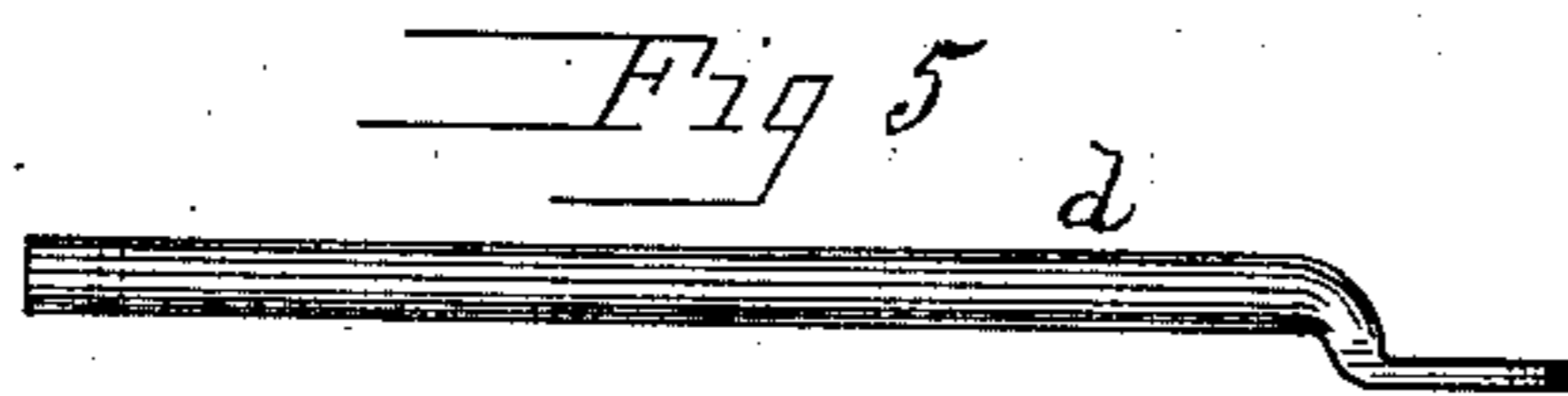
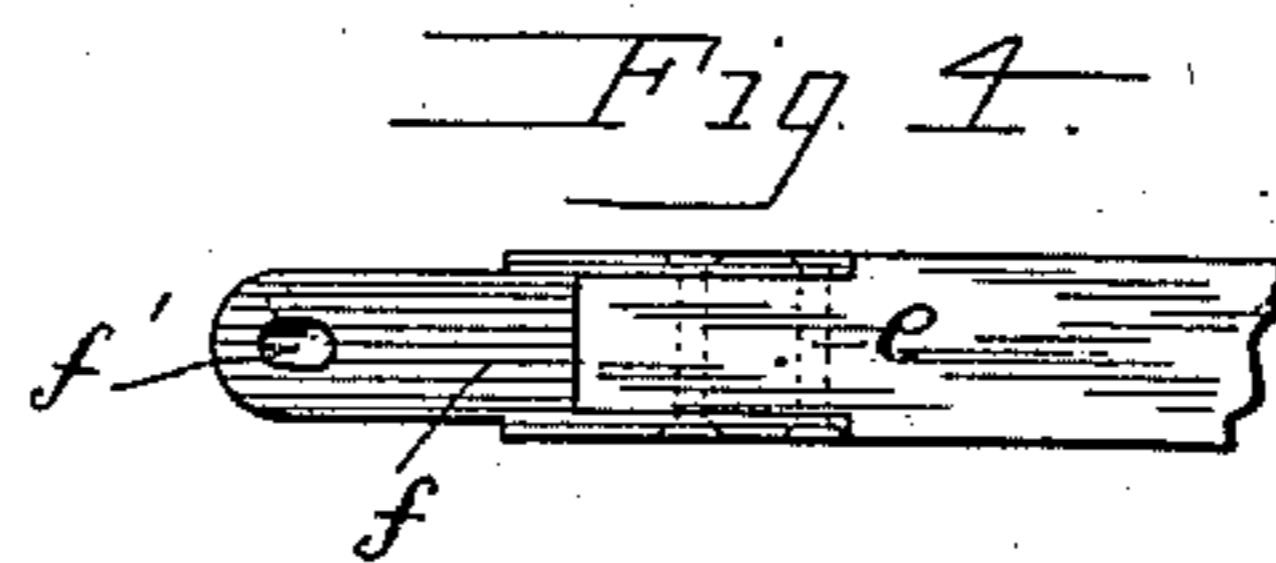
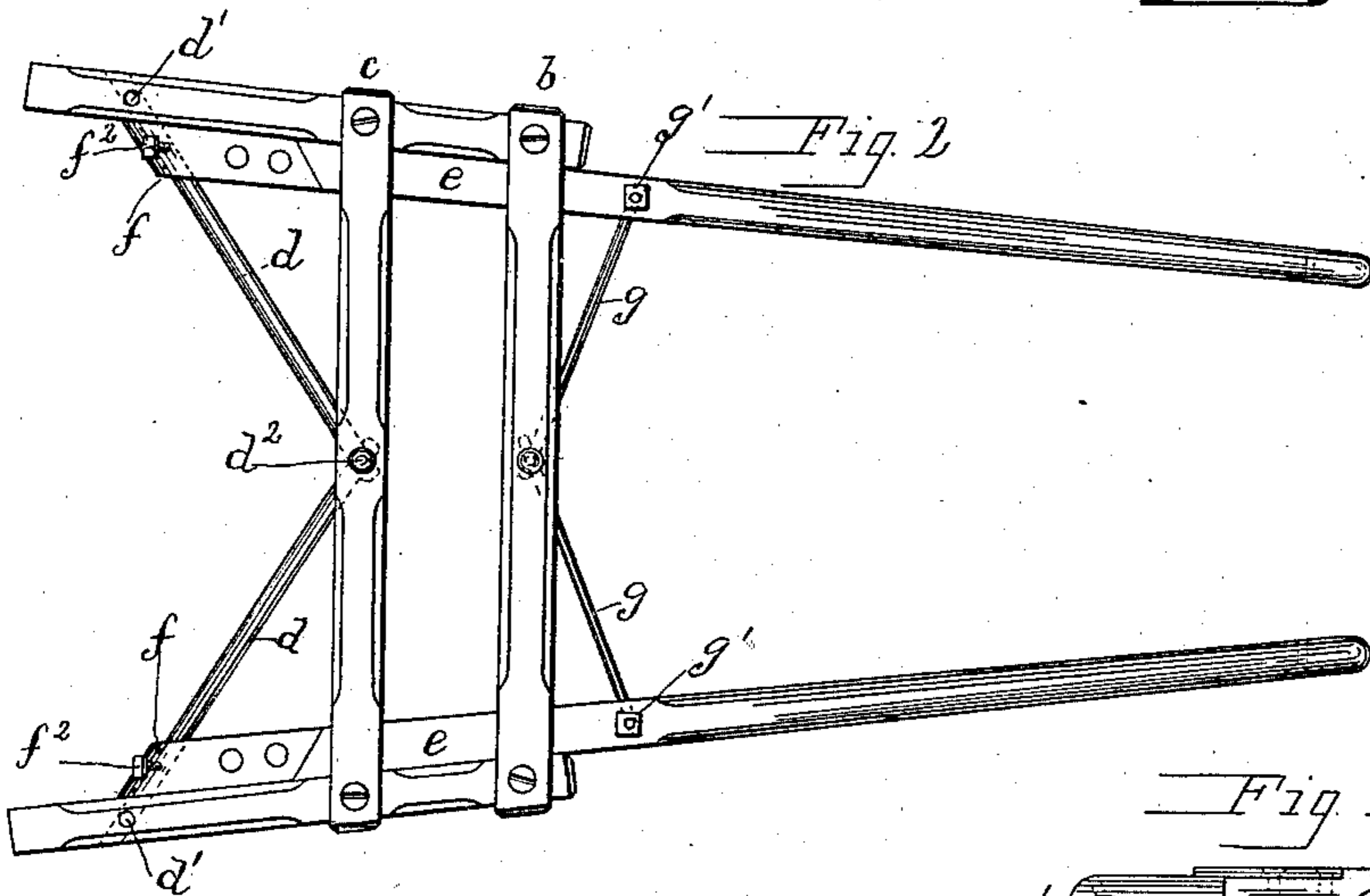
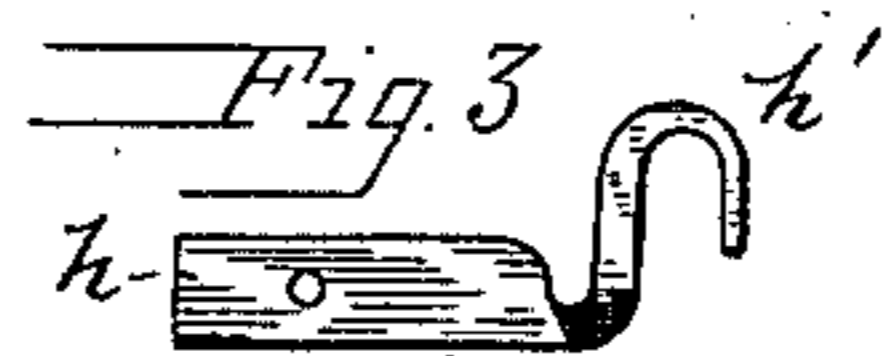
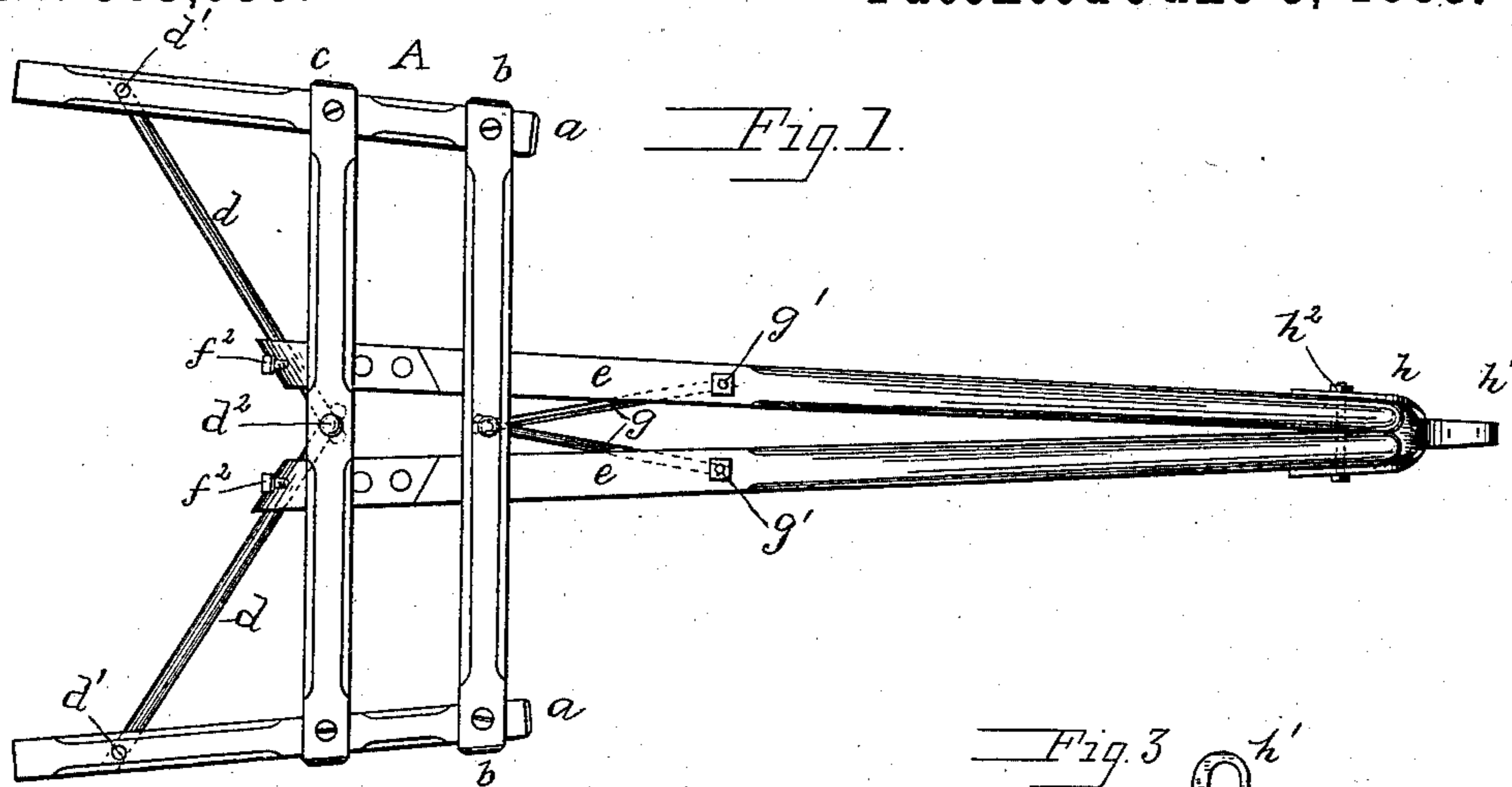


(No Model.)

A. L. BRATSCH.
POLE AND SHAFTS FOR VEHICLES.

No. 383,939.

Patented June 5, 1888.



Witnesses.
R. A. Balderson.
Joseph Sands.

Inventor.
Albert L. Bratsch.

By J. A. Duffie
His Attorney.

UNITED STATES PATENT OFFICE.

ALBERT L. BRATSCH, OF RENVILLE, MINNESOTA.

POLE AND SHAFTS FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 383,939, dated June 5, 1888.

Application filed March 27, 1888. Serial No. 268,627. (No model.)

To all whom it may concern:

Be it known that I, ALBERT L. BRATSCH, a citizen of the United States, residing at Renville, in the county of Renville and State of Minnesota, have invented certain new and useful Improvements in Sliding Poles and Shafts for Sulky Horse Hay-Rakes; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention has relation to sliding poles and shafts; and it consists in the novel construction and arrangement of its parts.

The invention consists of the construction and combination of the several parts shown in the accompanying drawings, in which—

Figure 1 is a top plan view of my invention, the shafts being closed and tipped to form a pole. Fig. 2 is a top plan view of the same, the tip being removed from the pole and its two parts spread apart, forming shafts. Figs. 3, 4, and 5 are detail views.

This invention may be used with any vehicle or machine which may sometimes be drawn by one horse and sometimes by two or more, and is described as follows:

A is a frame-work to be used in the front part of a vehicle or machine and supply the place of what is usually known as the "hounds," and consists of two side beams, *a*, two front cross-beams, *b*, one being bolted on the top of said side beams near their front ends and the other immediately under the top one, leaving an opening between the two, and a cross-beam, *c*, bolted on the top of said side beams some distance in the rear of said cross-beams *b*, and of two cylindrical rods, *d*, their rear ends being secured in the said side beams, *a*, near their rear ends by bolts *d'* or other substantial means. Their front ends are perforated and meet in the center of the rear cross-beam, *c*, and are bolted to the lower face of the same by means of a bolt and nut, *d''*, their front ends being double-elbowed, so that the said rods may hang down a little below the said cross-beam *c*. The shafts *e* have strongly secured to their rear ends sliding sleeves *f*. The perforations *f'* cut through said sleeves are cut at an angle to correspond with the angle at

which the said rods *d* are set in the frame, and said sleeves are provided with set screws *f''* to hold said sleeves firmly to said rods, in whatever position they may be placed. Two other rods, *g*, have their rear ends bolted between the front cross-beams, *b*, down close, however, to the lower cross-beam and at its center, so that they will work under the said shafts *e*, the front ends being bolted one to each of said shafts by bolts and nuts *g'*. The front ends of said shafts are held together by a tongue-iron, *h*, having a goose-neck hook, *h'*, and is secured to said shafts by bolt and nut *h''*. The operation of the said shafts is so obvious that I deem further explanation superfluous, as the law requires that I shall give no further description of the invention than is necessary to enable those skilled in the art to make and use the same.

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

1. The combination of the side bars, *a*, cross-bars *b* and *c*, bolted to said side bars, elbowed rods *d*, secured to said side beams and rear cross-beam, *c*, shafts *e*, their rear ends secured in the sleeves *f*, sleeves *f*, adapted to slide back and forth on the rods *d*, set-screws *f''*, adapted to hold said sleeves in position, rods *g*, their rear ends bolted between the upper and lower cross-beams *b*, their front ends bolted to the under side of said shafts by the bolts and nuts *g'*, and tongue-iron *h*, holding the front end of said shafts together, being secured in place by the bolt and nut *h''*, substantially as shown and described.

2. The combination of the side bars, *a*, cross-bars *b* and *c*, bolted to said side bars, elbowed rod *d*, secured to said side beams and rear cross-beam, *c*, shafts *e*, their rear ends secured in the sleeves *f*, sleeves *f*, adapted to slide back and forth on the rods *d*, set-screws *f''*, adapted to hold said sleeves in position, and rods *g*, their rear ends bolted between the upper and lower end beams, *b*, their front ends bolted to the under side of said shafts by the bolts and nuts, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

ALBERT L. BRATSCH.

Witnesses:

EDUARD M. CLAY,
T. PAUL HUSSOCK.