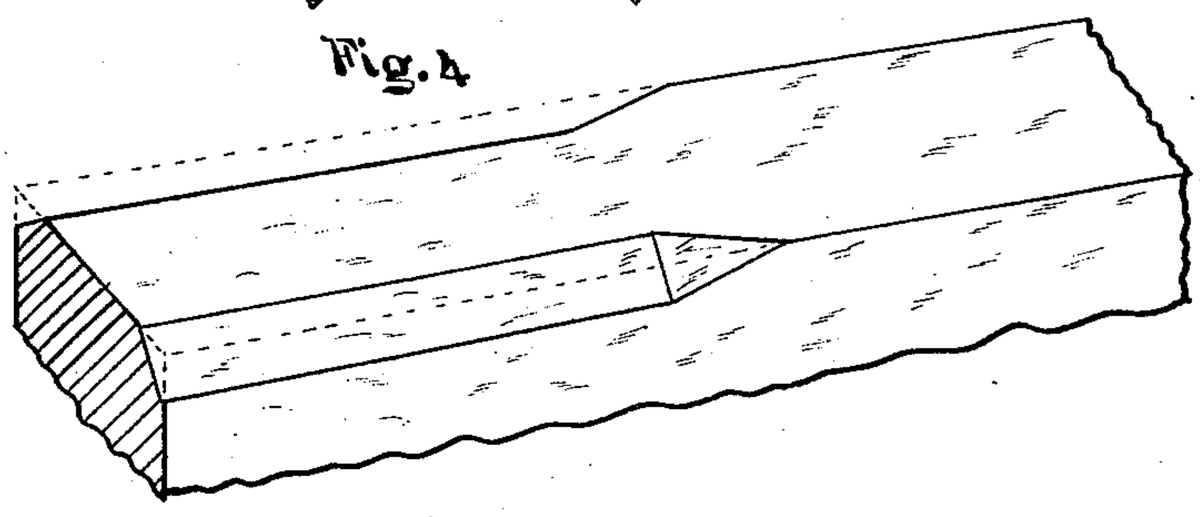


Fig. 4



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GAGE FOR DRAWING-KNIVES.

SPECIFICATION forming part of Letters Patent No. 322,040, dated July 14, 1885.

Application filed February 11, 1884. (Model.)

To all whom it may concern:

Be it known that I, PLINY F. CHANDLER, a citizen of the United States, residing in Springfield, Hampden county, Massachusetts, have invented new and useful Improvements in Adjustable Gages for Drawing-Knives, of which the following is a specification, reference being had to the accompanying drawings.

My invention consists in the construction and application of a gage or guide for drawing-knives, which guide or gage is made removable, and may be adjusted to any desired point on the blade. These guides are used more particularly when the drawing-knife is being used in chamfering. I therefore illustrate the guide for use in this respect, though the guide may be used to good advantage upon the blade of a drawing-knife when the knife is being used for other purposes.

Heretofore chamfering gages or side guides have been applied to spokeshave-frames; but these are in no way adapted to be applied to the blade of a drawing-knife or "draw-shave," as it is often termed.

A gage has been applied to the blade of drawing-knives to convert such tool into a spoke-shave; but such gages are not side gages, and are of no benefit when the tool is used in chamfering or other similar work.

The object of my invention is to construct a side gage of simple and cheap construction, which can be readily attached to or detached from the blade of an ordinary drawing-knife, and I accomplish this by the construction herein shown.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a front view of a section of the blade of a drawing-knife having two side gages applied thereto in position for use in chamfering. Fig. 3 is a view of the same reversed. Fig. 2 is a sectional end view of the blade, showing an edge view of the gage; and Fig 4 is a perspective of a piece of material after being cornered or chamfered.

The construction and application will be readily understood on reference to the drawings.

a represents the body portion of the gage, consisting of a piece of metal of about three-fourths of an inch in width, and about one-quarter of an inch in thickness through its central portion, and tapering from the thicker portion to the sides. The length of the body is equal to the width of the blade plus the length of the portion lettered *e*, which projects beyond the cutting-edge of the blade, and plus, also, a sufficient extension beyond the back of the blade to hold the projection *c*, through which the set-screw passes, and to allow of the ready insertion and removal of the blade. At the point *d* a hook or projection is formed, which passes over the cutting-edge of the blade and bears against the blade a short distance back of the cutting-edge. A recess or groove is thus formed between the part *d* and the body *a*, within which the cutting-edge of the blade rests. This groove should be of sufficient depth to allow the blade to fit therein and take its bearing against the sides, and the cutting-edge should be clear of contact. Thus all danger of dulling the edge in the application of the gage is avoided. The upper portion of the body is provided with an offset or projection, *c*, through which a set-screw, *b*, passes and bears upon the back of the blade, thus holding the edge firmly in the groove, and securely locking the gage in position. In use the inner or straight edges of the portion of the guide which projects beyond the cutting-edge of the blade bear against the material being operated upon, and thus prevent the slipping of the blade from side to side; and if the blade be held at a given angle in cutting the guide will enable the operator to cut the material in a uniform manner, that is—the line of the cutting-edge may be maintained at the same angle, with the side against which the face of the guide bears, throughout the whole cut. In chamfering, two guides being used, the drawing-knife being held in the same incline by the operative, the guides will permit the cutting-edge to operate upon the material until the inner faces of both of the guides bear against and lie parallel with the plane of the two sides of the material from which the corner is being removed. If but a small portion of the corner is to be cut from the material, then the guides are set near each other, and the greater the distance of separation of the guides from each other the greater will be the amount of material permitted to be removed before the guides' faces come in contact with the

sides of the material and prevent further cutting. The lower projecting portion, *e*, may be beveled, as shown in the drawings, or may be made straight, or of such shape as is best adapted to the work to be performed. In cornering a square piece of material the inner face of the gage—*i. e.*, the face which bears against the material being operated upon—should stand at an angle of forty-five degrees from the cutting-edge of the blade. The two gages may of course be secured together; or if desired for one special class of work the two projecting parts which come in contact with the material may be secured to one body. This body or point of connection, however, should in no event be near the portion of the cutting-edge of the blade, which is to be used, for with my device the portion of the cutting-edge to be used should be free and open upon both the front and back. It will be seen, therefore, that the construction illustrated may be varied a considerable extent without departing from my invention, and I do not limit myself to the exact construction shown.

I am aware of the United States Letters Patent to A. W. Crossman, dated October 16th, 1883, No. 286,787, and I make no claim to the construction therein shown. The Crossman device is adapted to convert a drawing-knife into a spokeshave, while my invention has no such object in view, and my gages are not adapted to be connected together at or near the cutting-edge of the blade, nor to cover or come near to the portion of the edge of the blade being used, except at the side.

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

1. As a new article of manufacture, a gage or guide for drawing-knives, consisting of a body portion, *a*, of sufficient width to give a good bearing-surface and of a length to extend across the blade, the same being provided with an edge-receiving groove, as shown, and having a part, *e*, which projects beyond the edge of the blade as a guide, and a set-screw at the opposite end to hold the device in place on the blade, substantially as shown.

2. A side gage for drawing-knife blades consisting of a body, *a*, having an offset or lip, *d*, forming an edge-receiving recess, *f*, between the body and the offset, and having a part, *e*, formed integral with the body portion and projecting beyond the edge-receiving recess, and a means to secure the body to the blade, substantially as shown.

3. A side gage for drawing-knives consisting of a body, *a*, adapted to be secured to the blade, and having a part, *e*, projecting beyond the cutting-edge of the blade to act as a stop, and a means (as a set screw) to secure the whole in place, all in combination, substantially as shown.

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