(No Model.)

J. ORT.

DOORWAY CONFORMATOR.

No. 509,582. Patented Nov. 28, 1893.

Fig. 1.

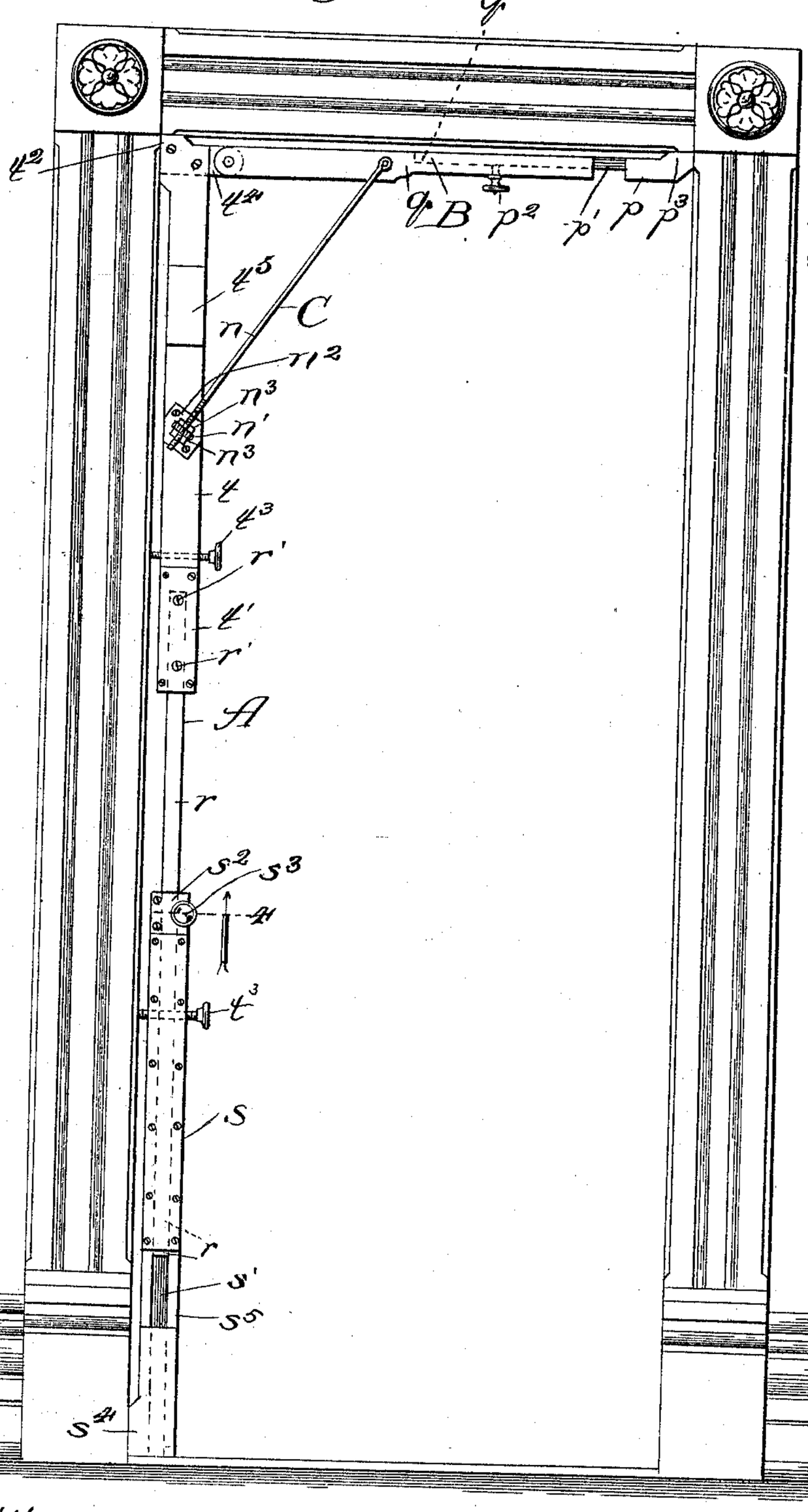


Fig. 2.

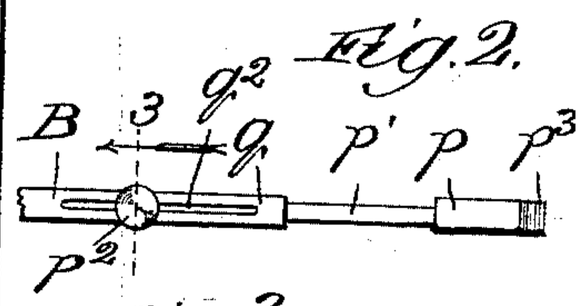


Fig. 3.

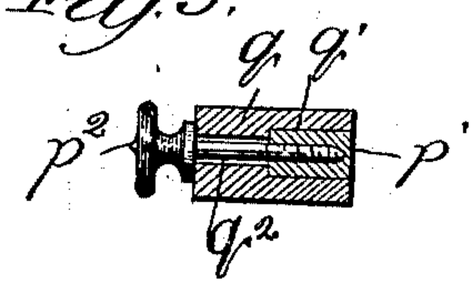


Fig. 4.

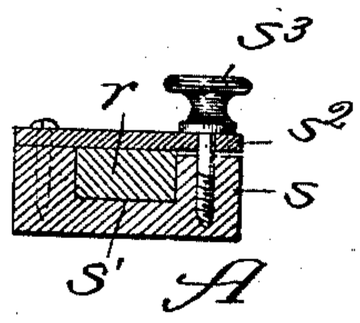


Fig. 5.

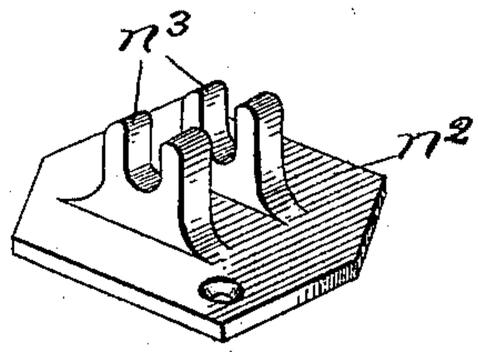
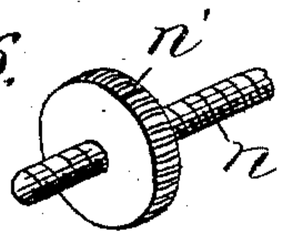


Fig. 6.



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JACOB ORT, OF WAHOO, NEBRASKA.

DOORWAY-CONFORMATOR.

SPECIFICATION forming part of Letters Patent No. 509,582, dated November 28, 1893.

Application filed July 24, 1893. Serial No. 481,358. (No model.)

To all whom it may concern:

Be it known that I, JACOB ORT, a citizen of the United States, residing at Wahoo, in the county of Saunders and State of Nebraska, have invented a new and useful Improvement in Doorway-Conformators, of which the following is a specification.

My invention relates to an improved device for use in fitting doors, windows, and the like, to their casings. With the instruments hitherto employed by carpenters in taking the measurements more especially of door casings for the purpose of fitting doors therein, it has been a matter of difficulty to lay off the door with such exactness that when trimmed to the measurements marked thereon it will fit with desired conformity in its casing; and this especially when the sides of the opening, owing to bad construction, shrinkage or warping of the casing, do not present straight and parallel surfaces.

My object is to provide a conformating instrument, of light, simple, and comparatively inexpensive construction, whereby the measurements of a door opening may be taken and marked upon the door, quickly, accurately, and with comparatively little labor.

In the drawings—Figure 1 is a view in elevation of a door casing, showing my improved conformator applied thereto; Fig. 2, a broken plan view of an extensible arm of the device; Fig. 3, an enlarged section taken on line 3 of Fig. 2; Fig. 4, an enlarged section taken on line 4 of Fig. 1; and Figs. 5 and 6 enlarged perspective views of details of an adjusting and retaining mechanism for changing the angle between the main or staff portion and the arm of the device.

The device consists, broadly, of a staff A, formed of relatively extensible and contractible members *t s*, to one end of which is pivoted an arm B, formed of relatively extensible and contractible members *q p*, and an adjusting and retaining connection C for changing the relative angles of the staff and arm. In the end of the part *t* adjacent to the part *s* is a recess, covered by a plate *t'* to receive the end portion of a slide *r* which is held to the member *t* by screws *r'* passing through the plate *t'*. Extending longitudinally through the member *s* is a recess *s'* adapted to receive the slide *r*. At the end of the member *s* adjacent to the member *t* is a clamp comprising a springy plate s^2 fastened down at one side of the recess *s'*. A thumb screw s^3 passes through the free end portion of the plate s^2 into the part *s*, whereby the plate may be tightened against the slide *r* to hold the members in relatively adjusted position. At the opposite ends of the staff on its outer side are abutting shoulders t^2 s^4, respectively, presenting rectangular surfaces, and giving to the staff the character of a straight edge. Between the ends of the staff, in the locations shown, are adjustable gages or gaging screws t^3 t^3, extending transversely through the members *t s* respectively. The arm B is pivotally connected at one end of its member *q* to a lug t^4 at the end of the member *t*, to swing only in the plane of the staff. In the outer side of the opposite end-portion of the member *q* is a groove *q'* receiving the shank portion *p'* of the member *p*, which slides longitudinally therein. The shank *p'* carries a clamp-screw p^2 which passes through a longitudinally extending recess q^2 in the inner side of the member *q*. Tightening of the screw p^2 causes it to clamp the members together in relatively adjusted position. At the outer end of the member *p* is an abutting shoulder p^3 presenting rectangular surfaces giving to the arm the character of a straight-edge. The adjusting and retaining connection C is preferably in the form of a rod *n* pivoted at one end to the member *q* of the arm, and threaded along its opposite end-portion to receive a nut or internally threaded traveling thumb wheel *n'*. Fastened upon the side of the member *t* of the staff is a plate n^2 having two recessed lugs n^3 affording between them a socket to receive the thumb wheel *n'*. The rod *n* carrying the wheel *n'* is sprung into the recesses of the lugs n^3 and its resilient tendency holds it in place and the wheel *n'* between the lugs. Turning of the wheel moves the rod longitudinally to swing the arm B to different angles with relation to the staff.

In operation the device is placed in the opening to be measured with the abutting shoulders t^2 s^4 against the jamb. The staff members are then extended until they bear at opposite ends against the sill and lintel, and are secured in adjusted position by tightening the screw s^3. The members of the arm B are

then adjusted by extension or contraction and by turning the thumb wheel n' to cause the abutting shoulder p^3 to extend against the lintel and opposite face of the casing. The gaging screws t^3 may then be turned, if necessary, to adjust them against the adjacent surface of the jamb so that any inequality in the latter may be measured. On the member t I provide a lug t^5 and in the member s a gain s^5, at the places indicated, for locating the hinges, the points of location being marked upon the casing while the device is in place. The device is removed from the casing without disturbing its adjustments and laid upon the door to permit the points thereon registering with the abutting shoulders, and gaging screws to be marked, for the outline of the door. The locations of the hinges may also be marked at the same time. By reversing the device so that the staff A is against the opposite side of the casing and the arm B against the threshold the outline for the remaining two edges of the door may be taken. If desired an arm corresponding with the arm B may be provided at the opposite end of the staff whereby the threshold measurement may be taken simultaneously with that of the jamb and lintel.

In the use of my improved conformator, the height, width and shape of a door opening and the location of hinges may be quickly and accurately taken and marked upon the door. By removing the screws r', and sliding the bar r into the member s, and springing the rod n out of the plate so that the arm B may swing against the member t, the device may be readily placed in a carpenter's tool chest. The device offers facilities for taking the measurements more quickly than has been possible with the instruments hitherto commonly employed, and furthermore affords a safeguard against mistakes which were liable to occur in the use of the said instruments.

While I prefer to construct my improved conformator as shown and described, it may be modified in the matter of details without departing from the spirit of my invention as defined by the claims.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a doorway conformator, the combination of a staff affording a straight edge, and formed of relatively extensible members, an arm affording a straight edge pivoted at one end to an end of the staff and formed of relatively extensible members, an adjusting and retaining connection between the staff and arm, and securing means upon the staff and arm for holding their members in relatively adjusted position, substantially as and for the purpose set forth.

2. In a doorway conformator, the combination of a staff formed of relatively extensible members, an arm pivoted at one end to an end of the staff and formed of relatively extensible members, an adjusting and retaining connection between the staff and arm, fastening means upon the staff and arm for securing their members in relatively adjusted position, and straight edge abutting shoulders, respectively at the opposite ends of the staff, and the outer end of the arm, substantially as and for the purpose set forth.

3. In a doorway conformator, the combination of a staff, formed of relatively extensible members, an arm pivoted at one end to an end of the staff and formed of relatively extensible members, an adjusting and retaining connection between the staff and arm, fastening means upon the staff and arm for securing their members in relatively adjusted position, straight edge abutting shoulders respectively at the opposite ends of the staff and the outer end of the arm, and an adjustable gage t^3 on the staff between its ends, substantially as and for the purpose set forth.

4. In a doorway conformator, a staff A affording a straight edge comprising a member t provided with a removable slide r, and a recessed member s, to receive the slide, provided with clamping mechanism for the slide, an arm B affording a straight edge comprising a sliding member p, and a recessed member q, on which the member p slides, pivoted at one end to the end of the staff member t, securing means upon the arm for holding its members in adjusted position, and an adjusting and retaining connection between the staff and arm, substantially as described.

5. In a doorway conformator, the combination of a staff affording a straight edge and formed of relatively extensible members, an arm affording a straight edge pivoted at one end to an end of the staff and formed of relatively extensible members, and an adjusting and retaining connection between the staff and arm comprising a socket plate upon the staff, a threaded rod on the arm, and a traveling nut upon the rod engaging the socket plate, substantially as and for the purpose described.

6. In a doorway conformator, the combination of a staff, affording a straight edge, formed of relatively extensible members and provided toward opposite ends with hinge locating means, an arm, affording a straight edge, pivoted at one end to an end of the staff, and formed of relatively extensible members, and an adjusting and retaining connection between the staff and arm, substantially as and for the purpose described.

JACOB ORT.

In presence of—
GEO. E. LODER,
H. H. DORSEY.