

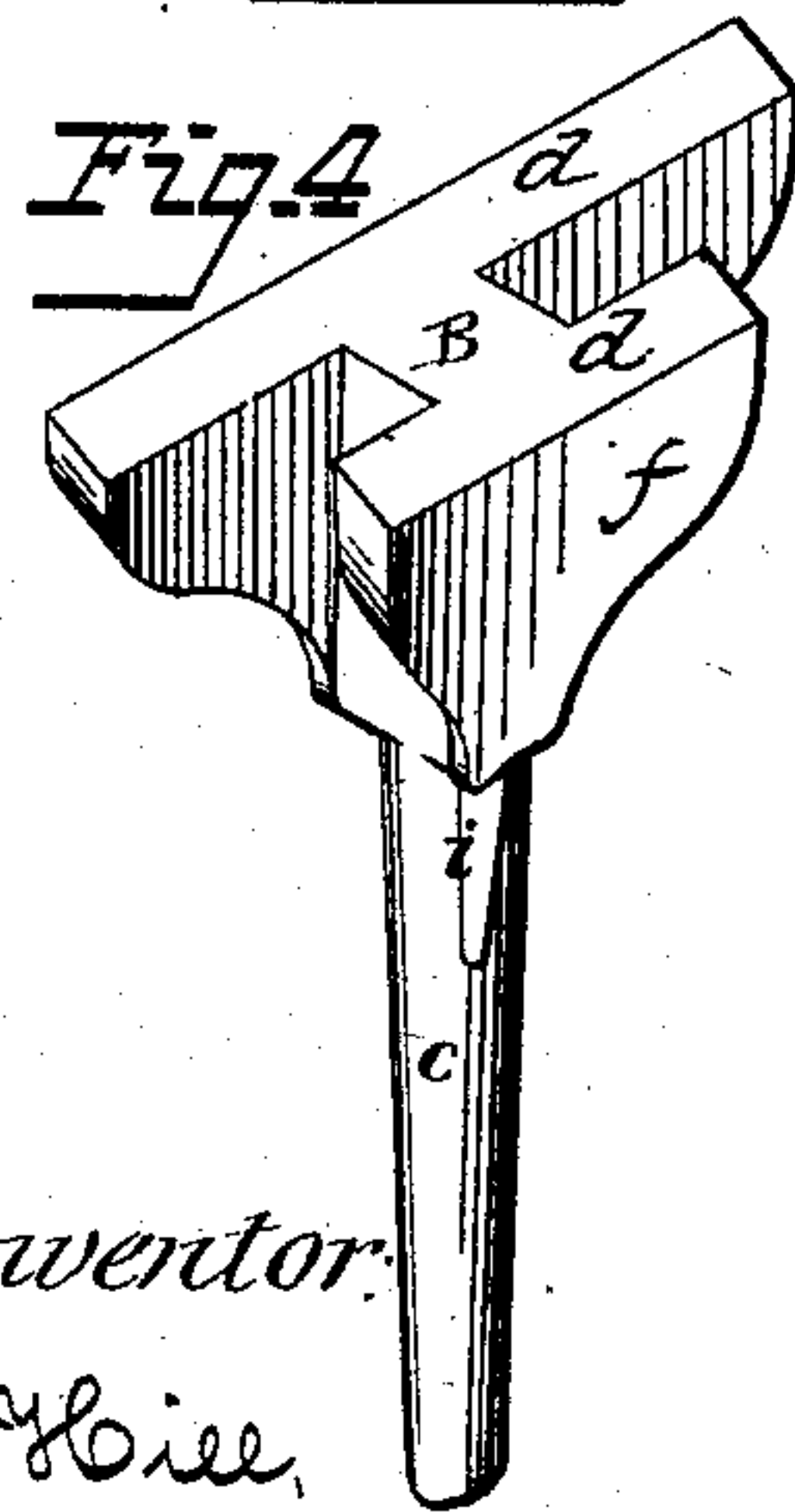
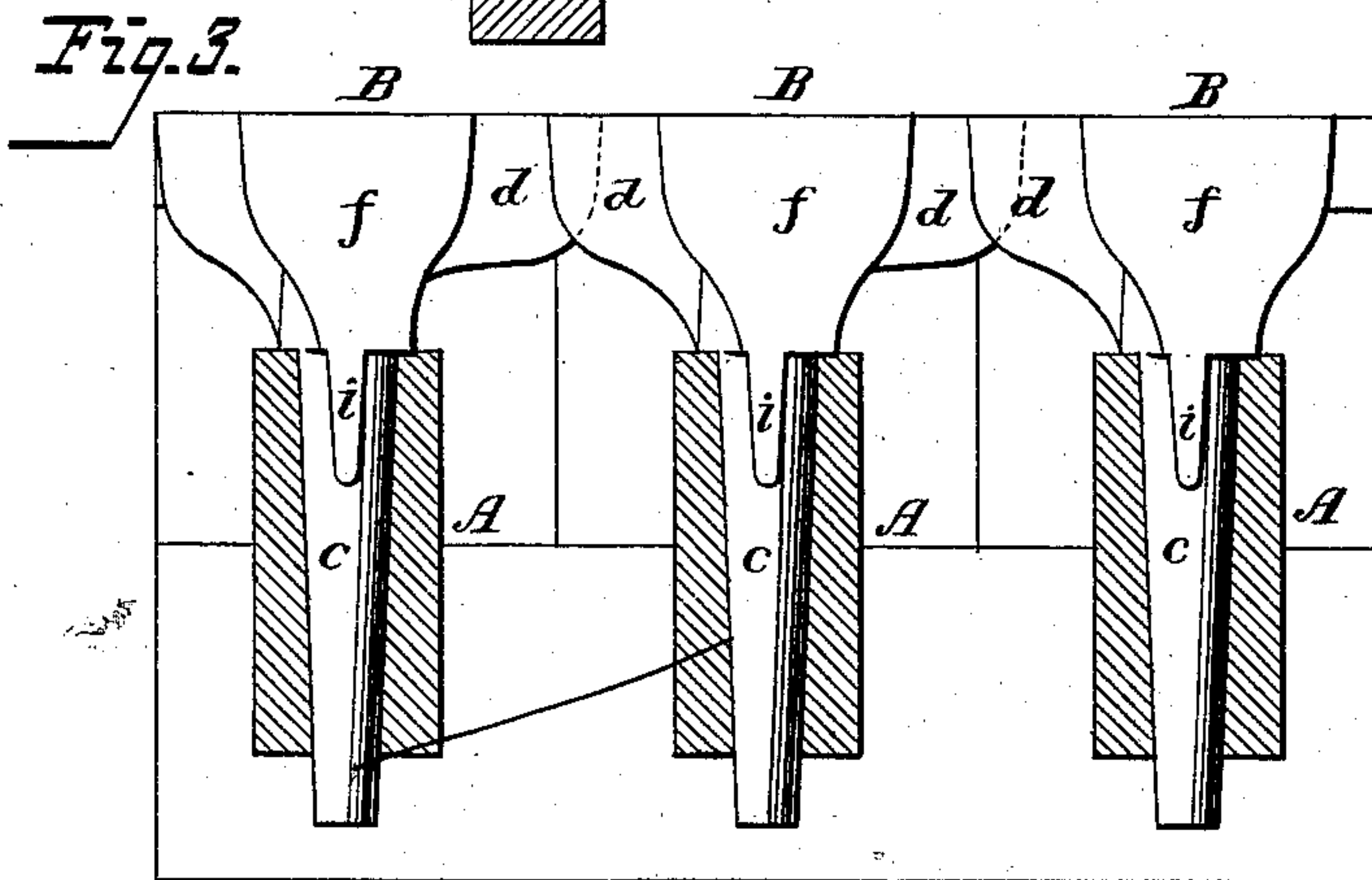
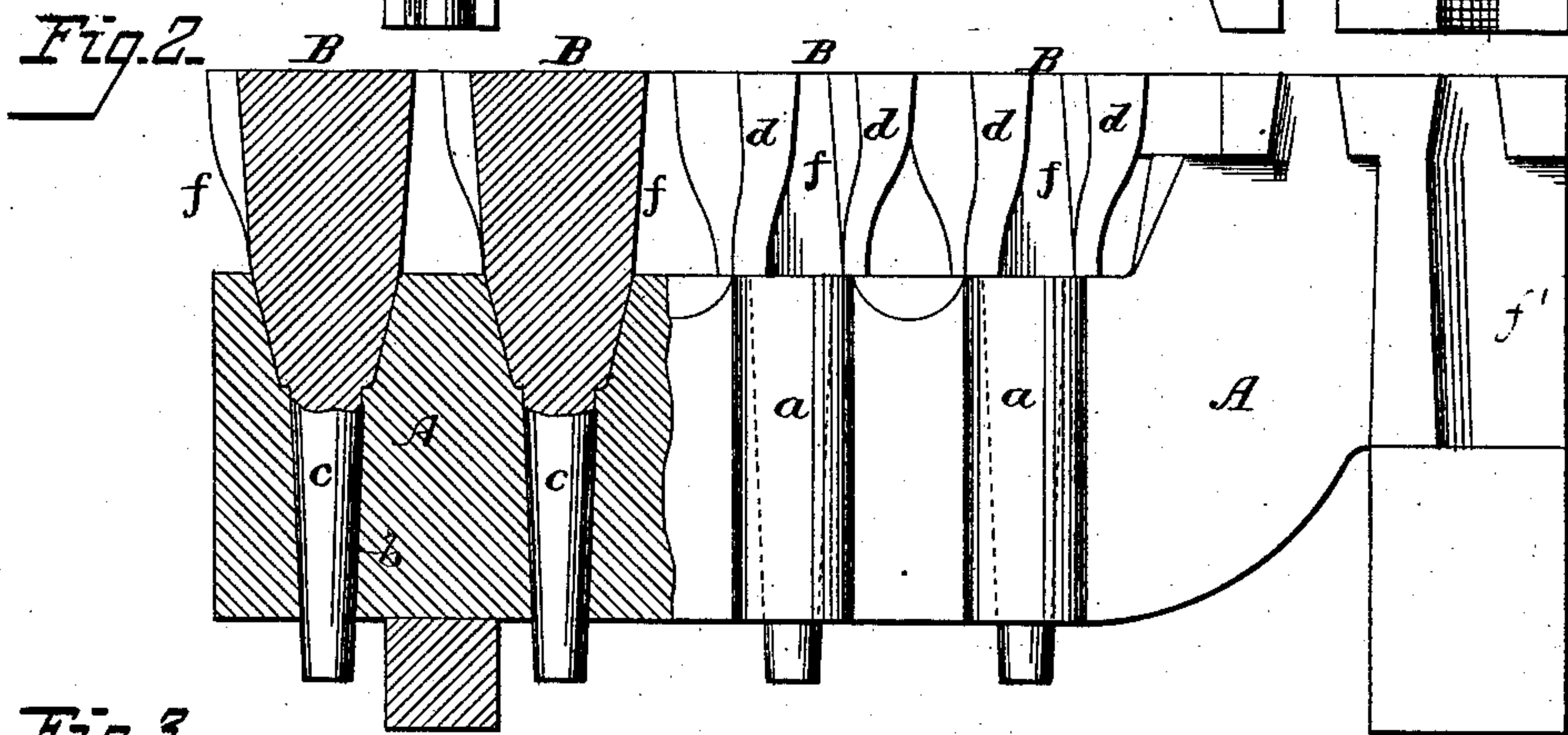
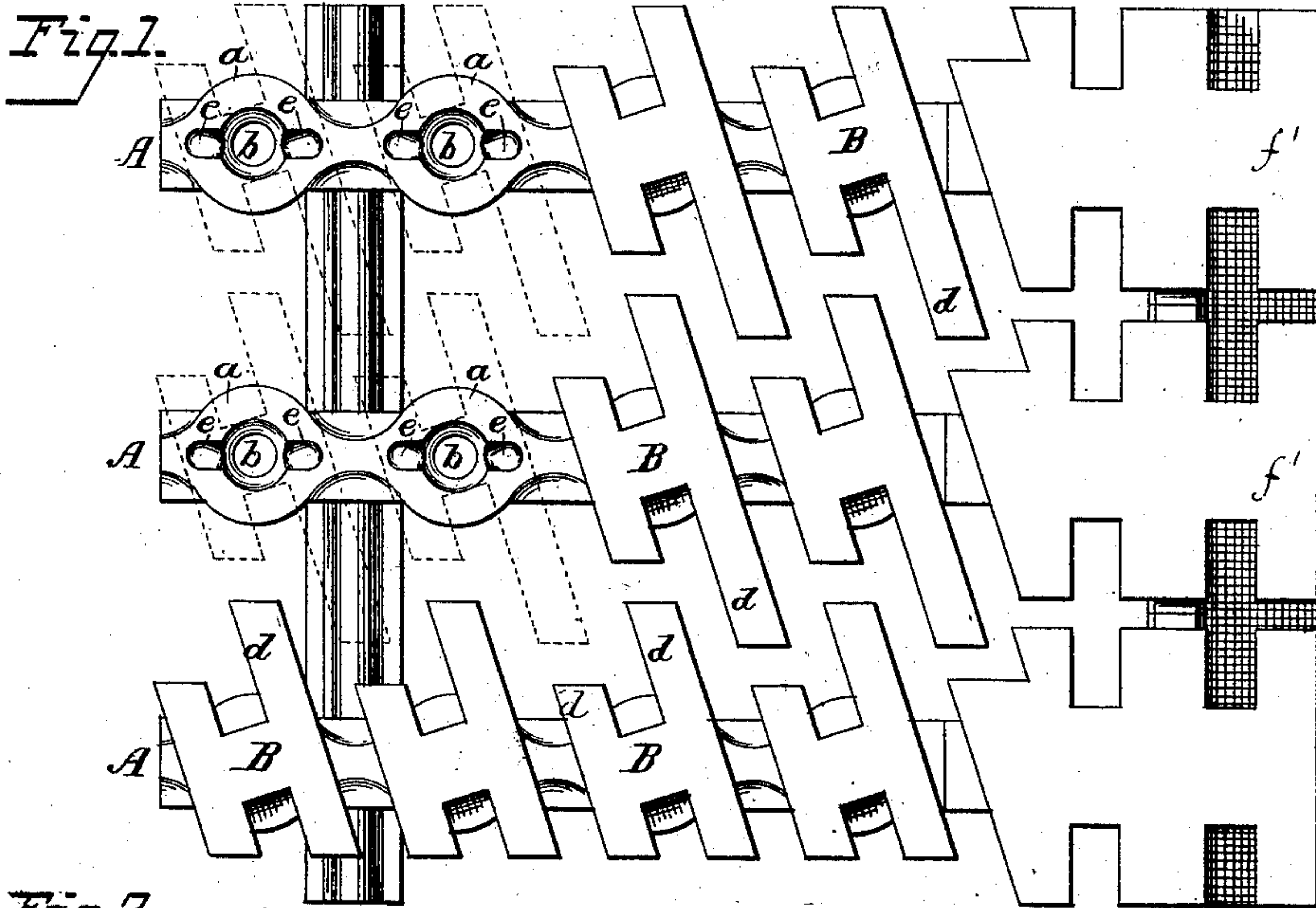
(No Model.)

H. T. HILL.

GRATE.

No. 258,921.

Patented June 6, 1882.



Attest:
Courtney A. Cooper.
Josephine Campbell.

Inventor:
Henry T. Hill.
By his Attorney
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UNITED STATES PATENT OFFICE.

HENRY T. HILL, OF MANCHESTER, NEW HAMPSHIRE, ASSIGNOR OF ONE-HALF TO PERSON C. CHENEY, OF SAME PLACE.

GRATE.

SPECIFICATION forming part of Letters Patent No. 258,921, dated June 6, 1882.

Application filed September 19, 1881. (No model.)

To all whom it may concern:

Be it known that I, HENRY T. HILL, of Manchester, Hillsborough county, State of New Hampshire, have invented certain Improvements in Grates, of which the following is a specification.

My invention relates to that class of grates in which longitudinal or circular ribs support independent bed-pieces; and it consists in constructing the parts, as fully described hereinafter, so as to secure an extended surface with a comparatively few ribs to afford a free supply of air to the fire and perfectly support the fuel.

In the drawings, Figure 1 is a plan of a section of my improved grate. Fig. 2 is a longitudinal elevation, partly in section; Fig. 3, a transverse sectional elevation. Fig. 4 is a perspective view of one of the bearing-pieces.

The grate consists essentially of the ribs A and the pieces B, which latter together constitute the bed for the fire. Each rib is a flat bar enlarged at intervals to form bosses *a*, each having a vertical socket, *b*, open at both ends to receive the shank *c* of a bed-piece, B, and with sideslots or notches, *e*, to receive feathers *i* at the side of the shank, which is thus prevented from turning in its socket. The shanks *c* are longer than the sockets and extend through and beyond the latter, so that any bed-piece may be loosened for removal at any time by a smart blow against the end of the shank with a tool introduced into the ash-pit. By this means any portion of the grate may be renewed without withdrawing a bar or rib or necessarily extinguishing the fire. The enlargements or bosses *a*, by strengthening the rib, permit the latter to be reduced in thickness, allowing of wider air-passages. The ends *f'* of the ribs A are enlarged to afford a proper support in the fire-place.

The bodies of the bed-pieces may be of different forms; but I prefer to make them each of two or more connected bars, *d d d*, which are preferably of different lengths, as shown, so that when the bed-pieces are assembled, as shown, they will constitute a bed in which there are numerous openings for the passage of air, but in which none of said openings are of any extended length on the same line, thereby preventing the fire from falling through, and affording a

perfect support for finer fuel than could be used if the openings extended continuously across the grate, yet permitting an abundant supply of air to the fire. The same effects result to a degree in setting the bed-pieces each with its bars at an angle to the ribs A, thereby avoiding straight continuous openings directly across the fire-place.

By extending the bars *d* laterally the requisite bed-surface is secured with a comparatively few supporting-ribs A, not only reducing expense, but permitting a better supply of air and facilitating the cleaning of the fire.

By the use of bed-pieces of the character described I am enabled, without changing the ribs A, to adapt the grate to any kind of fuel which it may be necessary or advisable to employ. Thus each fire-place may be provided with a series of fixed ribs, A, and with two or more series of bed-pieces, each series having the bars *d* differently arranged to form beds in which the openings are wider or narrower and in different positions.

I claim—

1. The combination, in a grate, of a series of supporting-ribs and a series of detachable bed-pieces upon each rib, each bed-piece having bars *d d*, of different lengths, substantially as and for the purpose set forth.

2. The combination, in a grate, of the series of supporting-ribs, each having a series of sockets, *b*, and the bed-pieces, having shanks constructed to project through the sockets and below the edges of the ribs, for the purpose set forth.

3. The supporting-ribs A, each having a series of socketed bosses, *a*, with side notches, *e*, and constructed to support each a series of bed-pieces, B, with shanks and feathers *f*, substantially as set forth.

4. The combination of the ribs and bed-pieces supported thereby, each consisting of two or more bars arranged at an angle to the rib, substantially as set forth.

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

HENRY T. HILL.

Witnesses:

IRA CROSS,
B. P. CILLEY.