J. S. COCHRANE.

ROLLING IRON SHUTTER.

No. 31,300. Patented Feb. 5, 1861.

Fig. 2

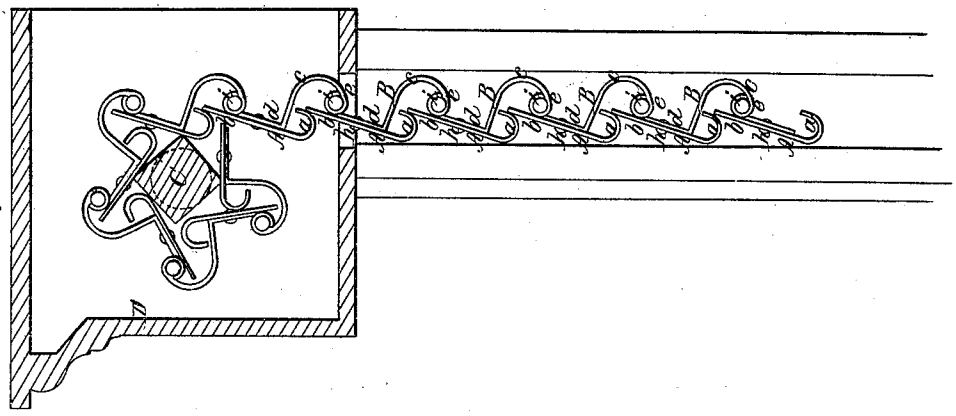


Fig. 3

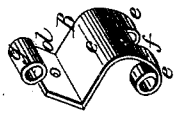
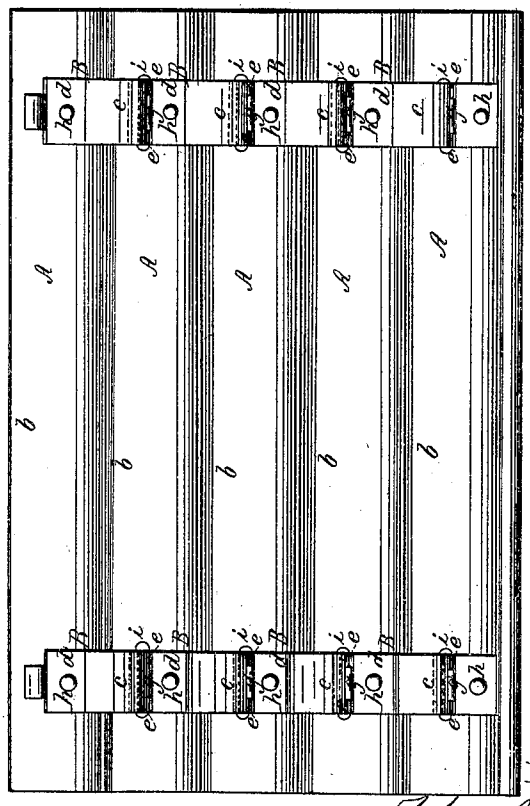


Fig. 1



Witnesses

James Laird.

C. W. Curtain.

Inventor

John S. Cochrane

UNITED STATES PATENT OFFICE.

JOHN S. COCHRANE, OF NEW YORK, N. Y.

ROLLING IRON SHUTTER.

Specification of Letters Patent No. 31,300, dated February 5, 1861.

To all whom it may concern:

Be it known that I, JOHN S. COCHRANE, of the city, county, and State of New York, have invented a new and useful Improvement in Iron Shutters; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a detached back view of my invention. Fig. 2, a transverse vertical section of the same. Fig. 3, a detached perspective view of one of the joints or hinges which connect the several slats or plates.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to an improvement in that class of iron shutters which are arranged to roll over shafts placed in the building directly over the windows or doors.

The invention consists in bringing the several slats of the shutter together in such a way, that they may turn over or roll in a direction toward the front, or, in other words roll on their faces and thereby admit of the roller or shaft being placed in the hollow cast-metal lintels over the doors and windows, so as to avoid the trouble and expense of constructing special chambers in the wall for such purpose.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A, Figs. 1 and 2, represents the slats which compose the shutter. These slats are constructed of metal plates of a suitable thickness and their lower edges or parts are curved in semi-circular form. As shown at *a*, in Fig. 2, the upper parts *b* of the slats are perfectly straight and the lower semi-circular part *a*, of one slat slightly overlaps the upper part *b*, of the one immediately below it, as shown clearly in Fig. 2.

The slats A, may be of any suitable length or width and they are connected together by hinges B, which may be described as being formed each of a plate having a curved portion *c*, and a straight portion *d*, the latter projecting from the former at right angles as shown clearly in Fig. 3.

The lower curved part *c*, of the hinge is formed with two eyes *e*, *e*, with a space *f*, between them, and the upper part *d*, has one eye *g*, formed on it, said eye being equal in length to the width of the space *f*, between the eyes *e*, *e*.

There are two hinges B, attached to the back of each slat A, one near each end, the rivets *h*, passing through the upper parts *d*, of the hinges, said parts being in contact with the back parts of the slats. The lower curved parts *c*, of the hinges extend around the lapped edges of the slats, and are sufficiently curved or bowed to admit of the slats assuming a position about at right angles with each other when passing around their roller, see Fig. 1, in which the roller C, is shown in red. It will be seen of course that the eyes *g*, at the upper ends of the hinges of one slat are fitted between the eyes *e*, *e*, at the lower ends of the hinges immediately above them, pintles *i*, passing through the eyes. By this form of the hinges B, and their position relatively with the lapped ends of the slats A, the latter are allowed to turn over on their roller C, in a forward direction and consequently the roller C, may be placed in the lintels D, of the doors and windows, as shown in red, Fig. 2, and the trouble and expense of constructing receptacles behind the shutter to receive the rollers, as would be the case if the slats rolled over backward, are avoided.

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

Connecting together the slats A, of the shutter, by means of the hinges B, curved and bent, and attached to the slats, so as to have the position relatively therewith as shown, to operate as and for the purpose set forth.

JOHN S. COCHRANE.

Witnesses:

JAMES LAIRD,

C. W. COWTAN.