

(1) Number of pages 70(2) Date of repair 27-4-40

(3) Initials of the Referencer _____

MADRAS RECORD OFFICE.**Government of Madras.***Public Works* **DEPARTMENT.**G.O. No. 3002-3003

Press
Mis.

204-22Dated 12-12- 18 70.Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
12th December 1870.*

Read the following papers :—

- No. 204. From the Acting Superintending Engineer, 1st Division.
(Here enter No. 2,073, dated 15th September 1870.)
- No. 205. From do. do., 2nd do.
(Here enter No. 104, dated 8th November 1870.)
- No. 206. From do. do., 3rd do.
(Here enter No. 156-B, dated 20th October 1870.)
- No. 207. From do. do., 4th do.
(Here enter No. 1,934, dated 8th August 1870.)
- No. 208. From do. do., 5th do.
(Here enter No. 167, dated 4th November 1870.)
- No. 209. From do. do., 6th do.
(Here enter No. 728, dated 30th November 1870.)
- No. 210. From do. do., 7th do.
(Here enter No. 134, dated 14th September 1870.)
- No. 211 to 219. From do. do., 8th do.
(Here enter No. 2,125, dated 2nd November 1870.)
- No. 220. From the Special Executive Engineer, Wynaad.
(Here enter No. 486, dated 11th July 1870.)

No. 221. ORDER THEREON, 12th December 1870, No. 3,002.

MILITARY WORKS, No. 11.

ORDERED that the following letter
be sent :—

(Here enter No. 3,003, dated 12th December 1870.)

(True Extract.)

(Signed) CHARLES A. ORR, Colonel, R. E.,

Secretary to Government.

PUBLIC WORKS DEPARTMENT,
FORT ST. GEORGE, 12th December 1870.

No. 222.

No. 3,003.

To

THE SECRETARY TO THE GOVERNMENT OF INDIA,

PUBLIC WORKS DEPARTMENT.

MILITARY WORKS, No. 12.

SIR,—In reply to your endorsement
of the 17th June 1870, No. 620-B. M.,
requesting to be furnished with the

views of this Government on the subject of preventing the opening from the outside, by means of a man's hand thrust through a broken pane of glass, of the internal fastenings of doors and windows by so placing them as to be beyond reach in that manner, I am directed to state, that on the subject being referred to various members of the department, the following suggestions have been obtained :—

1. A bolt to be locked with a key similar to those used for locking the doors of railway carriages, or secured by means of another bolt placed transversely and made to fasten through an eye drilled in the former, the horizontal bolt being let into the floor of the building and covered entirely except at the end, from which it should be worked. Plan accompanying marked A.

2. Bolts worked by means of a vertical bar shown in the accompanying plan marked B. In opening, the hasp working on the hinge at A is first released from the staple or bottom rail of the door frame, and, with the hasp in one hand and the handle at B in the other, the vertical bolt is forced downwards, and, following it, the cross bolts glide out of their catch-hooks and leave the shutters unbarred. In fastening, the reverse action will suffice, the closing of the hasp on its staple renders the door secure.

3. A bolt at top and bottom of each shutter fitting with force in a socket.

4. The cross bar of the window or door or the end of the bolt to be fastened on or through an eye or staple, and secured to the wall by means of a chain out of reach of a man's hand thrust through a pane of glass.

5. Locks made on the same principle as those used for admirals.

6. A horizontal iron bar fastened to its staple by a padlock.

7. A common hasp fastened with a padlock.

8. A cross bar working on a swivel fixed in the centre of the window frame, shown in the accompanying plan marked C.

9. A bar placed transversely and fastened by a strong spring—see plan marked D.

More than one of these contrivances appear to possess merit, but His Excellency the Governor in Council is of opinion that nothing can be more simple or more effectual than the plan described above as No. 6, which consists merely of a bar across the door or window hinged on one side and fastened on the other by a padlock.

I have the honour to be,

Sir,

Your most obedient servant.

(Signed) CHARLES A. ORR, Colonel, R. E.,

Secretary to Government.

Exd. S. T. Augustin.

No 255.

Dowlaisberran
Ex: Engrs Office.
17th August 1870.

From

The Officer in Charge

No 101 E. S. Range.

Godavery District.

To

The Superintending Engineer

1st Division.

Dowlaisberran.

Sir.

With reference to your Memo No 1311 dated 20th July forwarding G.O. No 1620 for an expression of opinion on the subject of placing the fastenings of doors and windows out of reach from the outside, I do not well see how it is to be done unless at great expense.

2. My opinion is that it is better to improve the fastenings themselves. Explanatory of which I herewith forward a sketch which I would suggest for adoption it is locked by means of a key which can be removed and kept by head of office or other responsible person and reopened only by use of same key (or a forged one) there need be only 1 or 2 keys for each building.

3. The small door it is mounted on is merely to hold bolts whilst trying it and is out of proportion the bolt would be placed in exactly same manner as ordinary bolts.

I have the honor to request the bolts &c.
may be forwarded to Government with any expression
of opinion you may think necessary.

I have &c. &c.
(Signed) G. L. Sage
Sr. Engr.

(True Copy)

Mr. T. H. Major R. E.
Acting Supy. Engineer 1st Div.

Recd. 12. Oct 1870

Enclosed in a letter dated 19th Sept 1870
from the Acting Supy. Engineer 1st Division to the
Secretary to Government
P. M. Department

Dowlaisberron
Ex. Engineer's Office
20th August 1870

No 260.

From

The Officer in ch.
No. 1 Range
Godavery District.

The Superiority Engineer
1st Division
Dowlaisberron

Sir,

With reference to your letter No. 1725
dated 19th Inst. the G. L. in question merely asks
for an improved bolt or method of fastening bolt,
but with reference to your query, I have the honor
to state, it is not intended to fasten from the outside,
as in all public offices our door locks from the outside,
side or else there is a guard: the bolt as wished for
by Government is so made that if a pane of glass is
removed it cannot be opened from the outside.

I have &c. &c.
(Signed) G. L. Sage
Sr. Engr.
(True Copy)

Mr. T. H. Major R. E.
Acting Superiority Engineer
1st Division

No 1725.

Supr Engrs Office 1st Div
Dowlaisburgh
19th August 1870

To

The Executive Engineer
Sub: No 1 Range
Godavery District.

Sir,

Before submitting the model of a door I received with your letter No 255 date 2 17th Instant, to Government, I have the honor to suggest you will be good enough to explain how the bolt is to be fastened from the outside after all the people have cleared out of the building, as a person can easily lock himself in, in the manner proposed by you, but I do not think this is exactly what the Government required in their order to which your letter is a reply.

I have &c &c
(Signed) J. S. Fisher Major R.E.
Asst Engrs Office 1st Div
(True Copy)

W. H. Fisher Major R.E.
Asst Engrs Office 1st Div

W. H. Fisher

Supr. Engineer's Office 1st Div.
Dowlaisbury 15th September 1870.

No 2073

From

The Adj. Supr. Engr.
1st Division.

The Secretary to Government,
D. D. W.
Madras.

Sir,

At the request of the Sr. Engineer in-
charge of the 1st Range Mysore, I have the honor to
submit a model for the fastening of doors &c. of
public buildings with reference to G.O. No. 1620
dated 6th July 1870.

No 2554260 dated
17th & 20th August/70
respectively.

Two copies of letters received from Mr. Sage
as well as mine to him are forwarded for your in-
formation.

No 1725 of 19th
Augt. 1870

The designs from other Range Officers, when
received, will be submitted to Government in due
course.

I have the honor to be,
Sir,

Your most Obedient Servt.

W. H. K. Major R. L.
Acting Superintd. Engr. 1st Div.

W. H. K.

65-2007

Ch 204

No 3002-3003-12-1872

Public Buildings
fastening of doors &c. of
forwards a model for the

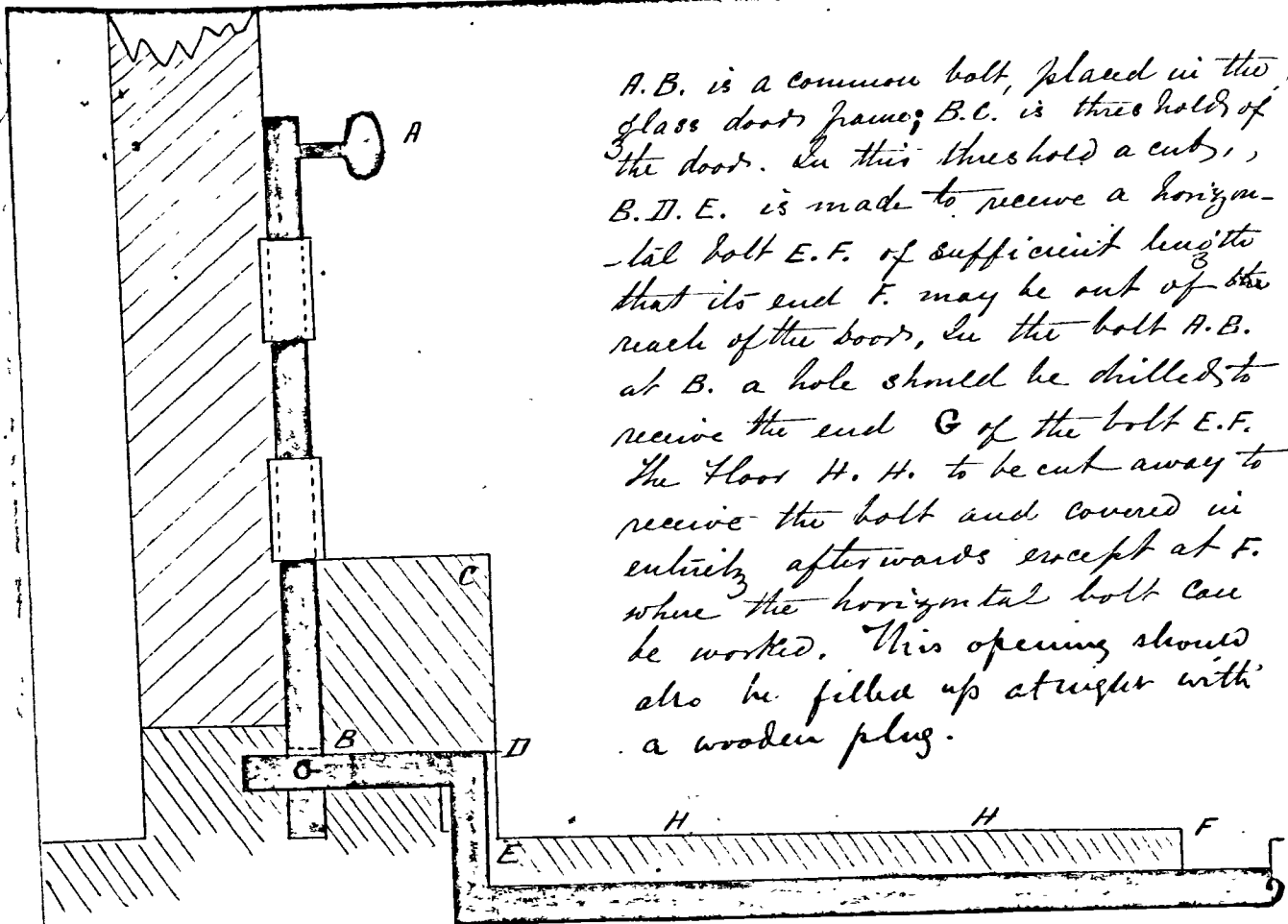
12/16/20 dated 6th July 1920

with reference to G. C.
Enclosures 4

Noted 15th September 1890
Recd 22nd

To The Secretary to Government
Madras
R. P. M.

Public Works 1890 Report
to the Secretary to Government
of Madras
10th November
1890



A.B. is a common bolt, placed in the glass door frame; B.C. is the hold of the door. In this threshold a cut, B.D.E. is made to receive a horizontal bolt E.F. of sufficient length that its end F. may be out of the reach of the door, in the bolt A.B. at B. a hole should be drilled to receive the end G of the bolt E.F. The floor H. H. to be cut away to receive the bolt and covered in entirely afterwards except at F. where the horizontal bolt can be worked. This opening should also be filled up at right with a wooden plug.

Printed by Aldrich & Co.
Printers & Stationers

Supp. Enquiries & D.C.

more and more in the

No 104

Supy Engineer's Office
2nd Division
Masulipatam
8th November 1870

From

To
Colonel J. J. Moherly R.E.
Superintending Engineer
2nd Division
Colonel C. A. Orr R.E.
Secretary to Government
Public Works Department.

Sir,

I have the honor to enclose a sketch of a bolt proposed by Lieutenant A. C. Smith R.E. for securing barrack doors as called for in G.O. No 1620. 6th July.

2. I fear however that native children can easily pass through the space occupied by a pane of glass and if bars are put across them to prevent entrance the ordinary bolts would suffice.

I have the honor to be

Sir,
Your most Obedt Servt

J. Moherly. Colonel R.E.
Supy Engineer D.D.

1

8. 11. 4. 6. 4. 8. 1/90-

10/1/90

Extract from a Docket N^o 247 dated
23rd July 1840 from Mr. R. S. Harris Super-
visor in charge Anantapur Range to
the Superintending Engineer 3rd Division.

G. O. N^o 1620 of 6 Instant.

In compliance with Enclosure
ment on above, begs to submit
the enclosed plan of a door whose
fastenings seem to provide the re-
quired security.

The bolts fasten or withdraw
with a single motion. The Plan
gives the view of the bolts when
fastened, the dark shadings show-
ing the position of horizontal bolts
when withdrawn. As the fastening
or opening depends on one motion,
the explanation of either will suffice,
and as the position of the bolts in
the plan is that of being fastened,
the following is the mode of opening:

The hasp, working on the hinge
at A, is first released from the
staple on bottom rail of door-frame
and with the hasp in one hand,
and the handle at B. in the other,
the

Public Works 1840 Referred
to Mr. J. J. for 23rd July 1840

From Mr. C. J. Engineer
to Mr. J. J. for 23rd July 1840

23rd July 1840
No. 17

In answer, sketch of a door
prepared by Mr. C. J. Engineer
for securing houses down
and uppers has to be put
across frames of doors to
prevent entrance of any
unlawful children -

No. 3002-3003-12 kept

1840

to 6: 1840

to 6: 1840

"True Extract"

Billings } Lieut. Col. R. B.
20 October 1870 }
Superintending Engineer,
3rd Division

From
New York Engineer
3-28-76

and Secretary
of Mr. DeLoach
to Mr. DeLoach

Enclosed are two copies of a letter from the New York Engineer dated 3-28-76.

JWH 4230/je

From,
The Superintending Engineer
3rd Division,

To,
The Secretary to Government
Public Works Department
Fort Saint George

Sir,
Having received replies from most of the Range Officers in this Division in reference to G.O. No. 1620 dated 16 July last, I have the honor to forward for consideration the accompanying Plans and report from Mr. Supervisor Harris who is the only one whose suggestion may commend itself to Government.

2. My opinion of the plan proposed by Mr Harris for secure internal fastenings is, that the screw bar, with its attached hafts

Enclosures, 2.

** to be returned*

1870.71.

It would be too heavy, and that upon one of the shutters only.

3. I however suppose that what is required is a plan so simple that it can be carried out in the remotest stations of India, and as far as I am aware I think a bolt (at top and bottom) on each shutter, and fitting only with force in the socket, would not only be the cheapest, but as secure as it can well be, considering that the door or window is half glazed and half panel.

4. Spring bolts or catches are certainly to be preferred, but such must be expected to get out of order or slack and cannot perhaps be replaced at all times.

I have the honor to be,

Yours most obt. servant

Wm. G. Lenthall
Superintending Engineer
3rd Div.

1870 - 7th Sept
From, *Mr. J. P. Bean*
No. 4230
The Superintending Engineer
3rd Division

To,
The Secretary to Government
Public Works Department
Fort Saint George

No. 156.13.
Dated 20th October 1870.
Received 25th
En: 2. 10th Oct

Replies to G. O. No 1620
dated 6 July 1870,
regarding inter-
nal fastenings
to half glazed and
half paneled doors &
- windows
No 3002-3003-12th Oct

No 206
6th Dec 70
Superintending Engineer
3rd Div

No. 1934

Sup. Engr's Office 4th Div
Madras 8th August 1870

From
Lieut. Colonel J. Bean R. E.
Superintending Engineer in Charge 4th Div

To,
Colonel L. A. Orr R. E.
Secretary to Government P. W. Dept
Fort Saint George

Sir,
With reference to Order of Government
No. 1620 dated 6th July 1870 calling for a
report upon the best method of securing the
fastenings of doors and windows from being
opened from outside by an arm being thrust
inside through a broken pane of glass, I have
the honor to report that I have taken the opinion
of my range Officers on the subject.

2
No very simple contrivance has
suggested itself in the absence of pad lock
or Key. The prop bar of the window or door,
or the end of the bolt might be made to
fasten on or through an eye or staple, and
a chain passed through it secured to the
wall, out of reach of a person's arm thrust
through the pane of glass.

I have the honor to be
Sir

Your most obedient servant
J. Bean Lt Col R.E.
Sup. Engr in Ch. 4th Div

J.P.

N^o 167.

Superinty Engr's Office, 5th Divⁿ
Cuddalore, 4th Nov^r 1870.

From

Captain P. A. Roberts C.E.
Acting Superinty Engineer,
5th Division

To.

The Secretary to Government,
P. W. Department,
Madras.

Sir,

In reference to G. O. 6th July
1870, N^o 1620, and reminder, dated
25th October 1870, N^o 84, calling for a
report as to the best method for the
fastening of the doors and windows
of Public Buildings, I have the
honor to report as follows.—

1. Immediately on receipt
of the order, I circulated it to all
Range Officers for any suggestions
they might have to offer, and the
following is a resume of their replies,
with remarks thereon.—

2. Of the Range Officers in South
Arcot, Lieutenant Purchas C.E.
in

Enclosures.
2 Plans.

Received by the
Hon^{ble} Secy to Govt
P. W. Department
on 11th Nov^r 1870
Dated 8th Nov^r 1870
To
Secretary to Government
P. W. Department
Madras

N^o 1934.

Re. fastening the

method of fastening

the fastenings of doors

and windows of public

buildings

and windows of public

buildings

buildings

in charge of No. 1 Range, has taken no notice of either the original order or of a reminder addressed to him on the 27th September last.

3. Lieutenant Graham, in charge of No. 2 Range, reports "that he is not prepared to submit an opinion" on the subject.

4. Mr. Hawkeworth, in charge of No. 3 Range, suggests as expedients:—
"to have plate-glass instead of common glass." I fancy that the mere mention of this is sufficiently deterrent or "to have the fastening, either at the top or bottom of the door, or both, with a contrivance, as is usually adopted in shops in London, of connecting the door by means of a spring clip with a bell, and which on being opened is sure to agitate the bell and give warning."

I imagine that the expense and inconvenience attending the fitting of every door and window with this contrivance, is likewise sufficiently deterrent.

5. Mr. B. E. Norfor, in charge of No. 4 Range, forwards the enclosed Drawing marked "A" representing what appears to him to be the most secure method for effecting the object in view. It will be seen that this gentleman comes boldly to the front, and effectually prevents the fastenings being opened by the breaking of a pane of glass, by not having any glass at all either in his doors or windows. Barring this trifling inexactness, his method appears irreproachable.

6. Of the Range Officers in the Salem District, Capt. H. H. Hinde, in charge of the Salem Range, forwards the accompanying Plan, marked "B", of a bolt which he thinks would answer the purposes required. With it he forwards the following explanation: "the horizontal bar is fastened by a padlock to the wall at the side of the door, out of the reach of any one from outside, though a pane of glass were

were broken. When unlocked and lowered the lower bolt raised - and the upper lowered simultaneously, you will perceive from the position of the bar the usual lock in the centre of the door becomes unnecessary, therefore the extra cost in length of bolt would be quite made up in the saving of locks."

This crude contrivance appears to me to have little, if any, practical value, and it would be too much to expect that there is the slightest probability of its being ever adopted. For to have a jagged iron bar sticking out in mid-air, as would be the case on every door and window when open, would be a considerable nuisance and prove a fruitful source of accidents: and when shut it is improbable, to say the least, that the upright top-bolts would remain so truly vertical as to be shot at pleasure into the staples

staples when the levers are worked.
7. Appavoo Moodeliar, the Executive Agent in charge of the Trippatore Range, presumes that "the safest way to secure glass doors from being opened would be to have them locked by such locks as are used for almirahs."

Tho' approving of the principle suggested by the Moodeliar, I scarcely think almirah locks strong enough to resist the pressure to which doors would be subjected in the cases under consideration. But with top and bottom flush bolts let into the inside edge of the door styles, as in an ordinary book-case, and with a good stout rim-lock, it would appear that this system would answer very well.

8. Mr. Pajpiter, in charge of the Oopoor Range, considers that the arrangement proposed might easily be contrived. The fastenings "might be placed so high or low, on the door as to be beyond the reach

"reach of a man's hand. Or bolts
"might be connected with a sys-
"tem of levers placed in the wall
"or under the floor of a room, and
"so arranged that they would open
"or shut the bolts only by motion
"communicated to a handle placed
"some distance from the door, or
"even in the next room". Or again
perhaps it would suffice to protect
"the glazed portion of a door or window
"with iron bars."

Mr. Paynter proceeds to state
that fastenings to be of reasonable cost
and yet efficacious must vary accord-
"ing to circumstances - such as the de-
"scription of door or window to be fas-
"tened, the nature of the property in-
"side the building, the general char-
"acter of the thieves about, the length
"of time they would probably have at
"their disposal without danger of
"being molested in trying to effect
"an entrance". -

Of course, it is impossible
for me to furnish Mr. Paynter with
the

the variety of information, which,
in the true spirit of the age, he
desires to possess before proposing
something which, judging from
other experiences, shall end in the
habitual smoke. - It appears to me,
however, that if a building were
left unprotected until all these im-
portant points had been fully dis-
cussed and determined on, it would
be fastening the door on the stolen
steed. Robbers and tramps are sy-
nonymous, and it would be in-
deed mortifying, after selecting
a system of fastening that baffled the
skill of the artful thief of today, to find
that when the Police make that in-
gentleman "move on", this fastening
would prove of no kind of security -
against the more artful thief of the day
after tomorrow. -

"For ordinary purposes, Mr.
Paynter thinks, that "the best and
cheapest kind of fastening is an iron
"bar placed across a door & secured
"to its staple by a pad-lock. -

And I have no kind of hesitation
in

in endorsing that opinion.--

9. Captain Wood R.E., Executive Engineer, Bangalore, has taken no notice whatever of my original order or of the reminder of the 27th Sept^r last.-- Whether, therefore, that officer has no suggestions to offer, or whether he considers the subject beneath his notice, I am not in a position to state.--

10. In conclusion, I have only to repeat that Mr Poynter's suggestion mentioned at the end of para 8, viz. an iron bar placed across a door and secured to its staple by a pad-lock, appears to me the mode of fastening best suited, in a general way, to meet the requirements of the case.--

I have the honor to be
Sir,

Your most Obedt Servt.

Rich^d Roberts Capt^l R.E.
Agy Supermtg Engr, 5th Div.

1870 Sept
Hon. Secy
No 4474
The Supg Engineer
5th Division

To
The Secretary to Govt.
P. W. Deptt.
Madras.

Dated 4th
Rec^d. 7th } November/70.

No 167
Encl^s 2. Plans

Public buildings
Report as to the best
method for the fast-
ening of doors and
windows of public
buildings.

No 3002-3003-12th Divⁿ

No 208

6th Dec/70

Executive Engineer's Office
Trichinopoly 17th Nov/70

No 80

To

The Executive Engineer
Incharge Supg Office
6th Division

Sir,

With reference to G. O. No 1620 of
6th July I have the honor to state my
views regarding the fastenings of Doors and
Windows.

The Question seems particular-
ly to refer to glazed doors and Windows.

These I would remark are from
their nature insecure, nor would it be
expedient to try to devise any complicated or
expensive process for rendering them other-
wise, for if a man has the opportunity
to remove a pane of glass, he can almost
as easily remove two or more, together
with so much of the frame as will allow
ingress to his own body, or to that of
another person.

This being premised and it being
understood that the object is merely
to prevent the opening from the outside
of Windows or Doors via their Hinges, I
can

Can indicate how this can easily be rendered almost impossible.

I will suppose that the Doors or Windows are in 2 leaves, but this plan may easily be adopted when it is otherwise.

I would propose that a strong staple be screwed ^{or riveted} into each of the two Vertical Bars of the Frame; to one of these staples a stout chain (steel best) is attached - this is passed twice through the other and being made taut is attached to a ring in the floor, out of reach of a hand thrust in from the outside.

The simplest attachment to the Ring would of course be by a hook at the end of the chain, but as the chain might then be jerked off the ring by a stick or other instrument in the hand of a person outside, I would propose that the end links of the chain be fastened to the Ring in the floor, as is a key (of a British key) to a Ring.

This would render the opening of the Door or Window a simple impossibility if the Ring in the floor be placed out of

of reach of a hand from the outside.

This seems to me the simplest and cheapest method of obtaining security.

Here is another more expensive and more complicated.

Referring to the sketch, Fig 1, which accompanies this, shows an Iron Bar which is placed across the Door or Window, following its splay, and passing along the inside Wall to a convenient distance; this Bar is dropped into strong Hooks on the Frame of the Door, as also into others let into the Wall; near each end it is perforated to admit of a Bolt passing through it, which is shot into a Wooden Brick fixed into the Wall.

From an inspection of the sketch it will be seen that it may be easily rendered quite impossible to withdraw this Bolt by a hand from the outside, for even supposing the head of the Bolt to be within reach of the fingers, the direction of motion must be more or less the arc of a circle to which the Bolt is tangential.

It may be said the Bolt can be withdrawn by a pick, but this would be far from easy, besides.

It

it would be very easy to provide against this -

To obviate the evils of rust it is recommended that the Bolts and the Sockets be made of Brass -

The Wooden Bricks could readily be made of two pieces, screwed or otherwise fastened to one another -

A third method that suggests itself is represented in Plan in Fig 2, and in Section Fig 3.

This shows an Iron Bar which goes across the Door, and fits into Recept in the masonry on either side; the depth of our recept may be about 6 inches, and in this the Bar merely rests; the other must be deeper to admit of the Fastening being applied -

The Bar being home in the Recept first mentioned and resting on the bottom of the Recept, a Bolt is passed through the Wall in front which penetrates the Bar, and is shot into a Wooden Brick having a Metal Socket for it.

It may be rendered perfectly impossible to withdraw this Bolt, except from the inside, by an arrangement such as is shown in the Section Fig 3.

On the Brass Bolt here shown are

are cast 2 flanges or Projections: when the Bolt is passed through the hole in the Iron Bar, and shot home into the Metal Socket in the Wooden Brick, a Collar (also brass) and in shape something like a Horse shoe is dropped on the Bolt between the Projections, the ends of the Collar fitting into a Recept in the masonry below the Bolt -

It will then readily be seen that even to move the Bar, except from the inside is a sheer impossibility.

I have the honor to be

Sir
Your most obedient Servant

James Tertius Capt R.E.
Executive Engineer *Friedrichs*

No 728



Superintendent's office Bangalore
Bangalore 30th November 70.

From
Captain R. F. Oakes R.E.
Superintendent Prisons Bangalore
To
Colonel C. A. Oakes R.E.
Secretary to Government D.O. No.
Madras.

1 Plan
1 Report

With reference to G.O.
No 1620, dated 6th July relative to
the internal fastenings of flap doors,
I have the honor to enclose an Ori-
ginal Report from Captain Vartan
suggesting two methods of securing
the doors, so as to prevent access to
the interior of a Room.

From the context of the Memo
embodied in G.O. No 1620 it would
appear that what is required, is
merely to prevent a door from
being opened from the outside. The
simplest and most unobtrusive way
of doing this would appear to be to
place

Friedrichshagen District

No. 1 Page

From
The District
Friedrichshagen
To
The District
Friedrichshagen
Dated 6th Dec 70

Dated 7th November 1870
Respectfully
Yours

No. 80

Report of the
as to the
of fastenings of doors
and windows

Encls: No in a
letter No 728 dated
30 Nov 1870 from
the District, 6th Dec
to the Secy. to Govt
1870/11/30

place staples in the outer frame
of the door and to have a chain of
2 or 3 links, one link permanently
attached to one of the staples and
another to lock over the other staple
and to be secured by a Padlock the
key of which might be hung any
where within the room beyond the
reach of an arm from without the
door or window. — The rings of the
chain to be so arranged, or the chain
to be so short, that it would not be
possible to push the door open more
than $\frac{1}{8}$ inch supposing all bolts &c.
to be drawn. —

If the door or window is fastened
at the top or bottom by a bolt instead
of the ordinary Iron Pin or projection
by which the bolt is lowered or raised
a hasp might be attached to the bolt
working on a hinge and when the bolt
is driven home, this hasp might
buckle over a staple on the other leaf
of the door or window & be secured by
a Padlock. —

I have the honor to be
Your most obed^t Serv^t —

J. P. A. Capt. R.R.
Superintendent 6th Dth

No 209
12.5. Dec 70

1870
To Mr. J. G. P. Secy
From Mr. J. G. P. Secy
The Superior
6. Div.

To The Secretary to the
P. M. D.

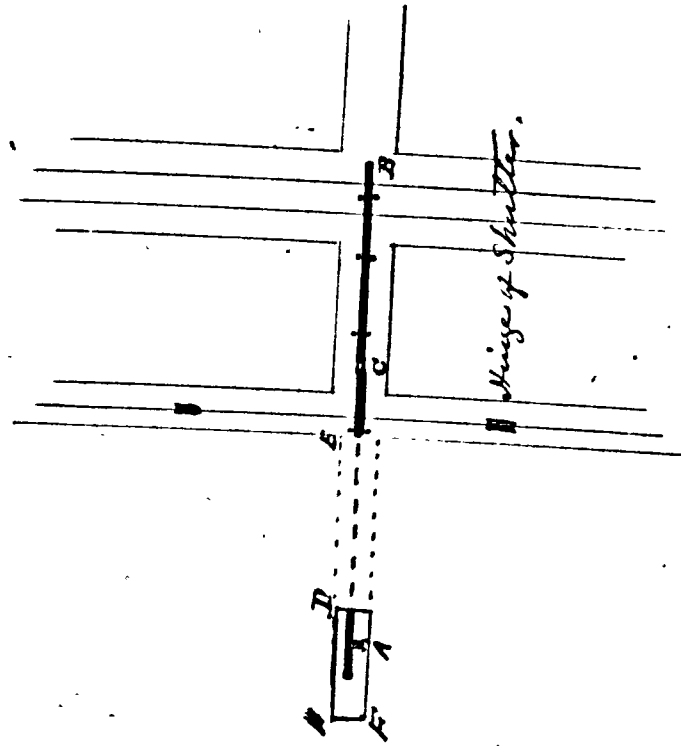
Dated 30 November
Recd 1st December 1870

No 728.
Enclosures. 2.

Replies to G. C. No.
1620 of 6 July relative
to the internal
fastening of glass doors
& submits a Plan & a
Report from Captain
Vertue on the subject
No 3002-3003-12 Dec 70

Window & Door Fastening

A B is a long draw bolt with a
hinge at C and a portion of the
bolt F E is let into the wall. D E is
covered. & D is just beyond the reach
of a man's hand from the outside.
When the bolt is drawn from A to F
the hinge C will be drawn to the same
line as the hinges of the shutter
& then will be no hindrance to opening
the window, since the hinge at C works
in the same direction as those of the window.
The bolt is fixed by a simple staple at A
or F.

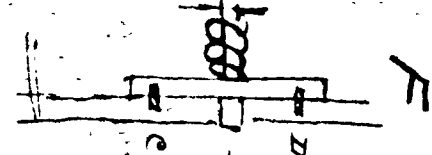
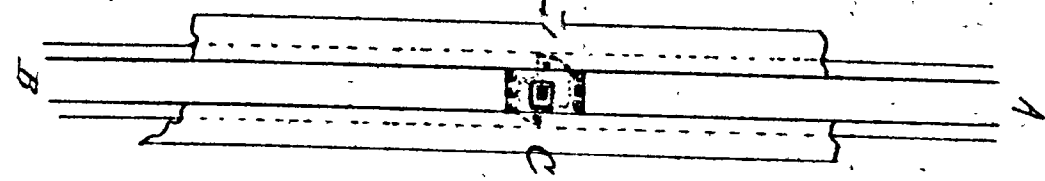


Designed by Mr. A. B. C. D. E. F.
J. G. P. Secy
11. 8. 70

Design for a window
and door fastening
patented by Mr. Andrew
Chubbuck.

Mr. Chubbuck

18-8-70
Design for a window
and door fastening
patented by Mr. Andrew
Chubbuck.

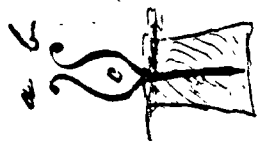


Designed by
Andrew Chubbuck

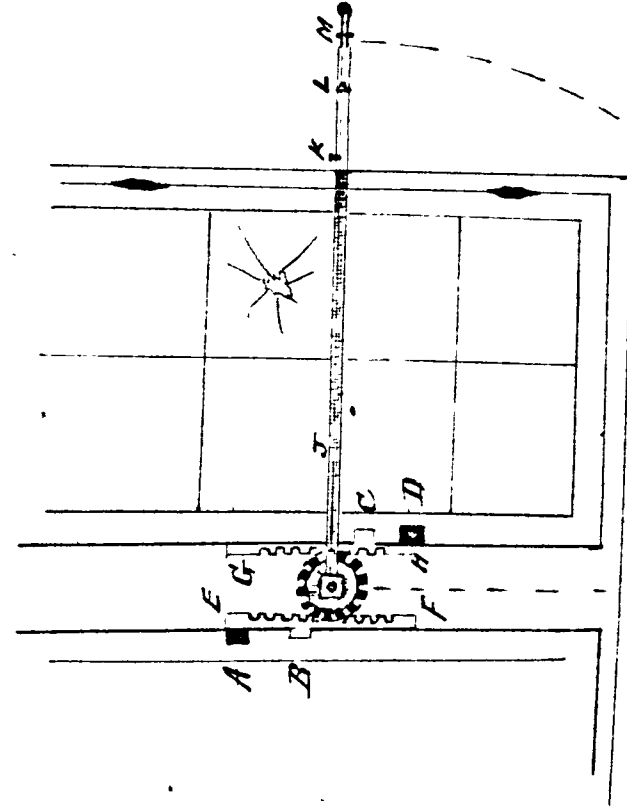
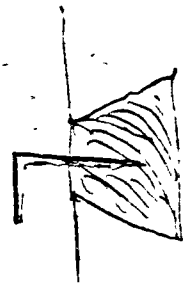
Window fastening

A B is the centre bar of a window, the double
parallel lines representing the rabbet on either
side. A quadrant mortise is cut into D & E
the back on either side of the centre bar, so as
to prevent tampering with the lock, from the
outside. This is done by cutting the mortise
in each end, at the depth of the rabbet only.
A key is required for the lock, which is like
that used for sliding casings. A key is
by itself than under action. A spring below
the two parts D & E so that when F will fix them
with pins at D & E making a dot (• then)
in such a way that they cannot be moved
without turning of the spring & a key.

Elevation
M



Elevation
K



* Cog wheel. At K there will be a band in the back then
to suit the difference of planes & window wall

Window fastening

A and D are two square ricks cut in the
back of each shutter. E F and G H, two flesh
bars geared on one side, with two small
pieces B & C at right angles to them. The second
sides work into a cog wheel, fixed to the
centre bar of the window, and a thin wheel at
the centre is attached a long bar, T M, so that
M cannot be reached by the hands of a man intending
to open the window from the outside.
When the arm T M, is brought, by describing a
curve, to O, then B will slide up to A & C down
to D. There will be then no hindrance to
opening the window shutters. The sketch represents
the window closed. At L is a hinge, by which
the part L M, is placed horizontal to the wall on
window, and serves the purpose of a handle.
At N is a double spring in the shape shown
in Elevation M, fixed into a wooden block in
the wall, at K is a book fixed D & E to prevent
upward thrust and bending of the bar T M.
as also forcing handle at M. A similar spring is placed at O with
key, the bar T M, from being moved when shutters
are open. The whole of the work may be covered over
like a door lock with sheet iron - and arm
T M, placed above with a screw nut at centre of

No 134

Superintending Engineer's Office,
7th Division

for initiation 14th Sept 1870

From Lieut Colonel W. Farwell S.C.
As Sups Engineer, 7th Div

To,

The Secretary to Government,
D P Works,
Madras.

Enclosure 6 Sir,

With reference to G.O No 1620
of 6th July 1870 I have the honor to
enclose 6 designs submitted by
some of the Officers & Officers of
this Division for securing internal
fastenings for glazed doors, but to
my mind the cheapest & simplest
plan would be to fit such glazed
doors as it may be desirable
to render more than ordinary
secure with a common hasp
and Padlock.

I have

13-81
10-11-70

Adams Express Co

65. 1870

1870 Dec 27
 Yours of 13th inst.
 the day before yesterday
 7th Division

N^o 2125.

From

W. H. Lamcott
2 November 1870

Mayor G. M. Payne

30

Atq Superintending Engineer & Dr.

Colonel G. A. Orr F. E.

Secretary to Government L.D.W

Sir,

Encl 1.

With reference to L. O. No 1620 of the 6th July, 1870 and to Memo No 84 of the 25th ultimo, I have the honor to state that in the replies that I have received from Executive Officers in this Division on the subject of the prevention of the opening of the internal fastenings of doors &c. by the breaking of a pane of glass, none contains suggestions of any very novel or practical character. Mr Leggall, the Executive Engineer of the 1st Range Madurai submits a plan of a half glazed and half panelled door to be closed by an iron bar and secured by a strong spring. Another Executive Officer suggests the precaution of fixed iron bars being adopted, whilst a third (Mr Supervisor Martin) thinks the best way for fastening the doors and windows would be "to use door locks and remove the key".

plan forwarded.

I have &c
S. W. Payne Major
Adj. Superintending Engineer
8th W^d.

1486.

John...

7.

The Secretary to Government
Department Public Works.
Madras.



In reply to G. O. No 1620 dated
6th Instant I have the honor to observe
that it appears to have escaped the notice
of the officiating Secretary to the Govern-
ment of India that there can be no
possibility made of securing a door or
window that has no other protection
than glazed sashes, as it would be quite
as easy to cut or saw the sash divisions
as to remove a pane of glass, and ingress
could thereby be obtained without the
necessity of interfering with any bolts
I would propose that all glazed doors
and windows should be fitted with
a strong wooden shutter removable
during the day and secured where
required

Oct 1830
Dear Sir
I have the honor to acknowledge the receipt of your letter of the 14th inst. and in reply to inform you that the same has been forwarded to the proper authorities for their consideration. I am, Sir, very respectfully,
Yours, &c. &c. &c.
J. M. Smith

8th Division
Vth of The Land Army to Government
P. W. D. Machine

Dabob 2 $\frac{2}{2}$ } Rosenbluth
 Stearn 7 $\frac{2}{2}$ }
 Can. 1 }
 X mid. Ac.

furnishes reliable information
 on the subject of the prevention
 of the opening of the internal
 passages of Doord's by the
 breaking of air and of glass

10 3002-3003-12-kerf

2/20/21

25 Oct 70

permanently by a pin passed through the
top of the window frame and fastened
in place.

Have the honor to be, Sir,

Sir,

Your most obedt servant,

Wm. S. Reeves Major

Adj. Gen. Engineer Regt.

Enclosed for you are
two copies of a report
of the operations of the
regiment during the
month of June. One copy
of the same is also
forwarded to the
Adj. Gen. of the
Department. The
report is in the
form of a narrative
and contains a
detailed account of
the operations of the
regiment during the
month of June. It
also contains a
list of the names of
the officers and
men who were
killed or wounded
during the month.
I am, Sir, very
respectfully,
Your obedient servant,
Wm. S. Reeves

Calling No. 1870 to fact mount
 21 no. 1870 for (December)
 The Special Executive
 Engineer. Wynand
 To The Secretary to
 Government
 Department Pub.
 Works. Madras
 Dated 11th July 1870
 Recd 13th July 1870
 No 486.

Informs that the
 made in which glass
 doors and windows in
 a Building can be de-
 -cided. —

No 3002-3003-12th Dec 70

No 270

65th Dec 70

2750-4548, 4230
 4878-3698-4477
 1274
 No 3002-3003
 Proceedings of the Madras Government
 Under date the 12th December 1870
 Read the following
 from the act of Sept 1st Dec 1870 (H.E. No 102073 of 15th Sept 1870)
 " — 2nd — 2nd (H.E. No 10478 of 15th Sept 1870)
 " — 3rd — 3rd (H.E. No 15613 of 20th Oct 1870)
 " — 4th — 4th (H.E. No 1934 of 8th Aug 1870)
 " — 5th — 5th (H.E. No 167 of 4th Nov 1870)
 " — 6th — 6th (H.E. No 728 of 30th Nov 1870)
 " — 7th — 7th (H.E. No 134 of 14th Sept 1870)
 " — 8th — 8th (H.E. No 2125 of 2nd Nov 1870)
 " the Special Ex. Eng. Wynand - H.E. No 486 of 11th July 1870

Ordered that the
 following letter be sent.

H. E. No 3003 of 12th Dec 70
 To No 3003 —
 The Secretary to the
 Government of India
 Sir,

In reply to your
 endorsement of the 17th June
 1870, No 620 B. M. requesting
 to be furnished with the
 views

views of this Government
on the subject of preventing
the opening from the outside,
by means of a man's hand
thrust through a broken
pane of glass, of the internal
fastenings of doors and
windows by so placing
them as to be beyond reach
in that manner, I am
directed to state, that on
the subject being referred
to various members of the
Department, the following
suggestions have been
obtained.

1. A bolt to be locked with a
key similar to those used for locking
the doors of railway carriages, or
secured by means of another bolt
placed transversely and made to
fasten

fasten through an eye drilled in the
jambon, the horizontal bolt being
let into the floor of the building and
covered entirely except at the end, from
which it should be worked. Plan
accompanying marked A.

2. Bolts worked by means of a
vertical bar shown in the accompanying
plan marked B. In opening, the
hasp working on the hinge at A is first
released from the staple or bottom rail
of the door frame, and, with the hasp in
one hand and the handle at B in the
other, the vertical bolt is forced down-
wards, and, following it, the cross bolts
glide out of their catch hooks and leave
the shutters unbarred. In fastening,
the reverse action will suffice - the
closing of the hasp on its staple renders
the door secure.

3. A bolt at top and bottom of each
shutter

shutter fitting with force in a socket.

4. The cross bar of the window or door or the end of the bolt to be fastened on or through an eye or staple, and secured to the wall by means of a chain out of reach of a man's hand thrust through a pane of glass.

5. Locks made on the same principle as those used for Almshouses.

6. A horizontal iron bar fastened to its staple by a padlock.

7. A common hasp fastened with a padlock.

8. A cross bar working on a screw fixed in the centre of the window frame, shown in the accompanying plan marked C.

9. A ~~single~~ bar placed transversely and fastened by a strong spring-see plan marked D.

More than one of these

these contrivances appear to possess merit, but His Excellency the Governor in Council is of opinion that nothing can be more simple or more effectual than the plan described above as No. 6 which consists merely of a bar across the door or window hinged on one side and fastened on the other by a padlock.

h. s. despatch 12/12/70 with a model

Copies of plans despatched 14/12/70.

Originals kept in the office.

P. C. despatch 21/12/70

+ Despatch in a wooden box for the same

W. J.

3750, 4148, 4230, 3077,
4474, 4878, 3698, 4479
and 2704
Govt. of Madras.

PUBLIC WORKS.

To The Secretary to the Govt.
of Madras.

Dated

Recd.

G. O. 12th Decr 1870. No. 3002-3003

Nos. 221, 222

Public Buildings. Papering orders
in papers relative to the best
method for the
papering of doors
& windows of Public Buildings.

Letter

Submitting a report as
to the best method for the
papering of doors and
windows of Public Buildings.