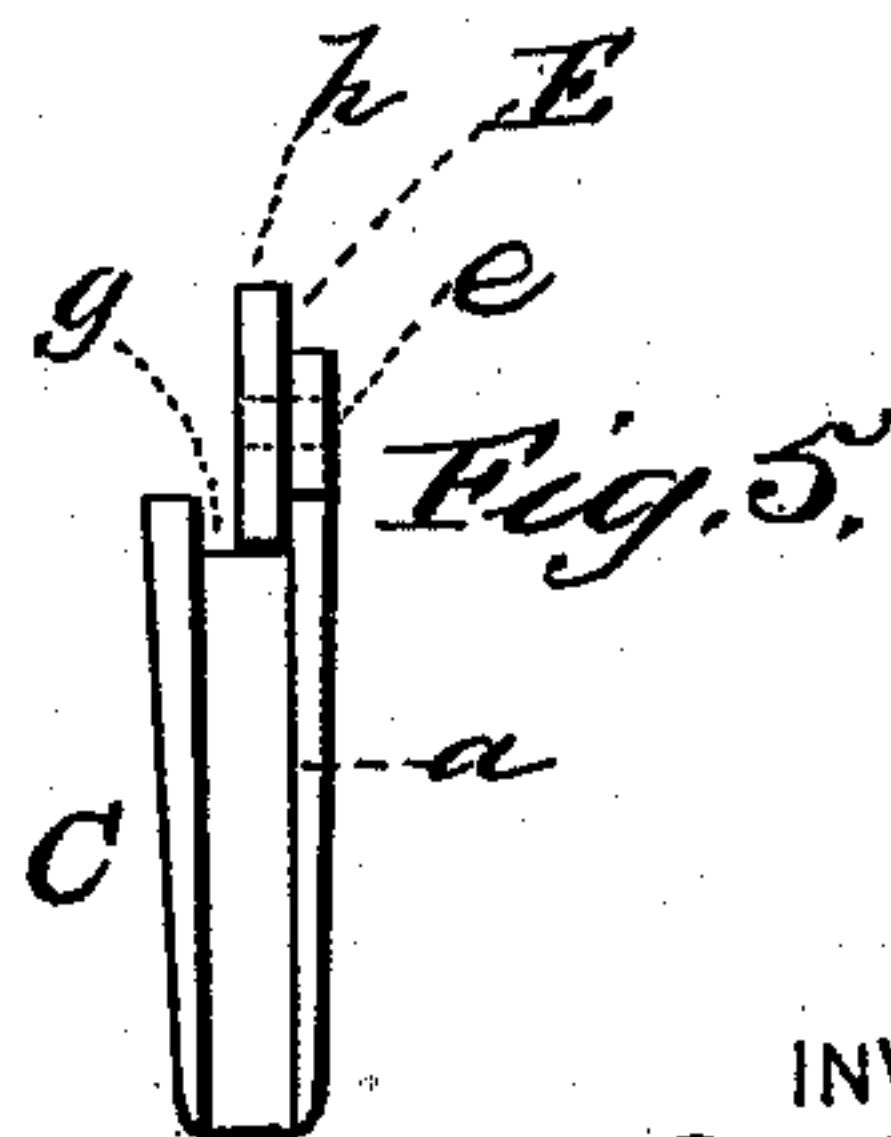
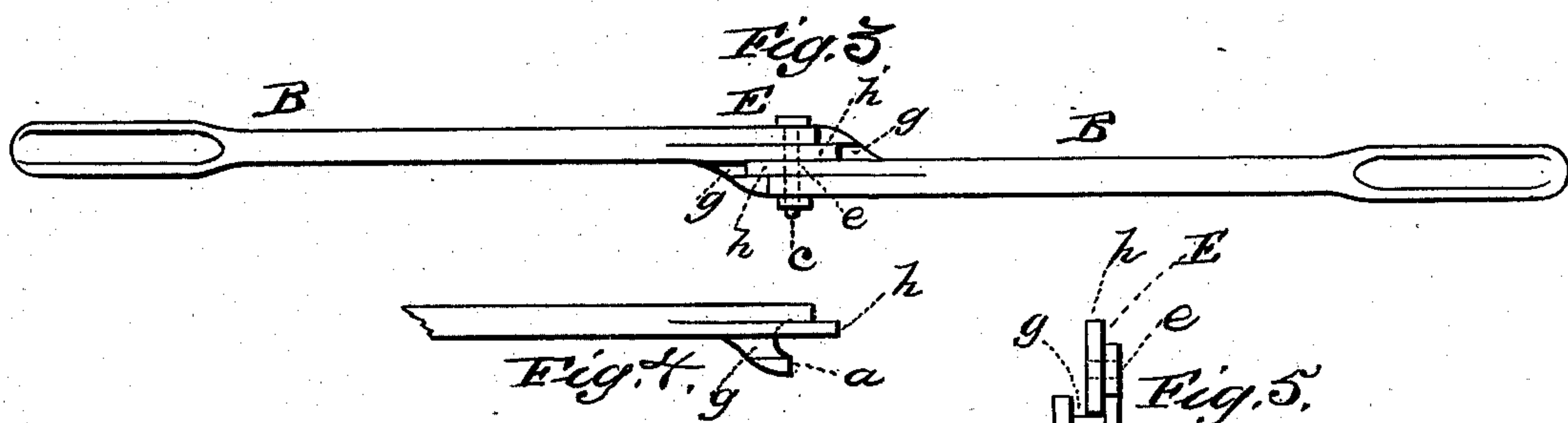
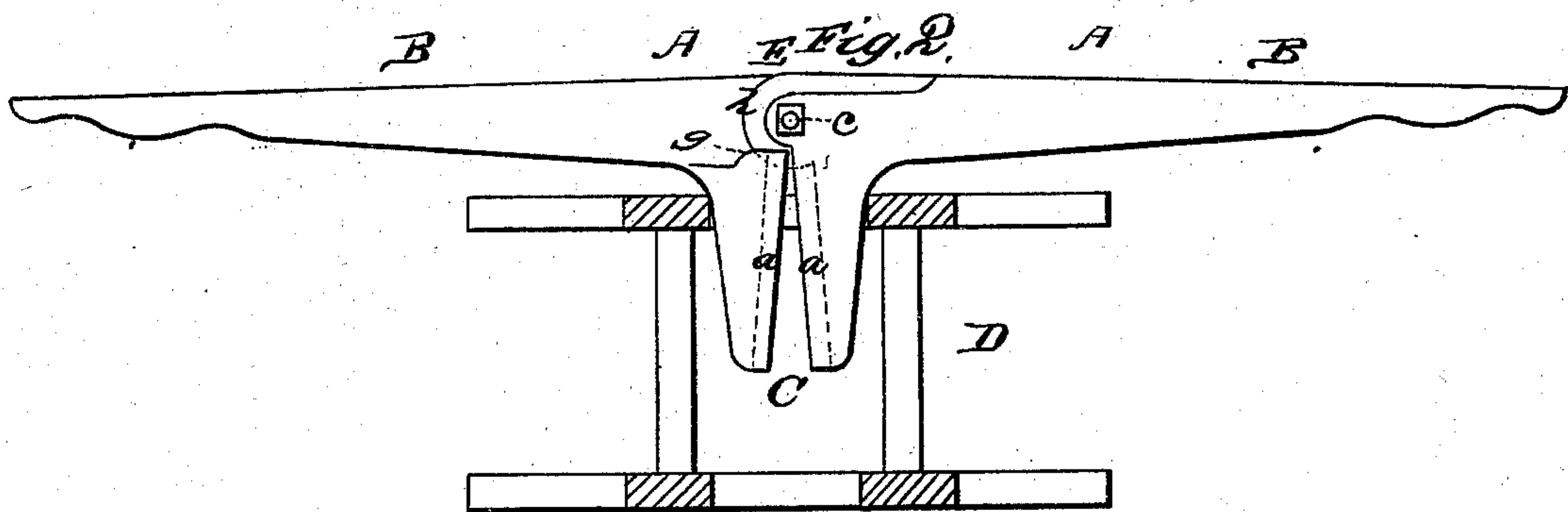
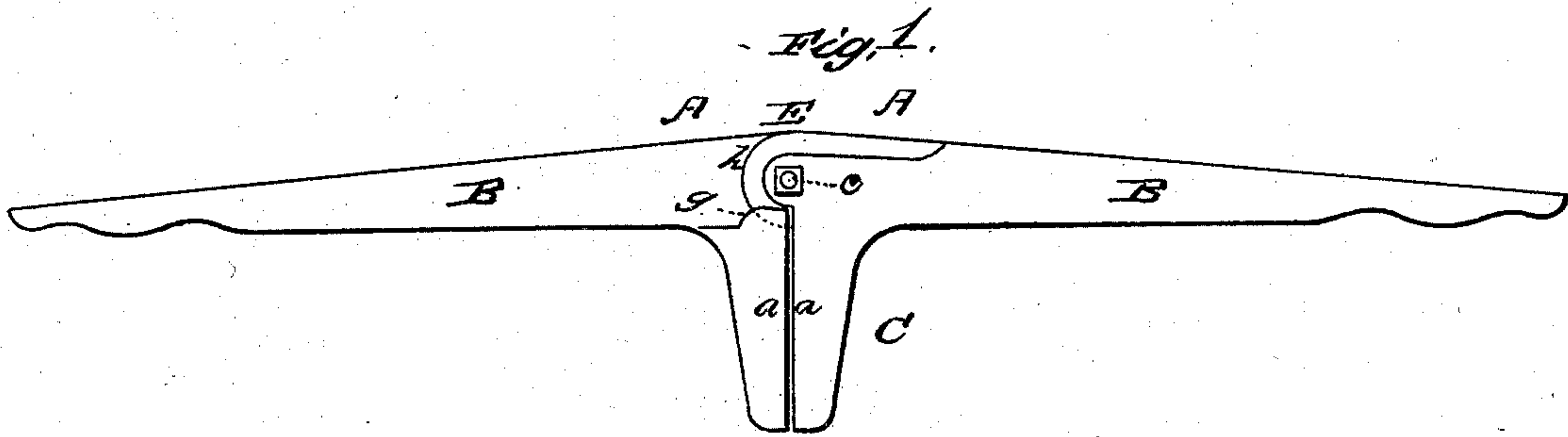


(No Model.)

A. PALM.
GRAPPLE.

No. 258,203.

Patented May 16, 1882.



WITNESSES
E. H. Bates
Philip L. Masi.

INVENTOR
A. Palm.
by Anderson Smith
his ATTORNEYS

UNITED STATES PATENT OFFICE.

ANDREW PALM, OF LAWRENCE, KANSAS, ASSIGNOR OF ONE-HALF TO THE
LAWRENCE PLOW COMPANY, OF SAME PLACE.

GRAPPLE.

SPECIFICATION forming part of Letters Patent No. 258,203, dated May 16, 1882.

Application filed March 23, 1882. (No model.)

To all whom it may concern:

Be it known that I, ANDREW PALM, a citizen of the United States, and a resident at Lawrence, in the county of Douglas and State of Kansas, have invented a new and valuable Improvement in Grapples; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side view of my improved grapples. Fig. 2 is a similar view of the same, showing the grapple applied to a "coiled-wire spool." Fig. 3 is a top view, and Figs. 4 and 5 are detail views, of the same.

This invention has relation to devices for lifting and handling barbed fence-wire wound on core frames or spools; and the invention consists in the construction and novel arrangement of a pair of angle-levers having short arms or bills meeting each other squarely, and pivoted through lapping lugs extending beyond the meeting faces of the bills at the angles.

The invention also consists in providing the angular portions of the levers with grooved shoulders to engage the edges of the projecting lugs, thereby forming a laterally-braced joint, which will materially strengthen the lifter, all as hereinafter set forth.

In the accompanying drawings, the letters A A designate the angle-levers, each of which is formed with a long arm or handle, B, which may be straight or somewhat bent, and a short arm or bill, C, which is usually semicircular in cross-section on its outer surface or back, and on its face is formed with a meeting edge, *a*, designed to fit the meeting edge of the opposite bill when the two are brought together, forming a rounded projection of suitable size and form to be easily inserted into the central aperture of the spool D.

E represents the joint projection or lug, which extends beyond the face of the bill at the angle, and is laterally arranged to overlap

and bear against a similar projection or lug on the opposite lever. Usually a groove, *g*, is made in the shoulder *b* of each lever to engage a circular edge rib or flange, *h*, whereby the joint is strongly braced on each side. The perforations *e* for the passage of the pivot-bolt *c* are made through the lugs E in line with the meeting faces of the bill ends C.

When it is desired to lift a coil of wire on its spool the bill ends C are brought together, forming a rounded projection, which is inserted into the eye of the spool. By raising the handle ends B of the levers the bill ends are spread apart in the eye, so as to engage its wall securely, and the coil can be readily lifted and carried any required distance, its weight assisting materially in securing the purchase of the bill ends in the eye of the spool. When the coil is deposited on the ground the levers are at once disengaged from the eye.

This coil-lifter is designed to be especially useful in handling barbed fence-wire, because of the ease and rapidity with which it can be engaged and disengaged.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

1. The coil-lifter consisting of the angle-levers A A, having the bill ends C, meeting each other squarely to form a rounded projection to be inserted in the eye of the coil-spool, and pivoted together through laterally-lapping lugs E, extending beyond the meeting faces of the bill ends, substantially as specified.

2. The coil-lifter having its pivoted angle-levers A A provided at their angular portions with grooves *g* in the lateral shoulders *b* to engage the circular edges *h* of the projecting and lapping lugs E, thereby forming a laterally-braced joint, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ANDREW PALM.

Witnesses:

VERNON H. HARRIS,
LEVI A. DOENN.