STIVERS & SMITH.

Fifth Wheel.

No. 36,310 Patented Aug. 26, 1862.

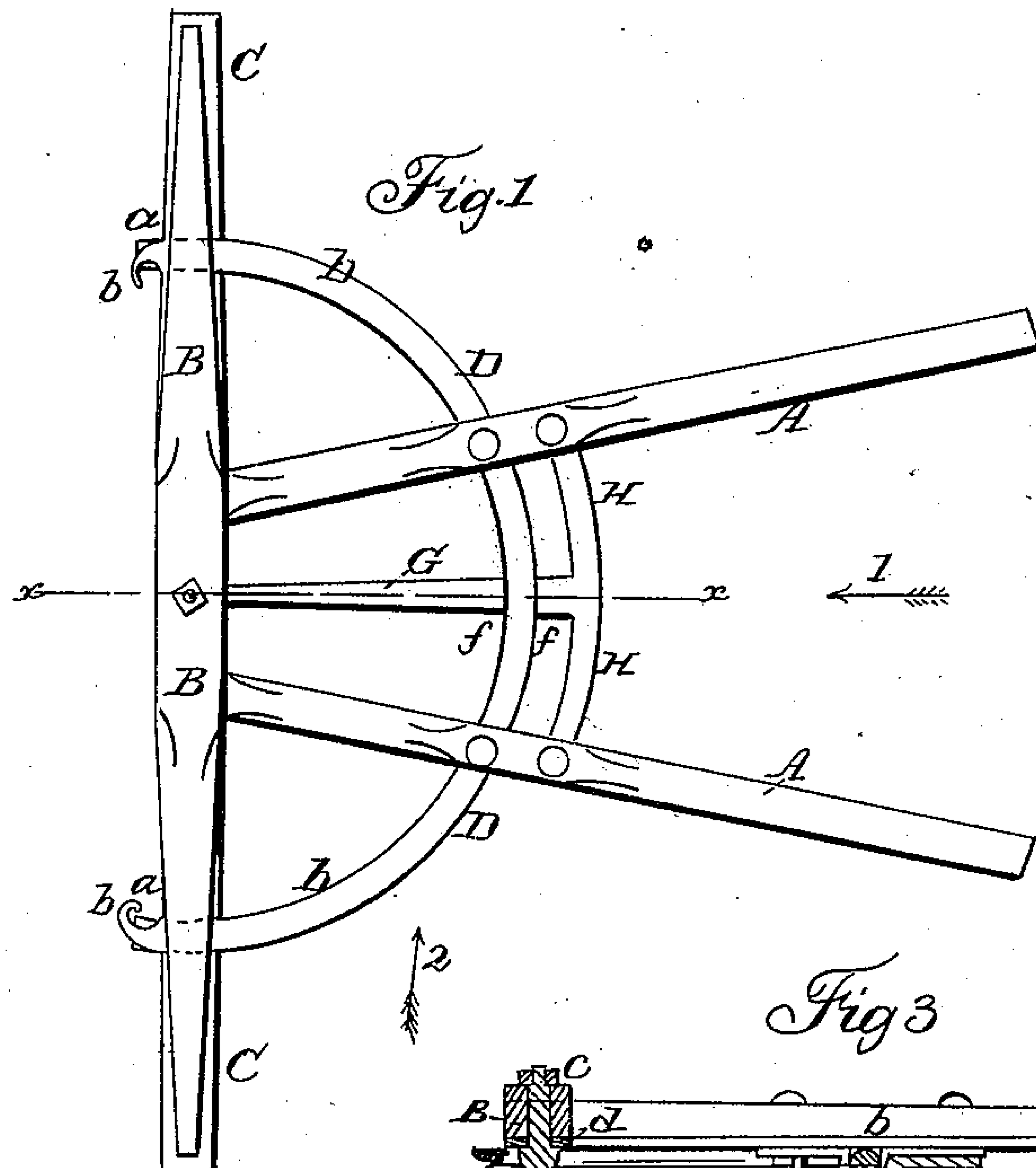

Fig. 1

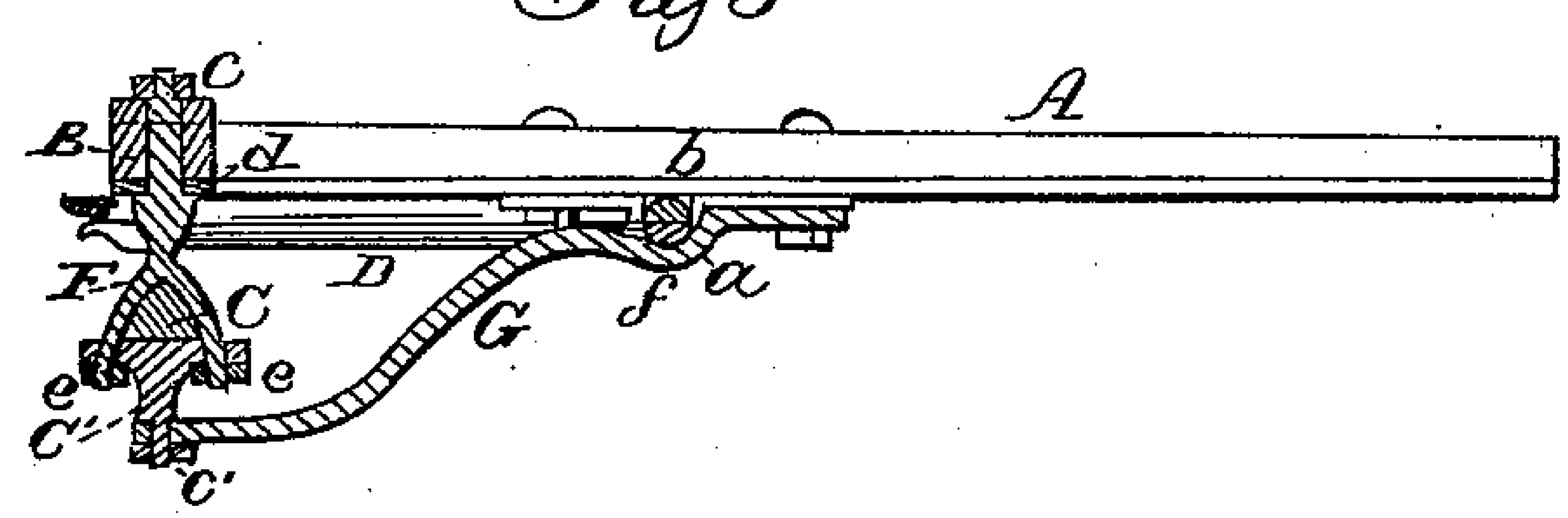

Fig. 3

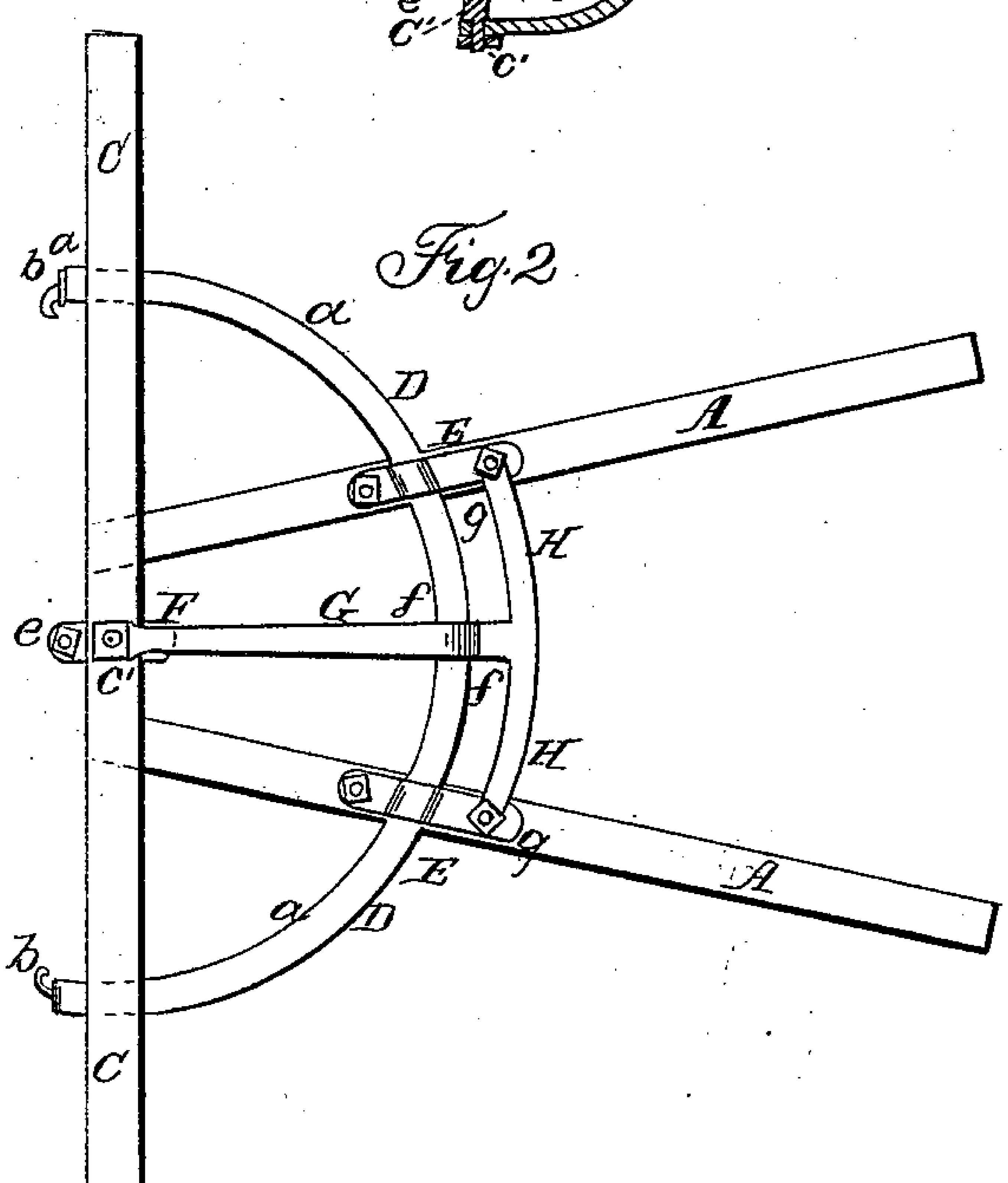

Fig. 2

Witnesses:

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UNITED STATES PATENT OFFICE.

R. M. STIVERS AND G. W. V. SMITH, OF NEW YORK, N. Y.

IMPROVEMENT IN FIFTH-WHEELS OF CARRIAGES.

Specification forming part of Letters Patent No. **36,310**, dated August 26, 1862.

To all whom it may concern:

Be it known that we, R. M. STIVERS and G. W. V. SMITH, both of the city, county, and State of New York, have invented a certain new and useful Improvement in Carriages; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 represents a top or plan view of so much of a carriage as is necessary to illustrate our invention. Fig. 2 represents the parts shown in Fig. 1 turned over, or a bottom view of the same, while Fig. 3 represents a section on line *x x*, Fig. 1, looking in the direction of arrow 2.

As most of the parts shown in the drawings represent parts in common use in carriages, it will not be necessary to describe them in detail.

In the drawings, A A represent a portion of the perch of a carriage connected to the head-block B in any well-known manner.

C represents a portion of the front axle, and D what is generally termed a "fifth-wheel," the lower half, *a*, of which is connected at its ends to the top of the front axle, C, while the upper half, *b*, is connected in like manner to the lower side of the head-block B. The rear curved parts, *a* and *b*, pass through and are sustained by guide loops or eyes E E, one of which is attached to the under side of each branch of the perch A by suitable bolts or screws.

The head-block B and front axle, C, are united by an iron shackle, F, the lower forked ends of which pass through the metal part C′ of axle C after passing on either side of the part C, as fully shown in Fig. 3. The parts C and C′ are thus held firmly together by means of nuts *e e* on the ends of the forks.

The upper end of shackle F is made smaller, and passes loosely through the head-block B, and has a nut, *c*, on its upper end. If preferred, the upper end of shackle F can be riveted down a little to prevent the nut from working off.

d represents the iron strap or plate usually applied to the under side of the head-block and front of the perch. It will now be seen that the front axle, C, can be turned either to the right or left without turning the front of the perch or head-block, the part *a* of the fifth-wheel D turning in the eyes or guide-loops E, its upper surface rubbing against the lower surface of *b*. The rear of the carriage can also be lifted either to the right or left without turning the front axle, C, and in which case the part *b* may turn above the part *a* in eyes or loops E.

By constant wear and use the parts *a* and *b* become so worn that a great rattling and noise is the result, especially when the carriage is drawn over paved streets. To obviate this difficulty is the object of the present invention; and it consists in applying a metal spring to the parts *a* and *b* in such a manner as to keep them always in close contact, and yet not so close as to create a binding and undue friction of their rubbing-surfaces. It is effected by and consists in so constructing the stay rod or brace G and combining it with the parts *a* and *b* as to make it perform the double purpose of a spring and stay-rod. One end of spring G is fastened to a projection on the lower side of C′ by means of a nut, *c′*, while the other end is projected back and upward with a curve, *f*, to fit against the lower side of *a*, and then branched to the right and left, as seen at H H, the lower ends of the latter being fastened to the under side of the perch A.

The length of the metal part G from its connection with C′ to the point *f*, in connection with the length of the arms H H, permit of considerable spring of the part G without "setting," even when made of ordinary iron.

The pressure of the part G, whether made of iron, steel, or other metal, can be regulated by turning up either of the nuts *g* or *c′*. By this means the parts *a* and *b* are kept pressed gently together, whereby rattling is prevented, the spring of G compensating for the gradual wear of the parts. It will also be observed that the branches H H of G answer as braces for the perch and axle C.

The plans heretofore tried for preventing the rattling of the above parts have been too complicated and liable to get clogged up with mud, and thus rendered inoperative, or at least expensive to keep in repair, one of which is to be seen in the patent granted George Kenny November 25, 1856.

Having described our invention, what we

claim, and desire to secure by Letters Patent, is—

The combination of the stay-rod or spring-brace G with the perch A, front axle, C, and parts *a* and *b*, the whole constructed and arranged in relation to each other, as and for the purpose set forth.

In witness whereof we have hereunto subscribed our names.

R. M. STIVERS.
G. W. V. SMITH.

In presence of—
EDWARD A. FRASER, Jr.,
EDWARD A. FRASER.