A. GRUBER.

DIVIDERS.

No. 181,331. Patented Aug. 22, 1876.

Fig. 1.

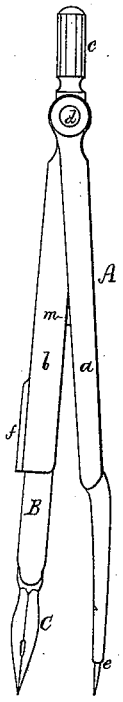

Fig. 2.

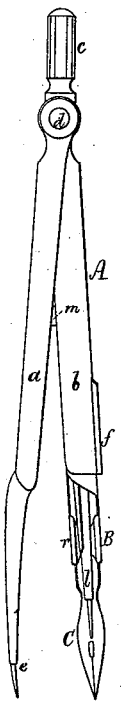

Fig. 3.

Fig. 5.

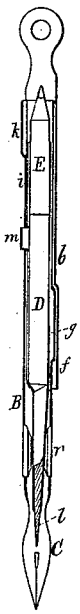

Fig. 6.

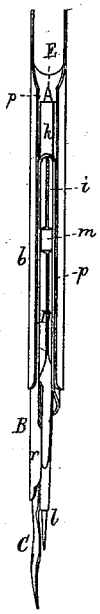

Fig. 7.

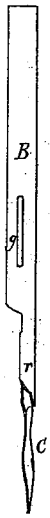

Fig. 4.

Fig. 8.

Witnesses.
S. N. Piper.
L. M. Müller

Adolphe Gruber.
by his attorney.
R. H. Eddy.

UNITED STATES PATENT OFFICE.

ADOLPHE GRUBER, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO L. PRANG & CO., OF SAME PLACE.

IMPROVEMENT IN DIVIDERS.

Specification forming part of Letters Patent No. **181,331**, dated August 22, 1876; application filed April 24, 1876.

To all whom it may concern:

Be it known that I, ADOLPHE GRUBER, of Boston, of the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Drawing-Dividers or Compasses; and do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figures 1 and 2 are opposite side views of the instrument. Fig. 3 is an inner side view, and Fig. 4 a transverse section, of its pointed limb *a*. Fig. 5 is a longitudinal section, and Fig. 6 an inner side view, of its socketed or tubular and slotted limb *b*, with its tubular pen-carrier and pointed pencil-holder. Fig. 7 is a side view, and Fig. 8 an upper end view, of the pen-carrier.

The main part A of the instrument is composed of two limbs, *a b*, or such and a handle, *c*, arranged as shown, and hinged or pivoted together at one end of each, their pivot being represented at *d*. These limbs are made of sheet metal, one—viz, *a*—being trough-shaped or recessed, to receive the other, *b*, when folded down upon it. Furthermore, the limb *a* terminates in or is provided with a compass-point, *e*, extended from it, as shown. The other limb *b* is tubular, and on its inner side is slotted from end to end, as shown at *p*. At its free end it has a long grooved or concavo-convex projection, *f*, extended from it, to receive a similar projection, *g*, extended from one side the pen-carrier B. This pen-carrier is a tube slotted lengthwise, and provided at one end with a socket, *r*, to receive and hold a writing-pen, C. At its other end, and so as to extend over the slot *i*, as shown, is a concavo-convex or troughed projection, *k*, which is intended as a cover to the compass-point *e* when the pen-carrier is run pen foremost into the tubular limb *b*, and the two limbs are closed together.

Within the pen-carrier is a reversible pencil-holder, D, provided with a compass-point, *l*, extended from it, as shown. This pencil-holder is tubular, and slitted lengthwise, it being to hold a pencil, E, inserted in its open end.

The pencil-holder is furnished with a projection, *m*, extended from it through the slot of the pen-carrier, such projection being to enable a person, by pushing against it, to move the pencil-holder either way in the pen-carrier, in order to advance the compass-point or the pencil sufficiently beyond the said carrier for use, the projection *m* bringing up against either the pen-socket or the projection *k*.

On inserting the pen-carrier, pen-socket foremost, into the limb *b*, and closing the two limbs *a b* together, the projection *k* will receive and cover the compass-point *e*, and the projection *g* will enter the projection *f* and stop the point of the pen from being pushed against the handle *c*, to the injury of such point.

On reversing the pen-carrier—that is, on shoving it, open end foremost, into the leg *b*—the projection *g* may be made to enter the projection *f*, so as to stop the pen, or the compass-point *l*, or pencil, in the right position for being used with the point *e* for plotting or drawing.

The instrument above described, made mostly of sheet metal, can be manufactured very cheaply, and afforded at a small price to draftsmen, mechanics, or others. It can be folded together so as to be carried in the vest-pocket without danger of injury to the same.

I claim—

1. The combination of the troughed limb *a*, provided with the compass-point *e*, with the slotted and tubular limb *b*, provided with the concavo-convex projection *f*, to receive the projection *g* of the pen-carrier, such limbs *a b* being pivoted together or to a handle at their upper ends, as set forth.

2. The tubular pen-carrier B, provided with the pen-socket *r* and the projection *g*, arranged as set forth.

3. The slotted tubular pen-carrier B, provided with the pen-socket *r*, and the compass-point cover *k*, arranged as shown.

4. In combination with the part A, as described, the removable tubular and slotted pen-carrier B, and the removable reversible compass-pointed pencil-holder D, all constructed and arranged substantially as set forth.

ADOLPHE GRUBER.

Witnesses:
R. H. EDDY,
J. R. SNOW.