(No Model.) 2 Sheets—Sheet 1.

W. R. PITT.

FOLDING GATE.

No. 494,824. Patented Apr. 4, 1893.

Fig. 1.

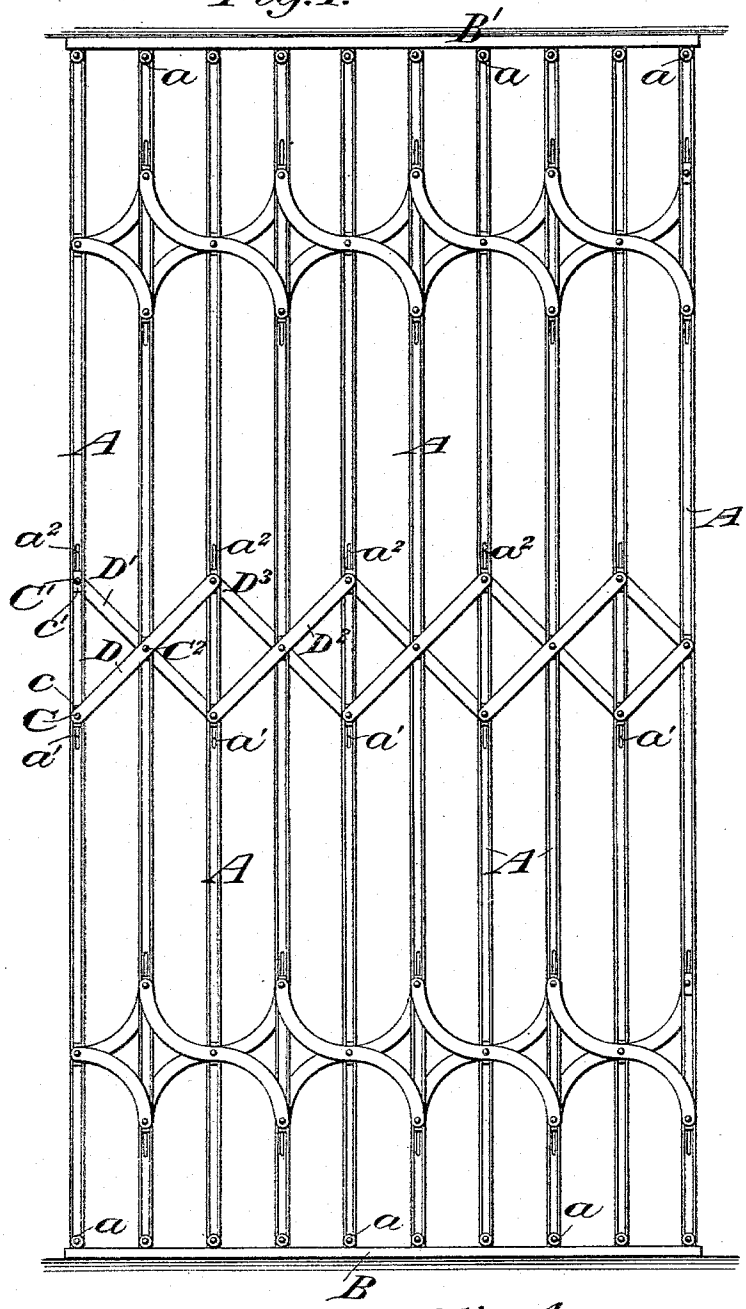


Fig. 2.

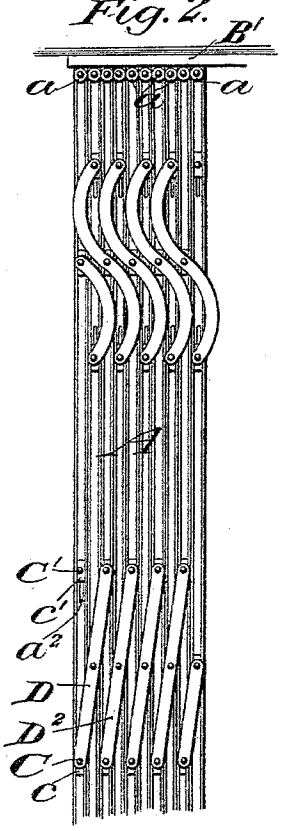


Fig. 3.

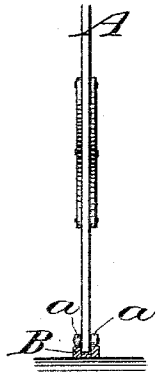
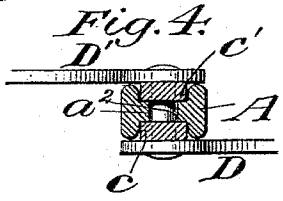


Fig. 4.



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(No Model.) 2 Sheets—Sheet 2.

W. R. PITT.

FOLDING GATE.

No. 494,824. Patented Apr. 4, 1893.

Fig. 5.

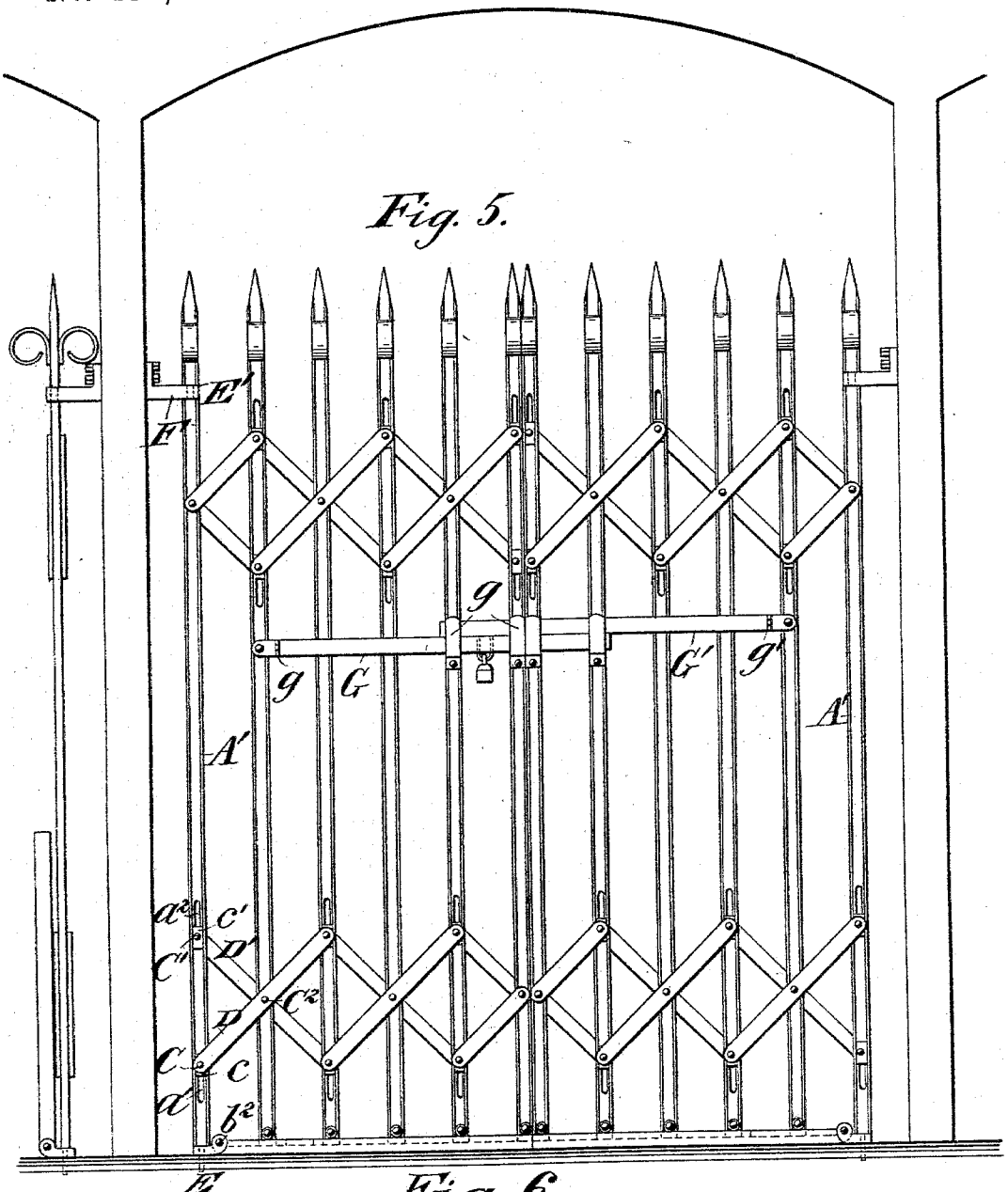
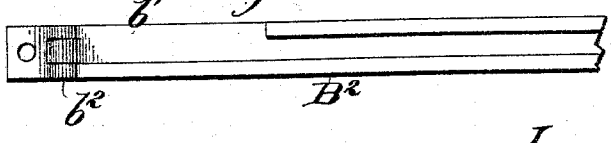


Fig. 6.



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UNITED STATES PATENT OFFICE.

WILLIAM R. PITT, OF NEW ROCHELLE, NEW YORK.

FOLDING GATE.

SPECIFICATION forming part of Letters Patent No. 494,824, dated April 4, 1893.

Application filed September 17, 1892. Serial No. 446,187. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM R. PITT, of New Rochelle, in the county of Westchester and State of New York, have invented a new and useful Improvement in Folding Gates, of which the following is a specification.

My invention relates to an improvement in folding gates in which consecutive pickets are pivotally connected together by series of arms so as to permit the pickets to be closed into proximity to one another to open the gate or separated to close the gate.

My present invention contemplates a material reduction in the number of arms or links for uniting the several pickets together and a simplification of the structure of the picket itself in connection with the arrangement of the arms or links whereby the gate is materially lightened and the expense of manufacturing reduced without any material lessening of its strength or abridgment of its functions.

In the accompanying drawings, Figure 1 is a view of the gate in side elevation, showing the pickets separated as they appear when the gate is closed. Fig. 2 is a similar view, showing the position of the pickets when the gate is open, the lower portion being omitted. Fig. 3 is a partial edge view. Fig. 4 is an enlarged horizontal section through one of the pickets at the point where the arms are pivotally secured to its opposite sides. Fig. 5 is a view in side elevation of a pair of the folding gates closed and locked, the portion of the figure at the left representing an edge view of the gate after it has been folded and swung off at right angles to the plane of its position and the track folded up out of operative position, and Fig. 6 is an enlarged plan view in detail of a portion of the folding track.

The pickets are denoted as a whole by A; they are formed of what is commonly termed as "I-iron," their cross section being in the shape of an I or having channels upon its opposite sides, as clearly indicated in Fig. 4. The pickets, as represented in Figs. 1 and 2, are arranged between upper and lower channel guides B and B′ and are preferably provided both at their upper and lower ends with anti-friction rollers *a* extending on opposite sides of the picket and adapted to rest upon the flanges of the lower guide B, as indicated in Fig. 3. The several pickets may be united by one or more series of pivoted arms or links. In the present instance, I have shown them in Fig. 1 united by three such series; and in Fig. 5 by two series. In Fig. 1 the upper and lower series are represented of curved form for the purpose of giving the gate an attractive appearance.

As the principle of the operation of the several series and their construction and attachment are substantially the same, it will be necessary to describe one series only. For this purpose, I have selected the middle series of straight arms or links. Beginning at the left hand side of the drawings, Fig. 1; the first picket is provided with a pair of elongated slots a', a^2 extending through the web portion of the picket. Through the slots a', a^2 pivotal bolts C and C′ extend; the former C also extending through the end of the arm or link D on the one side of the picket, and the latter C′ through a corresponding arm or link D′ upon the opposite side of the picket. For the purpose of securing the link in position so as to prevent the lateral wabbling of the picket and at the same insure the sliding of the bolts C and C′ along the slots during the folding operation, I find it desirable to insert cheek pieces *c* and *c′* between the ends of the arms and the webs of the pickets and also between the heads of the bolts or rivets and the web of the picket which cheek pieces are intended to fill the channels to a point flush with the flanges on the pickets and have an easy sliding movement along the grooves in the pickets. The arms or links D and D′ cross each other, passing upon opposite sides of the next succeeding picket A, to which picket they are pivotally secured by a bolt or rivet C^2. The opposite ends of the said arms or links D and D′ as well as the ends of a succeeding pair of arms or links D^2, D^3 are pivotally secured to the third picket in a manner quite similar to that in which the ends of the arms or links D and D′ are secured to the first picket A. Beginning with the first picket, each alternate picket is provided with the elongated slots a', a^2 for the reception of the rivets which connect the ends of the two successive pairs of arms or links and, beginning with the second picket, the pairs of arms or links cross each other at each alternate

picket therefrom and are pivotally secured thereto. At the last picket to the right, the arms or links are made half length and are pivotally secured to the said picket by a single bolt, as clearly shown. Where several series of arms or links are employed, as shown in Fig. 1, I prefer to place the half length arms or links in one series at the right and in an adjacent series at the left. Such arrangement will naturally make the picket which is provided with the elongated slots for one series, the picket to which the cross arms or links of an adjacent series are pivotally secured.

In operation, by pushing the picket to the right toward the left the pivotal bolts or rivets passing through the elongated slots will slide along said slots permitting the arms or links to close until the several pickets have been closed into contact with each other, as represented in Fig. 2. By the above arrangement, I am enabled to secure a firm alignment of the several pickets by employing one link for each picket in a single series of pairs of links instead of two links for each picket which has heretofore been common; while the metal in the pickets is so disposed that it will resist pressure in a direction transverse to that in which the gate opens and closes and is at the same time amply strong in the direction of its width.

In the form shown in Fig. 5, the upper guide is omitted and the pickets are extended in ornamental form. The pickets A′ toward which the pickets from the free edge of the gate fold are pivotally secured, as at E and E′ to the base and to a support F near the top so that when the gate has been folded it may be turned off to one side, as shown at the left of Fig. 5. The track B^2 is pivoted at E to swing horizontally off to one side, one of its flanges being cut away, as at b', to permit the track to swing; and at a short distance from its pivotal connection E, the track is provided with a second hinge b^2 to permit it to be swung up into folded position alongside of the folded gate. This admits of swinging the track out of the way when the gate is partially opened and also admits of swinging the track around to the opposite side of the pivotal picket A′ from that toward which the gate is closed, and then turning it up alongside the pivotal picket entirely out of the way.

Locking bars G and G′ are pivotally secured at one end to pickets adjacent to the pivotal pickets A′ and the overlapping ends of the bars are adapted to drop between the sides of the pickets and bracket pieces or guards g secured to the pickets. A staple, socket and padlock of ordinary form are employed to fasten the bars together. In order to swing the bars G and G′ out away from the sides of the pickets to permit them to fall past the brackets or guards g, I provide them with hinges g' at a short distance from their pivotal connections with the pickets.

What I claim is—

1. The folding gate comprising a series of pickets and rigid arms or links connecting an intermediate picket with adjacent pickets, the said arms or links being arranged in pairs, the members of a pair being pivoted to the opposite sides of the intermediate picket and having sliding connections with the adjacent pickets, substantially as set forth.

2. The folding gate comprising a series of pickets channeled upon their opposite sides, each alternate picket being provided with a pair of elongated slots, arms or links arranged in pairs, the members of a pair being located upon opposite sides of the picket and having their ends pivotally secured in said elongated slots, the said arms or links being secured intermediate of their ends to an intermediate picket, substantially as set forth.

3. The combination with the series of folding pickets and their swinging supports, of a grooved track pivotally secured to swing laterally and jointed to fold vertically, a portion of one of the flanges of the track being cut away to permit it to swing laterally independently of the pickets, substantially as set forth.

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