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Sala . The Battle of the Safes - 1868

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THE BATTLE

OF

THE SAFES.

BY

GEORGE AUGUSTUS SALA,

AUTHOR OF "MY DIARY IN THE MIDST OF THE AMERICAN WAR," "NOTES AND
SKETCHES OF THE PARIS EXHIBITION," ETC.

TWO SHILLINGS.

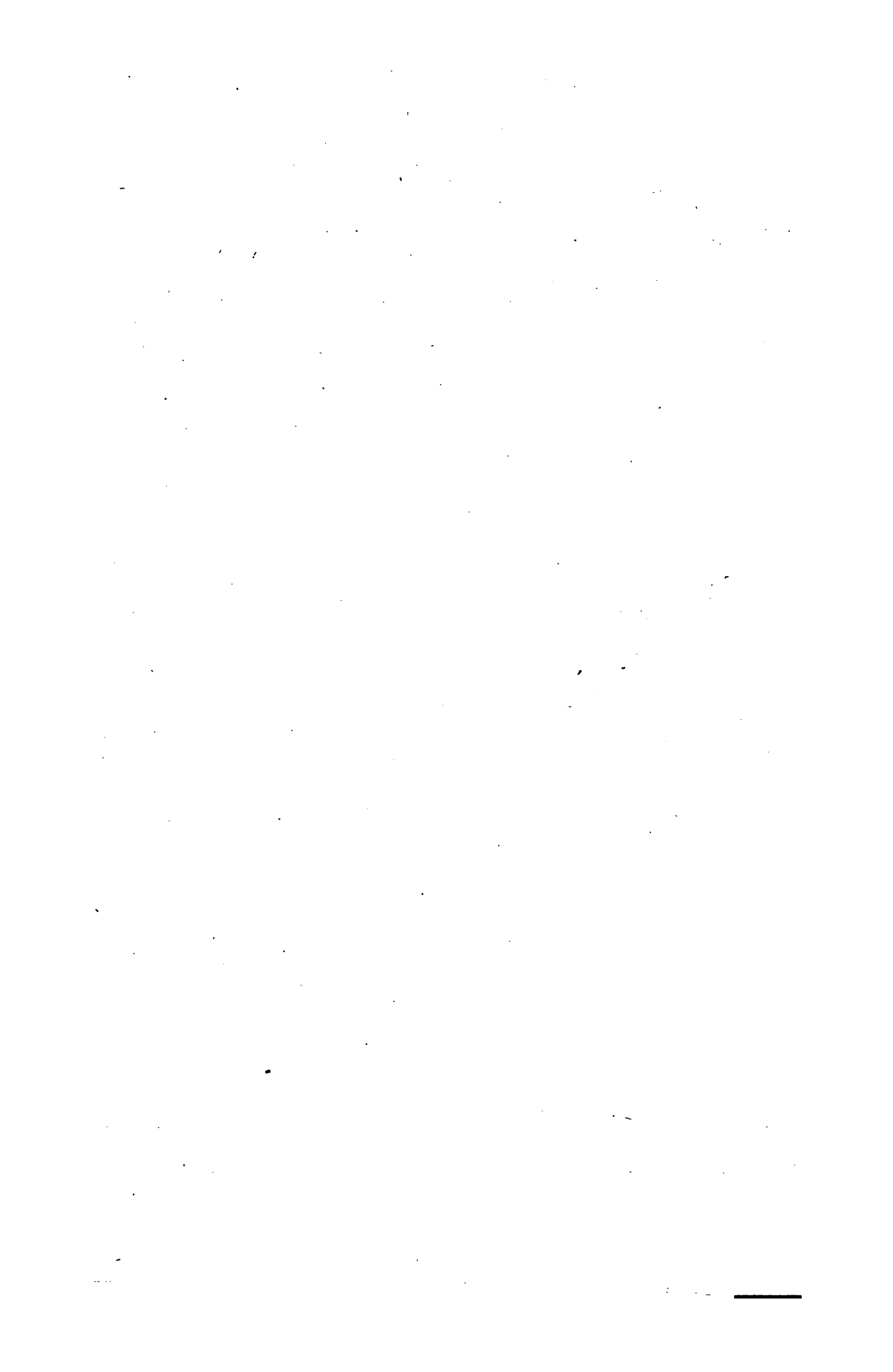
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AND MAY BE HAD OF ANY BOOKSELLER AND AT THE RAILWAY BOOKSTALLS.

1868.

76.

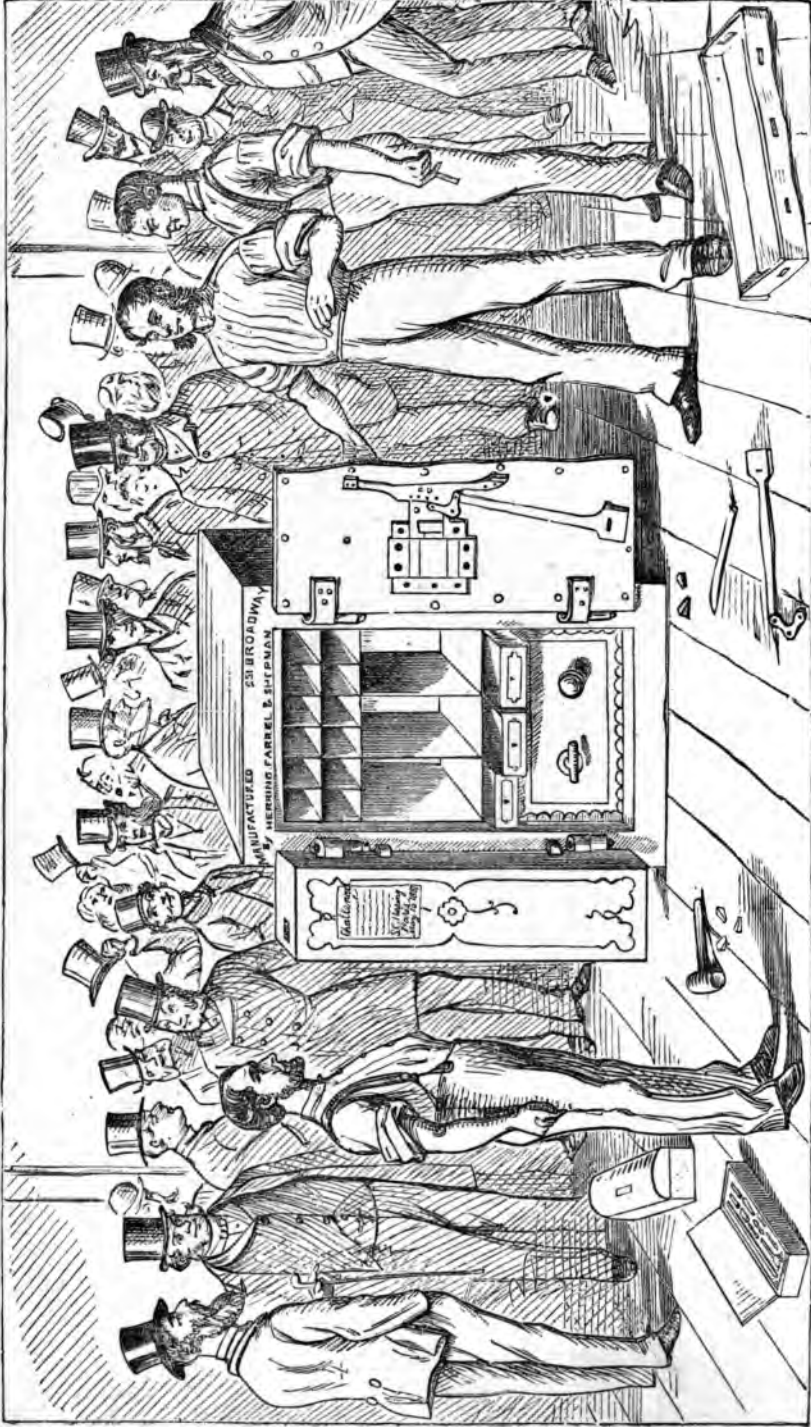






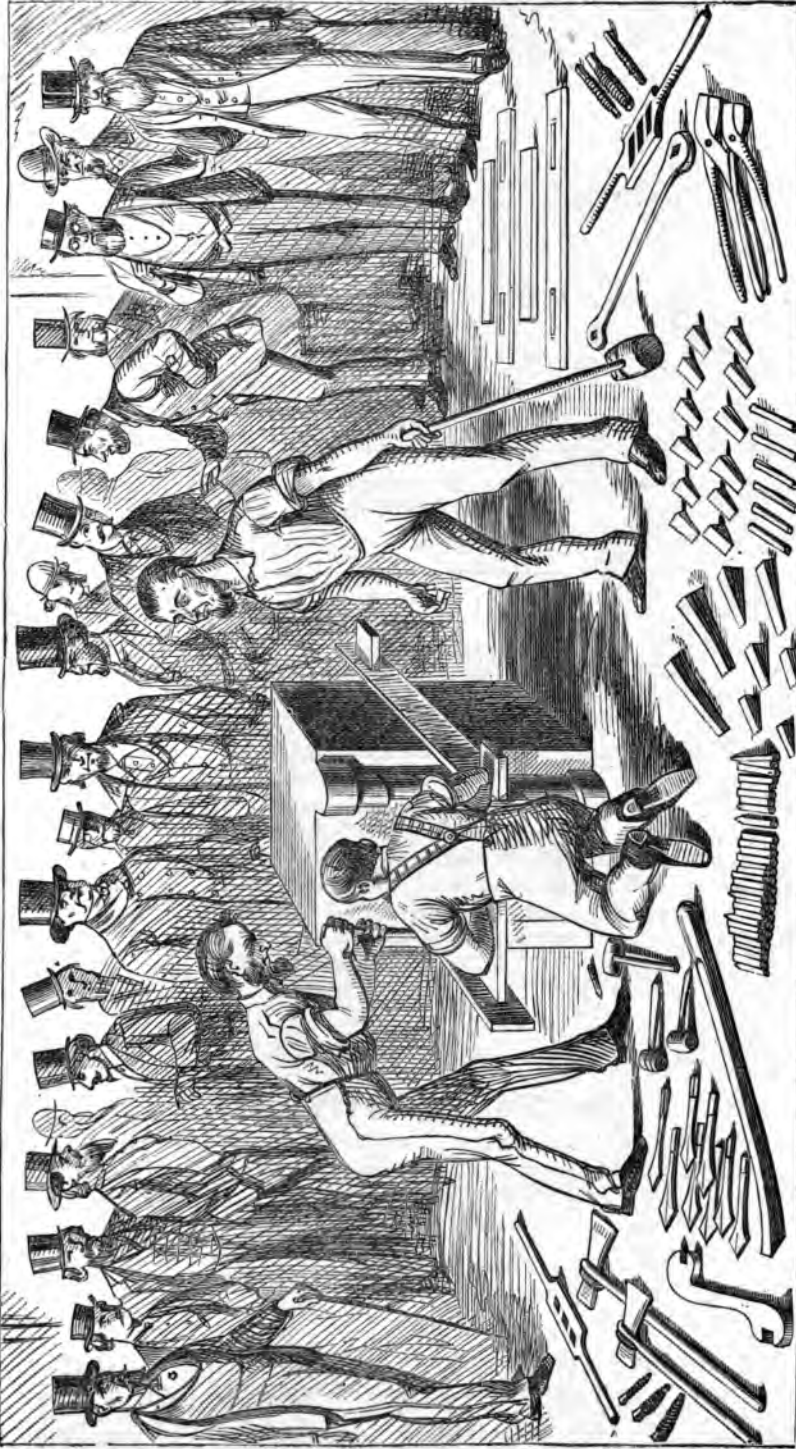
THE AMERICAN SAFE.

Time, 3 14 p.m., Aug. 13, 1867, 29 minutes after the commencement; the trials having commenced simultaneously on both Safes at 2 45 p.m.



"In that brief space of time (29 minutes) the original challenge safe of Silas C. Herring which Samuel Chaitwood had undertaken to force open was so forced open by him, in a perfectly legitimate manner, and with nothing but ordinary burglars' appliances."—p. 24.

THE EVOLUTION OF THE



"Abandoning lockpicking tactics as utterly useless, they built around the safe a very mischievous-looking framework for the "ratchet," and arranged to drill the front door with a view to forcing it open; and, after numerous drills had been broken to pieces, the Germans were fain to give up the attempt as a bad job, and commenced in earnest with steel punches and sledge hammer to try to force in the lock and the keyhole plug, but in vain."—p. 22.

THE
BATTLE OF THE SAFES;

OR

BRITISH INVINCIBLES

VERSUS

YANKEE IRONCLADS.

BY

GEORGE AUGUSTUS SALA,

AUTHOR OF "MY DIARY IN THE MIDST OF THE AMERICAN WAR," "NOTES AND SKETCHES OF
THE PARIS EXHIBITION," ETC.

" Make me a strong box,
Hard as a diamond and smooth as glass—
Concrete, compact, without a joint or flaw ;
Inflexible as an attorney's heart ;
Stronger than steel than ever Norseman forg'd
From Dalecarlian or from Bothnian mine ;
And, like a castle built of adamant,
'Invincible.' Let it have seven locks,
And seven keys, but only one that fits 'em ;
So that the hopes of the all-itching thief
Who steals the Keys, but cannot find the Master,
Shall break upon this inexpugnable rock
In blank despair."

Old Play.

WITH APPENDIX,

CONTAINING OFFICIAL REPORT OF R. MALLET, ESQ., C.E., F.R.S., AND R. F.
FAIRLIE, ESQ., C.E., THE ENGLISH MEMBERS OF THE SAFES TESTING
COMMITTEE ; MINUTES OF COMMITTEE'S PROCEEDINGS, CORRESPON-
DENCE, ETC. EDITED BY G. A. SALA.

London :

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B

THE BATTLE OF THE SAFES.

I.

THE ENGLISH TESTING HOUSE—WAITING.

IN that edifying *Omnium gatherum* the “Latin Delectus” —that charming banquet of classical scraps provided by hospitable pedagogues for the refecton of schoolboys (whose appetite for the feast has always been extremely questionable) may be found the following trite remark, which, to me, involves a very grave reflection :—“*Jam seges est ubi Troja fuit.*” The force of the melancholy moral remains, but the actuality of the commonplace has passed away. Not even grass grows now where once the famous city of Troy *may* have withstood the Grecian hosts. I say *may*, for topographers are very far from agreeing as to where Troy was—if it ever was, at all.

There is something, however, exceedingly mournful in the thought that anything to which we have grown thoroughly accustomed and familiar should have utterly surceased and vanished. The “oldest inhabitant” of Ilium, although he may have sympathised with the besiegers rather than the besieged, must have looked very ruefully on the razed site of the gate where the old men sate to look upon Helen as she passed, and, for the sake of her matchless beauty, forgave her all the woe she had caused to Priam’s town. Humanity is averse from the irremediable blotting out of an entity. We have an innate and instinctive repugnance to the total extinction of matter, and, half unconsciously, we

are always repeating to ourselves Lavoisier's famous axiomatic paradox, "Nothing is lost ; nothing is created." As there were those who wept for Nero, so may there have been sympathisers who dropped a tear when rotten old Middle Row, Holborn, was pulled down. So may there be sentimentalists who will heave a pensive sigh over the demolition of Temple Bar. Even though the thing be tasteless, and ugly, and a nuisance, some modicum of regret may be mingled with our acknowledgment of the necessity for its removal. I once enjoyed the countenance of a Spanish Grandee who, with grave courtesy, was wont to maintain that the Inquisition had done a great deal more good than harm ; and I have known a highly respectable solicitor who never held up his head after the suppression of the Palace Court.

Bearing these things in mind, I confess that I did not pen, without a soft feeling of melancholy, the words "English Testing House" as the title to this section. The English Testing House : where is it now ? It has faded away, even as the snows of last winter. Its contents have been scattered by the Wind of Mutation, even as the leaves of last autumn. But its summer was bright, indeed. It blossomed in April ; it bloomed in June ; it ripened in August ; and then it fell into the sere and yellow stage, as all things human must fall. It was a wonderful edifice ; of every or any conceivable style of architecture—or of none. It reminded the spectator equally of "My Cottage near a Wood," celebrated in song ; of William Tell's *châlet* (which they used to sell in plaster of Paris, with a cavity for a candle, and windows of yellow glass, in the Lowther Arcade, and which has been successively Jenny Lind's birth-place, Palmer of Rugeley's residence, Alfred Tennyson's villa, and is now, I believe, known as Garibaldi's farm at Caprera) ; of a semi-detached house at Camberwell ; of an asylum for idiots on a small scale ; and of the lodge to an

English gentleman's park. French people who had been in England used to speak of it admiringly, as *un vrai cottage, tout à fait Anglais*; more irreverent Gallic critics, of the Alfred Assolant order, dubbed it at once "*Le Goddam Britannique*. Mr. Cole, C.B., however, under whose auspices the structure had been raised, knew very well what he was about when he called it a Testing House. Every kind of domestic and socio-economical appliance was to be tried and tested there, both externally and internally; and its architectural style was necessarily composite and heterogeneous, since the roof was an experiment, the gables were tentative, the window-dressings so many trials, and the very chimney pots essays. Innumerable plasterers, builders, tilers, slaters, plumbers, glaziers, carpenters, joiners, and potters had been allowed to show what they could do there. The contents of the interior were extraordinary. The ironmonger, the locksmith, the bell-hanger, and the siphon tap-maker,—the patentees of electric alarums, roasting-jacks, wash-hand basins,—of clothes-wringers, cooking-stoves, mangling-machines, knife-cleaners, and shoe-scrapers had all competed there in a tournament of economical ingenuity. The English Testing House was a confused, but interesting epitome of English comfort.

It is gone now,—it is "wiped out," swept from the face of that unequalled Park in whose alleys for seven months in the year 1867 all the world wandered and wondered. The place knows it no more. It is more desolate than Tadmor in the Wilderness. No more will Parisian *badauds* gaze upon it with an expression in which the gape of astonishment struggled with the grin of derision. No more will its sides tremble to the intolerable booming of the Fog Signal bassoon hard by—a bassoon so loud and lugubrious that Coleridge's "Ancient Mariner" might indeed have beat his breast to hear it. No more will loungers sipping their sherry cobblers or their "Snake Valleys" outside Spiers and Pond's

buffet ogle the delightful young ladies in the short dresses and the porkpie hats who were continually tripping into the Testing House in the expectation of finding something nice and novel in the way of Russian bear-hounds, Japanese tea, Amsterdam lapidaries, or Turkish coffee there, but who would come out rather disappointed at having discovered nothing more existing than knife-cleaners and bottle jacks, and analogous articles of economical ironmongery. Such was the English Testing House, whose treasures have now been dispersed, whose walls have been levelled, whose site has been sown with salt or rather with sand. It stood on the right hand side of the Grand Avenue, coming from the Pont de Jena, and over against the Imperial Pavilion. It was one of the greatest oddities to be seen in that unrivalled collection of curiosities, which, under the name of the "PARIS UNIVERSAL EXHIBITION OF 1867," had been brought together in the world-famous Champ de Mars.

It was on the morning of the thirteenth of August, 1867—a day for ever memorable in the chronology of safe-making, that on a grassy knoll at the rearward portal of the Testing House, a select party of citizens of the world were gathered together,—waiting. Something like anxiety, something like stern and fateful preoccupation tempered the light-heartedness of the knot of gentlemen who stood on the turf, sheltering themselves as well as they could in the shadow thrown by shrubs or under umbrellas from the fierce rays of the August sun, and waiting for the doors to be opened and the show to begin. But it was more than a show which was in preparation. It was a struggle from which—as something too stern and rough for their tender feelings—ladies were to berigorously excluded. A great conflict was on the *tapis*--a great battle was imminent. This was the morning of Waterloo. The Duke of Wellington, otherwise Samuel Chatwood, of Bolton, Lancashire, was to encounter Napoleon Bonaparte, *alias* Silas Herring, The 'vantage ground had its Hougoumont, its Belle Alliance,

its Mont St. Jean, and its Forest of Soignies. The prize was not exactly an empire, but something worth having,—to wit, the sum of Thirty Thousand Francs, duly deposited and covered by both parties, and safely deposited in the Imperial Treasury of France by the stakeholder, M. Le Play, President of the Imperial Commission of the Exhibition.

So we—for the present writer had the honour to be among the number of anxious expectants—were all waiting for the beginning of the tremendous tussle—the shock of iron and the clash of steel. Tickets for admission to the Testing House had been sparingly distributed by the respective committees of the belligerents. No idle spectators, no mere gapers or gazers, were required, but persons cognisant of the issue at stake, acquainted with the power to be employed, students of the problem to be solved. Silent as it was, the gathering had a cosmopolitan aspect. One or two ribbons of the Legion of Honour gleamed at French button-holes; their wearers were old scholars of the Polytechnic, now become *Ingénieurs des Ponts et Chaussées*. Then there were English scientific men, and editors of journals devoted to the advancement of mechanics. Interspersed with them were the special correspondents of the principal London newspapers, one or two *employés* of the British Commission of the Exposition, a group of officers of the British Royal Engineers, and finally there was a sprinkling of gentlemen whose anxious, care, and business-worn countenance and eyes, (on “smart” bargaining intent,) together with their “soft felt hats,” and “goatee” ornaments to their chins, unmistakably bespoke them to be citizens of that Great Republic beyond the Atlantic which has given the world such an immensity of material to think upon during the last eighty-five years, and promises to give it an immensity more—and a prodigious deal of trouble into the bargain.

This Anglo-French American Congress was not met to discuss treaties of commerce, or the Alabama claims, or the

reconstruction of the Southern States, nor was it bent on "laying down a third cable," (as Mr. Dickens modestly put it on a recent memorable occasion) of peace and amity between Great Britain and the United States. The prime object of the assemblage was to be very impartial spectators of a fair stand-up fight—than which, as it turned out, few fiercer have been witnessed since the encounter between the Shannon and the Chesapeake, and to follow the phases of a struggle of English skill, ingenuity, strength, perseverance and pluck, as against those qualities in Americans. The contest was to have commenced at eleven o'clock, but the International Committee inside the Testing House continued to sit in secret "durbar" deliberating over the preliminaries of the battle until high noon, when one of the representatives of the high contracting parties made his appearance at the door whose opening was so anxiously expected, and announced that the actual beginning of hostilities must be postponed until two o'clock in the afternoon. So, some of the party strolled away to breakfast in England, Russia, Spain, Bavaria, or Yankee-land, precisely as their appetite, or chance, or their appreciation of the genius displayed by the *restaurateurs* of the countries mentioned led them. Others kindled their cigars, and seeking shade beneath the eaves of the English gunshed tranquilly took to killing time by means of the essential oil of tobacco, while another section cast themselves on the grassy knoll and day-dreamed away the time, after the manner of Mr. Tennyson's Lotos-eaters, or with a curious persistency—as the time of postponement had been definitely fixed, kept close to the door, to make sure of being "the first in" when it was opened, as old playgoers used to do when the drama was in its palmy days, and Edmund Kean drew overflowing audiences to Drury Lane.

While these enthusiastic amateurs of mechanical science are waiting at the not too hospitable Testing House portals, it may not be inexpedient to give a few details as to

the matters of fact which had led to the offer and the acceptance of this momentous wager of battle.

Let us take a glance at the knights who were to enter the lists, and briefly recount their pedigrees and achievements. I will term—using the euphemisms of the tilt yard—the first champion the Knight of the Invincible Coffin. His more prosaic name, in Registrar General's returns and tax collectors' books would be Samuel Chatwood, of Bolton, Lancashire, Bankers' Safe and Lock Engineer. His heraldic cognizance is a patent lock, with this device, "Open me if you can." To be plainer, Mr. Samuel Chatwood is the managing director of Chatwood's Patent Safe and Lock Company (limited), an enterprise of great magnitude, whose head-quarters are at Bolton, but whose operations are not confined to the North of England, or indeed to the United Kingdom, but are extended throughout Europe. The Chatwood Safes have been rewarded with first-class prize medals at the Dublin Exhibition of 1865, and at that of Oporto in the same year, with special mentions of "Chatwood's wedge-proof fastenings." It may be mentioned that Mr. Walker, the eminent watchmaker of Cornhill and Regent-street, has used Chatwood's "Invincible" Safes since the burglary on his premises in preference to all others, his Milner's "Hold-fast" Safe of the quality "strongly recommended for cash and valuables" having been opened by the notorious Casely. Chatwood's Sextuple Patent Invincible "Intersected" Steel Safe is described as fire-proof on the principle of steam generation and non-conduction; as "drill proof" as being "intersected" with hard and soft metals so arranged that neither the hard nor soft substances can be acted on separately; and in practice this system of intersection has been found the only one thoroughly efficient against the formidable "ratchet lever drill." Chatwood's "Invincible" is screw-proof; for being proof against drilling, it follows logically that no hole can be made in the surface of the safe in which to insert a screw. It is wedge-proof—for these

reasons : First, the curvilinear edge of the door prevents the wedge from being driven in, as it is impossible for the angle of the wedge to follow a curve. 2nd. The holding power of the lock-fastenings is greater than the forcing power of the wedge, even if it could be inserted. 3rd. The blade of the T-frame of the safe will resist a far greater amount of lateral strain than can be applied with a wedge. Again, the Invincible is crowbar proof, because being unwedgeable there is no possibility of the crowbar being inserted in an aperture. Next, it is gunpowder proof, in consequence of its safety valve, which, instead of resisting the explosive force of gunpowder, allows it to escape harmless. Next, it is acid proof, picklock proof, and in short inaccessible to burglars *provided with ordinary burglars' tools*. Furthermore, the interior chambers of the safe are preserved from oxidisation by being coated with a composition which effectually resists the action of the water of crystallisation. Again, the small key cannot be taken out of the lock without locking the bolts of the large lock, consequently they cannot be "thrown" and the key extracted without leaving the safe securely locked. To this it may be added that duplicates of the key cannot be taken by wax impressions, and that the centres on which the doors hang are all hardened and fitted with hardened sockets. Lastly, and fifteenthly—I think the American preacher got as far as twenty-fourthly in the doctrinal points of a sermon,—the Chatwood's Invincible is the only one extant in which provision is made against the explosive force of gunpowder, and which may really defy that tremendous puissance ; and bearing all things in mind Mr. Samuel Chatwood has naturally been incited to declare that his safe is the very best and "safest" in the world's market, and with pardonable self-reliance to defy any such of the compeers of "Counsellor Kelly," "Scotty," "Carrotty Fred," or the "Velvet Lad," as may be yet at large to do their worst with his Invincible.

So much for the Knight of the Invincible Coffe. Now

for his opponent—a most doughty champion likewise, and one in shrewdness and *savoir faire* fully worthy of his foe-man's steel. He is hight Silas Herring, of New York, in the State of that name,—not strictly perhaps a Yankee, as that term should only be generically applied to natives of the New England States,* Massachusetts, Connecticut, Maine, Rhode Island, New Hampshire, and Vermont, but still an American of the Americans, a “'cute” man, a “smart” man, a “clever man” as cleverness is understood on the “other side,” the architect of his own fortunes, and altogether “one of the most remarkable men in the country, Sir.” Him I will dub the “Knight of the Irresistible Sledge Hammer.” His devices should be a “fluke,” proper—the herald-painters will know how to pourtray a “fluke” with the motto, *Quocunque modo, Rem.* Mr. Herring is, in verity, one of the most eminent manufacturers of safes in America, and his pamphlet, “Fighting with Fire,” offers a very bright example of what undaunted perseverance combined with astuteness and adroitness can do. He began life, he tells us, in a very humble way, and had but one small workshop, where, with scant assistance, he made his own safes, and painted them with his own hands. By degrees he got possession of capital, patented his inventions, developed his operations, and now does an immense business in the States from the remotest East to the farthest West. He claims that this “banker's chest” inserted in some of his larger safes, and fitted with the elaborate piece of mechanism known as the “Yale combination lock,” is impregnable to burglars; but Mr. Herring's most striking claim to celebrity rests, I take it, on his fire proof safes, the sides of which are lined with a peculiar non-conducting composition, of which he is the inventor, and which have been extensively, and it would seem beneficially, adopted by merchants, bankers, and traders throughout the United States.

* The “Cunning man of Pyquag,” mentioned in Knickerbocker's “History of New York,” who “questioned Anthony Van Corlear, the trumpeter, out of his horse, and sent him home on a ‘vile calico mare,’” was a Yankee *pur et simple*.

Having thus placed the contending champions armed *cap à pié* before the reader, the story of how they came to challenge each other to a combat *à l'outrance* must be narrated as succinctly as possible.

In the early part of the month of June, 1867, Mr. Chatwood and Mr. Herring, both being exhibitors of safes in the Champ de Mars, a written challenge, *pasted on the outside of Herring's Safe*, appeared in the Exhibition, in which the American offered to back his safe for a specified sum against any other safe, constructed by any other manufacturer extant. Feeling the credit of England in general, and of Lancashire in particular, to be at stake, and determined that Mr. Silas Herring should not be allowed to walk unquestioned over the course, but should be made to approve his boast and win his spurs, Mr. Chatwood at once took up the gauntlet of defiance which had been thrown down. (*For copy of the Correspondence see foot.*) He at once

Copy of Correspondence between Samuel Chatwood, of Bolton, and Silas C. Herring, of New York.

GRAND HOTEL, PARIS, JUNE 5, 1867.

SIR,—Finding on my arrival in Paris a notice on your Safe in the Exhibition, that you “pit” it against any Safe exhibited by any other maker, I feel called upon to accept your challenge subject to the following conditions :—

1st. That the trials shall be entirely conducted by a Committee of five engineers—two English to be appointed by me, two American (or other) to be appointed by you, and the four thus appointed to appoint a fifth, who shall be a French engineer. The decision of the majority to be final on all points.

2nd. That your Safe now exhibited in the Exhibition Building in the Champ de Mars, and my Safe also now exhibited in the Exhibition Building, be at once delivered to the Committee on their appointment, together with full working drawings of the same, showing all the details and sections, together with all the keys belonging to the Safes.

3rd. That the Committee shall be at liberty to employ such means as they may think best to enable them to form a correct judgment.

4th. That the decision of the Committee of Judges shall state which of the two safes is, in their opinion, the best in the following particulars :—

- 1st. In the principles of construction.
- 2nd. In the quality of workmanship.
- 3rd. In the quality of material used.

went over to Paris, and on the fifth of June accepted the challenge, limiting, however—as it was his indefeasible right to do—to the safe on which the challenge had appeared, “now on view in the Exhibition building in the Champ de Mars.” Had he not made this reservation, it would have been competent for Mr. Herring to have produced an American monitor, or a steam ram, and to have called that a “Safe.” To this acceptance, on the eighth of June, Mr. Silas Herring replied, “I am prepared to offer my burglar-proof safe, now on exhibition for competition with yours.” He subsequently, however, stated that he meant by this “burglar-proof” safe, not the one in the Champ de Mars, and that on which his challenge was pasted, but another which he had left at Havre; and this he very “obligingly” offered to supply for the purpose of testing. Mr. Chatwood, however, objected to the ground being thus shifted. Nor did Mr. Herring in this first instance stipulate that Mr. Chatwood was to open the small banker’s safe or

4th.	In the capability of resisting	drilling instruments.
5th.	”	”
6th.	”	”
7th.	”	”
8th.	”	”

5th. That each party shall deposit the sum of 15,000fr. in the hands of “The President of the Imperial Commission Exposition Universelle, Paris,” to be held by him until the decision of the Committee of Judges shall be published, when he shall pay the sum of 15,000fr. to the winner, and after paying the expenses incurred in the trials, he shall pay the balance in equal proportions to the Charities of Paris, London, and Washington.

I shall be glad to receive your early acceptance of these conditions,

And remain, SIR, yours faithfully,

(Signed) SAMUEL CHATWOOD,
Safe and Lock Engineer.

P.S.—You will please address your reply to 41, Boulevard Malesherbes, Paris.
SILAS C. HERRING, ESQ.

HOTEL DU LOUVRE, PARIS, JUNE 8, 1867.

SIR,—I have the honour to acknowledge receipt of your favour of 5th inst. I am prepared to carry out the proposals made by you, with certain modifications. I do not offer my Safe for superiority in qualities of workmanship or principles of construction; would therefore make the test dependent upon the following sections of your letter:—

3rd. In the quality of materials used.

coffer imbedded inside his safe—somewhat after the manner of a boiler in a kitchen range—as well as the outer doors of the safe itself. However, after much diplomatic bickering, the ground was cleared for action. Articles of agreement were at length drawn up. A mixed Committee was formed

4th.	In the capability of resisting	drilling.
5th.	”	”
6th.	”	”
7th.	”	”
8th.	”	”

Based upon such trials, I am prepared to offer my burglar-proof Safe, now on exhibition, for competition with yours, and am prepared to place it in the hands of the Committee as you propose. The question is simply as to the respective merits of the two safes as against burglars; therefore drawings, details, or keys will not be needed by either party.

The Committee to employ all means in their power to form a correct judgment. So far as regards the deposit of the 15,000fr., I am quite willing to accept the conditions you make.

I am, yours respectfully,
(Signed) SILAS C. HERRING.

SAMUEL CHATWOOD, Esq.

WOOD'S HOTEL, LONDON, JUNE 13, 1867.

DEAR SIR,—I received yours on the 10th inst., I note that you except the two vital points, *i.e.*, “The principles of construction and quality of workmanship.” I take it, therefore, that you concede these. I am ready to contest the remaining points on the terms of my note of the 5th instant, adding to the 4th clause as follows:—9th. In the capability of resisting any other kind of burglars' appliances.

I beg to advise you that I called at your hotel before I left Paris, to arrange with you respecting a deposit on account, preparatory to the appointment of the Committee as per my previous note; but, failing to meet you, I have deposited with H. Chapman, Esq., the Paris Secretary of the I.M.E., 41, Boulevard Malesherbes, the sum of 1000 francs, pending the appointment of the Committee, according to the terms of the said note, and shall be glad if you will do so likewise. I am prepared at once to deliver my Safe, drawings, keys, &c., into the hands of the Committee, and shall be glad if you will forward to Mr. Chapman the names of the two engineers appointed by you. I have sent in the names of the two appointed by myself.

As soon as the Committee are appointed, I am prepared to deposit the remaining sum of 14,000 francs, on the terms of my before-mentioned note.

On receiving notice that you have deposited 1000 francs against mine, I will instruct my solicitor to prepare contract at once. I propose that the Committee shall commence their duties at the earliest day possible.

Yours faithfully,
(Signed) SAMUEL CHATWOOD.

S. C HERRING, Esq., of New York:
Hotel du Louvre, Paris.

HOTEL DU LOUVRE, PARIS, JUNE 15, 1867.

DEAR SIR,—In reply to your favour of the 13th, would respectfully note that I propose simply to test the value of my safe as available against burglars, therefore it is not a point for consideration as to principle of construction or quality of workmanship;

to see fair between the combatants—to “see fair,” and not only to pronounce as to who first achieved the material object sought by breaking open the safe of his rival, but also to decide on scientific and technical grounds which was really the best safe; but, in fact, the agreement of the Committee ulti-

and, however superior I may believe my Safe to be on these two points, they do not come up in this trial. As the lock in my Safe has no keys, I propose to place before the Committee and operators the lock upon my Safe, which can be examined in all its parts, and will expect you to do the same. The Imperial Commissioners, having positively forbidden that any article be taken from the Exposition prior to October 31, under these circumstances I shall be ready to supply another of my safes, which, owing to an injury received in shipping, has been left at Havre. This I am authorised by our U. S. Commissioner-General to take charge of for this purpose. Have deposited with Messrs. Norton and Co., Bankers, 14, Rue Auber, Paris, 1000fr. as guarantee, and will be prepared with my solicitor to have the proper papers ready as soon as we mutually understand each other.

Yours truly,

(Signed) SILAS C. HERRING.

SAMUEL CHATWOOD, Esq.,
Bolton, England.

41, BOULEVART MALESHERBES, PARIS, JUNE 18, 1867.

DEAR SIR,—I have to acknowledge your favour of 13th, covering 1000 francs deposit *re* Chatwood *versus* Herring.

I have daily been expecting the deposit from Mr. Herring, to advise you of it, but have not yet received it.

I remain, yours truly,

Pro HENRY CHAPMAN,

(Signed) GEO. MONBRO.

S. CHATWOOD, Esq.,
95, Bridge Street, Manchester.

LANCASHIRE SAFE AND LOCK WORKS, BOLTON, JUNE 18, 1867.

SIR,—Having accepted your challenge in good faith in my letter of the 5th inst., and having allowed in mine of the 13th your exception of Clauses 1 and 2 of said letter, I am surprised at your apparent evasion of the remaining terms. Now, the point at issue between us is simply this: You placarded your safe in the Exhibition at Paris with a challenge, dated May 15, 1867, “against any *other* safe now exhibited at the Exposition.” I accepted this challenge in good faith, and deposited 1000 francs, and have also appointed two members of the Committee, on the terms of my note to which you have agreed. I am ready to deliver my safe, with detailed sections, detailed drawings, keys, sample of lock, and every information the Committee may require. I beg just to recapitulate the terms, viz.—Your Safe in the Exhibition at Paris against my Safe in the Exhibition at Paris for 15,000 francs a side. “15,000 francs to be paid to the person whose safe is declared by the Committee to be the best in its capability of successfully resisting burglars’ appliances of any kind,” and the balance of 15,000 francs, after deducting the expenses of the Committee, to be divided in equal portions between the Charities of Paris, London, and Washington. The trials to be conducted entirely by a Committee of five engineers, two American (or others) to be appointed by you, two English to be appointed by me, and the four thus appointed to appoint a French engineer to bring the number up to five.

mately resolved itself into this :—That Chatwood, to be entitled to supremacy, was to force open *two* safes, the outer and the inner one ; whereas Herring was expected only to open one. It must be mentioned that only such tools as are usually employed by burglars, and such as could be carried

Our (Herring's and Chatwood's) two Safes, now exhibited at the Exhibition, together with full drawings showing all the details, sections, &c., &c., shall be at once delivered to the Committee. The Committee to employ such means as they may think fit to enable them to form a correct judgment. The decision of the majority of the members of the Committee to be final on all points. I beg again to state that, having accepted your challenge, I must call upon you to abide the issue without attempting to shift the ground. The safes are now in the Exhibition, and will not require to be removed out of the Exhibition grounds at all, any more than the fire-engines were. And nothing exists to prevent the Committee from meeting on the 28th of the present month at latest, except such obstacles as you may raise. I therefore appoint that day as the date on which the trials shall take place, unless you like to name some earlier day. Your reference to having another safe not now in the Exposition at Paris ready by October 31 is, I consider, altogether beside the mark.

Waiting the appointment by you of the two members of the Committee, in order that the remainder of the money may be deposited, and that the trials may take place promptly,

I remain, my dear Sir,

Yours faithfully,

(Signed) SAMUEL CHATWOOD.

SILAS C. HERRING, Esq., of New York :
Hotel du Louvre, Paris.

HOTEL DU LOUVRE, PARIS, JUNE 21, 1867.

SIR,—Yours of 18th is at hand, in which you express surprise at what you term an apparent evasion in my reply to yours of the 13th inst. I cannot permit for one moment any such construction of my letter. In the original acceptance of my challenge, you saddled such acceptance with certain restrictions, all of which I complied, with but two exceptions. It was not in my power to furnish full working drawings showing all the details and sections, nor could I furnish the keys—therefore did not require you to do so, as my lock has no keys. I proposed to place before the Committee and operators the lock upon my Safe, which could be examined in all its parts, and expected you to do the same. So far as regards the test of the safes in the Exposition, I am perfectly willing so to do, but am advised by the United States' Commissioner-General that such trial will not be permitted, and for that reason I proposed to furnish my safe now at Havre, you to furnish any safe of your manufacture outside of the Exposition. If an arrangement can be made by which the safes on exhibition can be tested, so much the better. There has been no backwardness on my part, and no attempt made by me to shift ground or throw obstacles in the way. A simple acceptance of my challenge by you, in the first place, would have saved much correspondence. You will distinctly understand that, should there be any difficulty in testing the Safes in the Exposition, I am prepared to supply another of my Safes for trial outside, and that I have never referred to October 31 as a date for the test to take place. I have made the same deposit that you have, and have selected my Committee, who will be ready so soon as a decision is arrived at as to which safe can be tested, that there may be no mistake. I enclose the basis upon which the test shall take place as agreed upon by both parties—viz., HERRING AND CHATWOOD'S BURGLAR-PROOF SAFES, Committee to be chosen two by each competitor ; they to choose

through the streets of London by night, were to be employed; and Mr. Chatwood so scrupulously adhered to this important part of the contract, that he would not allow his workmen to bring with them any implements more formidable than those used in the Cornhill burglary. These tools I saw

a fifth, who shall be a Frenchman; the exhibitors to furnish experiments or operators to test the safes in the following manner:—

- 1st. In the quality of material used.
- 2nd. In the capability of resisting drilling.
- 3rd. " " gunpowder.
- 4th. " " steel wedges.
- 5th. " " crowbars.
- 6th. " " steel screws.
- 7th. " " any other burglars' appliances.

Each party shall deposit 15,000fr. in the hands of M. Le Play, President of the Imperial Commission, to be held till the decision is announced, when he shall pay 15,000fr. to the winner, and, after deducting expenses of trial, the balance to be given in equal proportions to the Charities of London, Paris, and Washington.

Respectfully yours,
(Signed) SILAS C. HERRING.

SAMUEL CHATWOOD, Esq.,
Bolton, England.

LANCASHIRE SAFE AND LOCK WORKS, BOLTON, JUNE 22, 1867.

SIR,—Yours of the 21st to hand. I note your protestations of sincerity, &c., also that you comply with the terms of my acceptance (dated June 5, 1867), of your challenge (dated May 15, 1867), with "but two exceptions." The two exceptions were—first, "in the principles of construction"; and, secondly, "in the quality of the workmanship." I therefore write to say that I abide by the terms there set forth (*i.e.*, in mine of June 5, with the two exceptions above named, and which I have allowed), and which terms are recapitulated in my last (dated June 18), and I positively refuse to have the ground shifted by adding thereto or taking therefrom. To these terms I therefore refer you without further comment. I certainly have not so low an opinion of my competitor's talents as to suppose that, after an experience of so many years in the manufacture of his Safes, he is unable (as in his extreme modesty he professes) to make at least rough drawings, showing the various sections, for the information of the Committee. I would also remind you that the question at issue is not "Yale's Combination Lock" against "Chatwood's Invincible Lock," but "Herring's Burglar-proof Safe in the Exhibition" against "Chatwood's Invincible Safe in the Exhibition." I write by this post to the two engineers who have consented to act on the Committee to try to fix June 28 to meet in Paris, as I am quite sure I can have the consent of the English Commission to deliver my Safe, drawings, sections, &c., &c., into the hands of the Committee at once.

Yours faithfully,
(Signed) S. CHATWOOD.

SILAS S. HERRING, Esq.

LANCASHIRE SAFE AND LOCK WORKS, BOLTON, JUNE 25, 1867.

SIR,—Having on Saturday night hastily replied to yours of the 21st, just then to hand, in order to catch return post, I now write to confirm that letter, and to advise you further that I cannot consent to your attempt to alter the terms, or to draw attention from the point at issue. I believe in the good old English plan of doing one thing at a time. It will be quite soon enough to introduce a test of Safes outside, and apart from the

myself brought into the Testing House in a small gun-case and a small travelling bag, and carried burglar fashion, in a man's hand, whereas Mr. Herring's "burglars' appliances" arrived on a truck, were very much heavier and much more numerous, and included a tremendous sledge hammer which

Exposition, when you have done with those in the Exposition ; and also to test the New York safe-breaker against the Lancashire safe-maker when the engineers engaged on the Committee have exhausted all their own resources. All I desire is a fair trial by competent judges, and as this can be secured by the terms proposed in mine of the 5th inst., and which in yours of the 21st you say, "all of which I complied, with but two exceptions, which two exceptions I have allowed), I have sent to the Paris Secretary of the Institution of Mechanical Engineers the balance, 14,000 francs ; he now, therefore, holds the sum of 15,000 francs entirely out of my order and disposition, to hand over to Monsieur Le Play as soon as you advise him that yours is ready. I also give you notice that Robert Mallet, Esq., C.E., and Robert Fairlie, Esq., C.E., have consented to act as the English engineers on the Committee.

As Mr. Chapman is a thoroughly responsible person, I am surprised that you should have preferred to place your deposit of 1000 francs with your "bankers," instead of depositing it out of your own order and disposition.

Please reply to this to the Grand Hotel, as I leave here to-morrow morning for Paris, in order that the trials may be completed as quickly as possible.

Yours faithfully,

(Signed)

SAMUEL CHATWOOD.

SILAS C. HERRING, Esq., of New York :
Hotel du Louvre, Paris.

HOTEL DU LOUVRE, PARIS, JUNE 25, 1867.

SIR,—Yours of 22nd is received. I must again deny that any attempt has ever been made on my part to shift ground, or "*add thereto*" or "*take therefrom*" (as you say), and I must positively object to your *taking therefrom* what you *added thereto* in your letter of 13th inst., which has been accepted by me—viz., "The capability of resisting any other kind of burglars' appliances."

I grant you that the question at issue is not "Yale's Combination Lock" against "Chatwood's Invincible Lock," aside from the Safes ; but it is "Herring's Burglar-proof Safe" with "Yale's Patent Combination Lock" combined, against "Chatwood's Invincible Safe with Invincible Lock" combined. As a lock is a "part and parcel" of a Safe, an iron or steel box cannot be considered a Safe without a lock. The question is, which Safe and lock, as furnished to the public by us, afford the best security against burglars ?

I am ready to meet you in Paris on short notice, to have written articles of agreement drawn up and executed by us, and the 15,000 francs deposited.

Yours truly,

(Signed)

SILAS C. HERRING.

SAMUEL CHATWOOD, Esq.,
Bolton.

GRAND HOTEL, PARIS, SATURDAY NIGHT, JUNE 29, 1867.

MY DEAR SIR,—I feel much annoyed that you are not ready to sign articles. I had expected your approval of draft to-night, so that engrossment might have been signed on Monday. Pray let me have draft returned with your approval before Monday, at 11 o'clock a.m. You will please also not to forget that my deposit of 15,000 francs has been

Chatwood had never dreamt of using, and which is no more a burglar's tool than a hydraulic press or an Armstrong gun would be.

The Committee comprised two English engineers, Messrs. Mallet and Fairlie; two American engineers, Messrs. Holmes and Pickering; a French gentleman, M. Douliot, as chairman; a Mr. Hoyle acting as secretary. Fifteen thousand francs on either side were deposited in the hands of M. Le Play, and according to the original suggestion of Mr. Chatwood, the prize won, after the payment of all necessary expenses, was to be distributed by the person whose safe was declared by *the Committee* to be the best, among the poor of London, Paris, and Washington. Such was the state of affairs at two p.m., when the privileged spectators were admitted to the Testing House, and the "Battle of the Safes" began in right earnest.

The two safes were placed abreast of each other, and a few feet apart, with a large screen of canvas interposed, so that the experts respectively employed on the safes should not be able to see each others' proceedings. They had ample room however for free operation. Neither Mr. Herring nor Mr. Chatwood was to be allowed to advise or even to give a hint to their men, either by word or by gesture.

The safes stood on their bases, the fronts facing the same way, and the audience sat in front as in the stalls of a theatre—if you can imagine a theatre of which, as in the farce of "Antony and Cleopatra," the proscenium was divided into two sections, a distinct drama going on in each. The

fully made for some days past, and that, although the challenge came from you, you have not yet covered it. If you mean business, be prompt. With me time is money.

I have the honour to remain,

Yours faithfully,

(Signed)

S. CHATWOOD.

SILAS C. HERRING, Esq., of New York;
Hotel du Louvre, Paris.

members of the Committee, standing, as it were, in the orchestra, were enabled to watch all that went on on either side of the screen. As the apartment assigned for the trial was very limited in size, only fifty tickets for spectators had been issued.

A sealed "parallelopiped" of wood, rather smaller than a common brick, was placed in the interior of each safe, and precedence in the production of this piece of wood was to be regarded, *all other things being equal*, as one, *although not as the sole proof* of victory by one or other of the parties.

Mr. Chatwood's experts were Robert Crighton, John Blakeman, and George Plant: all sturdy and intelligent "Lancashire lads." On the side of Mr. Herring came Eric Doelen, Frederic Ruder, and Herman Winkler, all, curiously enough, Germans. Herring's men were, of course, to operate on Chatwood's safe, and *vice versa*. These "proletarians" having been ranged in front of the respective citadels which they were to assault, had each an equal time to arrange their tools on the floor, and at a given signal—the time being taken from one of Mr. Walker's chronometers—they began their task. The safes, which had been subjected to a final survey by the Committee, in presence of their respective owners, were by the latter locked up, the keys remaining in their custody.

Herring's Banker's Safe, externally, was much larger than Chatwood's, and had in front a pair of folding doors, *i.e.*, a door of two leaves meeting in the centre. This outer shell of metal, lined all round with some inches thickness of non-conducting "fire-proofing" composition, concealed the additional shell, the small chest or coffer, which had to be reached before the kernel, in the shape of the "parallelopiped" of wood could be got at. In short, Herring's fortress was a safe within a safe. Chatwood's tower of strength stood alone, without any exterior bastions, curtains, counterscarps, or

walls of circumvallation. The Herring Safe was very gaily painted and decorated, and bore about it a certain jaunty and defiant air of "Spread-eagleism," whereas Chatwood's Safe was of a sober and well-nigh sombre uniform hue of green and black. It looked square, stern, compact, and invincible. In front was closed by a single-leaved door, with a peculiar form of lock. Within there was nothing but two cabinet drawers in the lower part, which being little more than two partitions, Mr. Chatwood chivalrously declined to avail himself of them, and placed his "parallelo-piped" in the open space above. The astute Herring, on the other hand, determined not to throw the slightest chance away, deposited his "brick" in the recesses of his innermost coffer.

II.

THE BATTLE.

It was not until two forty-five p.m. that the signal was given and hostilities actually commenced. For the next five hours,—with a brief interval for refreshment—they were continued without intermission. The noise made by the workmen, particularly when the ponderous sledge hammers—hammers wielded with the strength of Thor or Tubal Cain—was Cyclopean; it was thunderous, it was deafening. Save that we, the spectators, were far too absorbed in the interest of the scene to join hands and dance, we might have quoted the Horatian lines—

Junctæque Nymphis Gratia decentes
 Alternò terram quatiant pede; dum gravis Cyclopum
 Vulcanus ardens urit officinas.

The sounds of the strife could be heard far over the Park, and attracted round the walls of the Testing House a crowd of curious listeners, who were kept back at last by a squad of *sergents de ville*. As for inside we had to pay somewhat dearly for our privilege in the damage done to the

drums of our ears by the prodigious hurly-burly. Every blow struck by the stalwart hammerman seemed like the forerunner of the "crack of doom." Some of his blows towards the conclusion of the contest were at once so masterly and were delivered with such terrific force as to elicit rounds of ringing cheers from the auditory. Again, in the last phases of the struggle, when "wedging" was freely practised, the wedges flew about the apartment like fragments of shells during a bombardment, and were fraught with no slight peril to those who had omitted to wear their hats.

The Germans Doelen, Ruder, and Winkler—were there no Yankee experts procurable? it was asked—commenced their onslaught on Chatwood's Safe by attempting to pick the lock. In this they signally failed; and if, as we are told, "Love laughs at locksmiths," Chatwood's lock—if a lock could be susceptible of hilarity—must have indulged in a contemptuous titter at the ineffectual efforts of the Teutonic experts. Abandoning lockpicking tactics as utterly useless, they built around the safe a very mischievous-looking framework for the "ratchet," and arranged to drill the front door with a view to forcing it open. In this also they were completely foiled. The door, like a refractory recruit, obstinately refused to be drilled. You could hear the implements employed screaming as though in an agony of disappointment as they vainly endeavoured to perforate Chatwood's stubborn "intersected" steel; and, after numerous drills had been broken to pieces, the Germans were fain to give up the attempt as a bad job, and commenced in earnest with steel punches and sledge hammer to try to force in the lock and the keyhole plug, but in vain. The cross-cut chisel was then brought into requisition, the astute Germans attempting to cut away the steel round the keyhole and to draw his tempered tooth bodily, being again defeated. They then endeavoured to cut into the top joint of the safe, close to the right hand top corner

of the front. They failed miserably in *that* little attempt. A change of tactics on the Yankee-German side was now inevitable. They abandoned the front door of the safe altogether, as an impregnable position—and impregnable it really was—and began with “cold setts” and huge sledge hammer to cut open the dovetail joint, and then to drive successively thin and thick wedges, and to split open the lateral or right side flank of the safe itself. Resort to such a course was in itself a tacit confession of defeat. The Germans had ceased to operate in the only manner that burglars *could* operate: that is to say, on the front of a safe, for it is obvious that a safe in actual use would be imbedded in masonry or brickwork, or in some manner made unapproachable from the side. In fact in “skinning” or tearing off the side of the safe by wedging it and widening the fissures by repeated blows from enormous sledge hammers, they acted, not as burglars would do, but as boiler-makers who were bound to take some ponderous machine to pieces by main force. It is manifest that if a boiler can be made it can also—a requisite amount of destructive force being procurable—be unmade. The “immovable body coming in contact with irresistible force” has yet to be discovered. There is nothing so strong but something the stronger can be devised to demolish it; and the final cause of a fortress is to be taken. Sebastopol fell at last, and given guns big enough Ehrenbreitstein could be battered to pieces in half-an-hour. Now breaking a safe to pieces by sheer force is no more opening a safe than an earthquake is a burglary, or an eruption of Vesuvius a volley of musketry. Burglars are restricted in their appliances. They cannot bring Armstrong guns or hydraulic rams to bear on the strong boxes they wish to rifle; and all that Chatwood claimed for his safe was that it was “invincible” and inaccessible to assailants provided only with the appliances of burglars.

Thus, working not as burglars but as boiler makers and

destructives—introducing enormous masses of tempered steel as wedges, and hammering away as though they wished to smash the Testing House as well as the safe, the Germans succeeded in making an aperture, not in the front, but in the flank of Chatwood's Safe. It was not until 7 25 p.m., however, that they succeeded literally in "knocking a hole" in the flank of Chatwood's Safe so as to enable them to get out the sealed "paralleloiped" or block of wood. Both sets of men began to show signs of exhaustion at 5 47 p.m., and were permitted to rest and take some food, and both simultaneously resumed work at 6 33. This interval must, of course, be deducted in "timing" the battle.

Let us see now how the other part of the struggle was being conducted, and what Chatwood's "Lancashire lads" were doing to Herring's safe. Chatwood's men went to work with a will, and began by almost instantly taking off the iron hasp of the double door. They then began to wedge along the mid-meeting joint of the doors, and at 3 14 p.m. the entire outer doors were flung open. *In fact, in that brief space of time (29 minutes) the original challenge safe of Silas C. Herring which Samuel Chatwood had undertaken to force open was so forced open by him, in a perfectly legitimate manner, and with nothing but ordinary burglars' appliances.* The wood partitions, &c., for books above the coffer were then swept away, and the *extra* work of forcing the inside coffer "chest"—work which, according to the original terms of the challenge, should never have been imposed on the Chatwood side—commenced. (See Leader from *Mechanics' Magazine*, of Feb. 14, 1868, Page 28.)

Long before 7 25 p.m., when the American part of the audience were flinging up their hats and uttering shouts of triumph at the production of the "paralleloiped" from Chatwood's skinned Safe, or rather from the hole which, by dint of tremendous exertions, and in a most "unburglar-like" manner, had been battered in, the front door of

Herring's coffer or chest had been wedged open, and its triple walls of plate bent forward to an extent large enough to satisfy any reasonable burglar; that is to say, he could have put his hand in and removed any number of goods or of pieces of gold or silver, of which he was in quest; but the lower remains of the door still existed and the "brick" could not be reached. After a few minutes' more battering at the coffer door, in the course of which its outer skin was taken clean off by one blow from George Plant, under the disadvantages of exhaustion and deficiency of light—for it was now near sunset—the Committee decided to close operations for the day. Chatwood's men knocked off work at 7 40 p.m., the last 15 minutes having been entirely wasted by the crushing of the crowd; but they resumed their labours early in the morning and with the same tools and in the surprisingly short space of *four minutes* they completed the total removal and destruction of the front of Silas Herring's coffer or chest. It must be borne in mind that Herring's Germans, although they succeeded in battering a hole in the flank of Chatwood's Safe, were completely defeated in their attempt to open his *one door*, and that Chatwood's men opened *all three* doors of Herring's Challenge Safe and his *extra coffer*.

Such was the Battle of the Safes. Mr. Silas C. Herring, seconded by the American members of the Committee, claimed the victory and the stakes on the ground of having been the first to extract the sealed block of wood. It is not for me here to enter into the vexed questions which subsequently occupied the Committee and ultimately led to its being broken up altogether.* A full account of the deliberative proceedings

* The following letter appeared in the *Manchester Examiner and Times* of November 26, 1867:—

TO THE EDITOR OF THE "MANCHESTER EXAMINER AND TIMES."

SIR,—It having come to my knowledge that during my absence in Paris some person or persons in American interests have practised upon you, as also upon several of your contemporaries, a very cruel hoax in reference to the International Challenge Con-

resulting from the battle will be found in the official report of Messrs. Mallet and Fairlie and in the very voluminous correspondence and other documents appertaining to the subject and published herewith as Appendices to this work. Both Mr. Herring and Mr. Chatwood have also had their say

test at the Paris Exhibition, in August last, I beg, for the information of your numerous English readers, to state that the document you publish as the Official Report of the Safes Testing Committee is simply a pretence. The Committee fell to pieces on the evening of the 20th August, in consequence of the highly improper proceedings of the American engineers (assisted by their nominated secretary, Mr. W. J. Hoyle), who, when they found that Mr. Herring was disgracefully beaten upon the merits, resorted to the un-English dodge of tampering with the French chairman, with the view of securing his casting vote. Private documents, *not intended for daylight*, were written by them, translated into French by their *private friend* the Secretary, and forwarded to the Chairman, unknown to the English members of the Committee. On this coming to the knowledge of Messrs. Mallet and Fairlie (by the barest chance), they felt that their personal and professional reputation would be compromised by their continuing longer to act as members of a Committee along with men who had vitiated its proceedings. They therefore at once tendered their resignations in writing, as did also Mons. P. Douliot, the president, after which he left the chair, and refused to sign the minutes of the meeting. This having occurred before any report of the Committee had even been discussed or the opinion of the Chairman expressed at all, your readers will be at no loss to see that no report of the Committee was afterwards possible, the Committee itself having ceased to exist.

The document you publish is, I am informed by Mr. Hoyle, the production of himself and Mr. Pickering, one of the American engineers, and was adopted at a caucus meeting held at the house of M. Douliot on the 4th of October, at which were present M. P. Douliot and Messrs. Holmes and Pickering, the two American engineers appointed by Mr. Herring, and signed by them (and I presume in the presence of Mr. W. J. Hoyle), at some place not stated either on the face of the document itself or in the minutes of the proceedings of this caucus, in which minutes no record appears of the meeting of the 5th October, at which the document purports to have been signed in the presence of MM. Cheysson and Beckwith, whose names are here introduced, *not as witnesses*, however, but as signatories "in some unknown official capacity," except it be to give the document the appearance, to the casual observer, of genuineness, by making up the number of signatures to five,—the number of members of the Committee during its existence. Of these two caucus meetings, Messrs. Mallet and Fairlie, the English engineers appointed by myself, had no intimation whatever. I need not say that the Imperial Treasury refused to recognise the validity of this trumped-up document, or to part with the stakes, £1200, on any such pretences. So long as the Americans and others in their interests confined themselves to making use of the American prints in this country and in France, the very insignificance of the journals served to shield them from reply, but when the immunity secured under such undesirable circumstances seems only to have encouraged the hoaxing of a number of respectable English journals, the interests of truth and justice require that the facts should be stated. I refrain from any comments on the contest itself or on the facts given above, but I rely on the well-known love of fair play which characterises English journalism to nullify the injurious effects of the publicity given by you to the false report referred to above; and remain, Sir, yours faithfully,

SAMUEL CHATWOOD,

Safe and Lock Engineer.

Lancashire Safe and Lock Works,
Bolton, Nov. 25, 1867.

in the columns of the daily and weekly press. As for me, I have only described the battle as I saw it, and as an impartial spectator I have only to record actual facts—that Herring's Safe *was opened*, that its doors and the door of his extra coffer were systematically and legitimately forced, as they might have been by "Casely," or "Scotty," or "Carrotty Fred," or the "Velvet Lad," even if built in solid adamant, to the detriment of a merchant, a banker, or a trader, and that with under 100 lbs. of burglar's tools; whereas Chatwood's Safe, with the exception of such a cavity as might have been battered in its side by a shot from "Big Will" in the adjacent ordnance shed was, at the conclusion of the battle, thoroughly intact and uninjured. It was not thrown out of its perpendicular; its lock was untouched; its door had not deviated a hair's breadth from its rectangularity; it bore scarcely a dent or a scratch, although somewhat more than 240 lbs. of boilermakers' implements of full size had been employed in the attempt to open it, and with a new left side and a fresh handle it might have been sold the next week as a bran new safe. Herring's Safe was on the other hand virtually ruined, and, to employ an American locution, "knocked into a cocked hat."

Leader from the Mechanics' Magazine, Feb. 14, 1868 :

THE BATTLE OF THE SAFES.

The battle of the safes bids fair to become as memorable as the battle of the guns and targets. Nor is it of less importance in its way. Guns and plates are for the protection of our country, safes for the protection of our cash. The one appeals to us as a nation, the other as individuals, and each with equal force. It is, therefore, no matter for wonder that the public should demand, and our manufacturers endeavour to supply, repositories for cash and other valuables, which shall be proof against thieves as well as fire. On the latter head we were tolerably well satisfied, but it remained for the Paris Exhibition to prove to us that we really had a safe which might really be considered as thiefproof. The burglary in Cornhill has not been without its fruits for good as well as for evil—evil as regards the loss sustained by Mr. Walker, but good as having led our safe makers competitively on to the production by one of them of an article which has proved itself worthy of the name of a “safe.” The safe contest at the late Paris Exhibition, between Mr. Chatwood, of Bolton, and Mr. Herring, of New York, has been briefly referred to in our columns, but hitherto we have abstained from entering into detail particulars. Now, however, that we have the published report of Mr. Robert Mallet, C.E., and Mr. Robert F. Fairlie, C.E.,—the English members of the committee appointed to superintend the competitive trial of the two safes—upon the subject, we can

no longer postpone the consideration of the details of the contest, which, in its results, placed Mr. Chatwood in the honourable position of victor.

From the report before us it appears that during the month of May, 1867, Mr. Silas C. Herring, a safe maker, of New York, affixed on the doors of his banker's safe in the Paris Exhibition a challenge against any other safe then exhibiting. Mr. Chatwood at once took it up, and proposed to test one of his safes, then in the Exhibition, against the one which had been so ostentatiously placarded, providing that burglars' appliances only were to be used. In July the agreement was duly signed by the respective competitors, and from which we quote the following :—"That, whereas the said Silas C. Herring is an exhibitor of safes in the Exposition, at Paris, and had on the 5th day of June, 1867, on one of the safes exhibited by him in Class 65, a certain challenge, setting forth that he the said S. C. Herring was willing to submit the said safe to a test against any other safe then exhibited by any other person." We are at a loss to conceive how language could have been more clear and explicit. And yet in the face of it, on the eve of the committee meeting in August, a month after the signing of the above agreement, Mr. Herring appends a codicil to his former posted challenge on the safe, intimating that "the small inside chest was only to be operated upon during trials," thereby ignoring the challenge safe and the original agreement. From this fact our readers will, no doubt, conclude with ourselves that Mr. Herring had not the implicit confidence in the security of the test safe which his challenge seemed to imply, and that he was desirous of stealing a march upon his English antagonist. We think the committee ought to have branded such an unwarrantable and clandestine proceeding as it deserved, by at once vetoing it, and doubtless the committee overstepped and exceeded its powers by allowing Mr. Herring to raise any question

foreign to the original proposition as to which safe was meant.

The American proclivities of Mr. Hoyle, the secretary and interpreter to the committee, and the fact of the French chairman being entirely ignorant of the English language, made the American interest supreme in the committee, so that the influence of the English engineers was only as two to four; and on no other grounds can we account for the decision, that Mr. Chatwood should, in addition to opening the challenge safe, be compelled also to open the practically useless inside chest (into which a man's hat could be put), which Mr. Herring had adroitly attempted to substitute at the last moment. From the report we gather that Mr. Chatwood's men, when preparing their tools for the attack on Herring's challenge safe, had only provided for the siege such as may be strictly defined *bonâ fide* burglars' tools, and such as are ordinarily used by that fraternity. And, although Mr. Chatwood entered his decided protest against the committee overleaping the bounds of its authority (it being impossible to find this second safe within the agreement), he yet declared that so soon as he had fulfilled the well-defined stipulations of the original agreement, by throwing open the doors of the challenge safe, he would then be prepared to show that the practically useless inner chest embedded therein could be also opened. What shall be said of the committee, after this flagrant piece of Yankee smartness, in granting to Herring's men an advantage over Chatwood's in weight of tools, and this for the unique and simple reason that they declared the impossibility of opening Chatwood's safe, unless they were permitted to use such appliances and instruments as are ordinarily required when a steam-boiler has to be knocked to pieces, thus stultifying its own unanimously-recorded resolution, passed after critically examining the tools of the Chatwood party, thus, "That both competitors be allowed equal weight of tools."

We think the committee were remiss in their duty in not on the instant giving the award to Mr. Chatwood, and handing to him the challenge stakes, instead of dallying with unreasonable demands which it had no authority to grant. It did, however, in the excess of its authority, allow to Herring the use of full-sized ponderous boiler maker's implements, more than double the weight of the tools which had been allowed to Chatwood. And the trials were allowed to proceed with these "dead weights" unjustly, as we think, hung upon Mr. Chatwood and his men. The extra sizes and weight of tools allowed by the committee to Herring's experts, during the operation, produced a result which forcibly reminded everyone present of the noise and clatter always found in a boiler maker's shop when in full operation.

It will, no doubt, be asked, how comes it that the committee were so remiss in their duty as to permit such a disparity of tools to be used by the competitors? Does not the original agreement clearly define *bond fide* burglars' tools—such as burglars are known to use without being detected in their nefarious practices? Ergo, by what right did the committee permit Herring's operators to use tools nearly thrice as heavy as those used by Chatwood's men—tools, too, unknown in the burglars' nomenclature? The affair being in the hands of the committee, their primary duty was to have seen that the first conditions of the agreement were fully carried out. But, with all the extraneous and undue advantages granted to Mr. Herring, his men failed, and failed utterly, in all their efforts to open the invincible door of the Chatwood safe, and only succeeded in making a hole on one side by a battering-ram and other heavy implements—the total weight of which was above 242lbs.—in 235 minutes. On the other hand, Mr. Chatwood's operators opened the doors of Herring's challenge safe in 29 minutes with the ordinary burglars' implements—(the weight of which was under 12lbs.)—the additional small inner chest

in the challenge safe taking 210 minutes further to open, the tools used being equal to 90lbs. weight, making a total, in opening the two, of 239 minutes in time, and 102lbs. weight in tools. We, therefore, come to the inevitable conclusion, from an examination of the proceedings of this great international contest, that Mr. Chatwood is really and truly the winner of the wager. We regret to find that, owing to the tampering with the chairman by the American members, and the secretary of the committee, the English engineers were compelled to retire, which they did on August 20 (the chairman having also resigned, in writing, at the same time), before any award had been made, or even discussed. Had a verdict been according to the terms of the agreement, Mr. Chatwood must have been declared the winner, and would have had the satisfaction of distributing among the charities of London, Paris, and Washington, the £600 deposited by Mr. Herring, which, in addition to the £600 deposited by himself, the French stakeholder still retains in the imperial treasury of France. In conclusion, we would remind our readers that several years ago we prognosticated that "Mr. Chatwood's would rank as the foremost safe of its time." This prediction was signally fulfilled at Paris last year.

APPENDIX,

CONTAINING

OFFICIAL REPORT OF ROBERT MALLET, Esq., C.E., F.R.S.,
AND ROBERT F. FAIRLIE, Esq., C.E.,

THE ENGLISH MEMBERS OF THE SAFES TESTING COMMITTEE, PARIS, 1867,
WITH COPIES OF CORRESPONDENCE, MINUTES OF THE COMMITTEE'S
PROCEEDINGS, ETC.

THE time has arrived when the interests of justice and truth oblige us to make the following statements in reference to the late challenge contest at Paris, between Messrs. Herring and Chatwood, as to their respective Burglar and Fire Proof Safes. For many reasons, we wish this had not been rendered necessary, by circumstances which have occurred since our withdrawal as members from the Committee, and by the persistent and ever enlarging misstatements, in matters of fact and of inference, publicly made as to this "Safes' Trial." Most of all do we regret that a charge of partisanship on our parts in favour of Mr. Chatwood, and of unfairness towards his antagonist, publicly made against us by Mr. W. J. Hoyle, the Secretary of the late Committee, obliges us to reveal some facts of his own conduct as Secretary, which tend to explain his motives and may indicate the amount of credence due to his statements.

Time and space forbid our recapitulating the whole narrative of the *res geste* of this safe contest. We must, however, recur, with some remarks, to the earliest period of this affair.

We neither of us have or ever had any professional or other business relation with Mr. Chatwood. Our personal knowledge of him is but slight, and we believe his reasons for choosing us to represent him on the Safes' Trial Committee were, that one of us (Mr. Mallet) had, as a Juror at the Dublin Exhibition of 1865, been instrumental in preventing the merits of his safe being overlooked as they had almost been by the Jury, and that the other of us (Mr. Fairlie) is known publicly to have given his attention as an engineer to the subject of safes' construction. We acceded to his request that we should act for him, mainly because we recognised his merits in the decisive advance he has made in the construction of the doors and bolt fastenings of safes—and we both of us expressed to him our entire indifference as to receiving any professional emolument whatever for so doing.

Upon reading the Articles of Agreement entered into between the parties to this contract, a copy of which is given at foot¹, it became apparent to us, that we ourselves, as well as the two American members of the Committee, had undertaken duties of some delicacy, and requiring the exercise of much discretion, impartiality, and forbearance. As respecting the *representatives* of the contesting parties, it was for us scrupulously to guard the interests thus committed into our hands, from every attempt, if made, at adroitness of policy, or unfairness of any sort, on the part of an opponent, in the conduct of the contest, from the moment we became concerned with it to its final conclusion, whenever and whatever that might be. So far as this went, it was our duty, as well as that of Mr. Herring's

1 ARTICLES OF AGREEMENT

Made and entered into this Ninth day of July, 1867, between SILAS C. HERRING, of New York, U.S. now residing in the Hotel du Louvre, Paris, Safe Manufacturer, of the one part, and SAMUEL CHATWOOD, of Bolton, Lancashire, England, now residing at the Grand Hotel, Paris, Safe and Lock Engineer, General Manager and Director of Chatwood's Safe and Lock Company, Limited, on the other part.

The said parties agree as follows :

That whereas the said Silas C. Herring is an Exhibitor of Safes in the Exposition at Paris, and had on the fifth day of June, 1867, on one of the Safes exhibited by him in Class 65, a certain challenge, dated May 15th, 1867,

(Of which the following is a copy, viz. :—Propositions.—1st: I propose to subject my Fireproof Safe to a test by fire, in competition with any Safe or Safes now on exhibition in Paris, before a committee to be chosen by both parties, in the sum of from 1000 to 50,000 francs. 2nd: I will also subject my Burglar-proof Safe (secured by Yale's Patent Combination Lock) to a test by experts, in comparison with any Safe now exhibited at the Exposition, before a committee which may be agreed upon, in like sum of from 1000 to 50,000 francs. Any party or parties accepting either of the above propositions are to place in the hands of a responsible party an amount of money equal to that required of me. These propositions to be left open until the 15th of June next.—Silas C. Herring, New York.—Paris, the 15th May, 1867.)

setting forth that he, the said Silas C. Herring, was willing to submit the said Safe to a test against any other Safe then exhibited by any other person : And whereas the said Samuel Chatwood is also an Exhibitor of Safes in the said Exposition, and did on the fifteenth day of May afore-mentioned exhibit in Class 65 a certain Safe which he, the said Samuel Chatwood, is willing to submit to a test against the aforesaid Safe of the said Silas C. Herring, on the following conditions, which conditions are hereby approved of by both the aforesaid parties :—

1st.—That the trials shall be entirely conducted by a committee of five Engineers—two English, to be appointed by the said Samuel Chatwood ; two Americans or others, to be appointed by the said Silas C. Herring ; and the four thus appointed to appoint a fifth, who shall be a French Engineer, the decision of the majority to be final on all points.

2ndly.—That the said Safe of Silas C. Herring, exhibited in the Exposition of the Champs de Mars on the 5th day of June, 1867, and the said Safe of Samuel Chatwood also exhibited in the same Exposition on the same date, be at once delivered to the custody of the Committee on their appointment, together with full working drawings of the same, showing all the details and sections, subject to the control of the Imperial Commissioners so far as the custody of the two Safes is concerned.

3rdly.—That the Committee shall be at liberty to employ such means as they may think best to enable them to form a correct judgment.

4thly.—That the decision of the Committee shall state which of the two Safes is, in their opinion, the best in the following particulars :—In the quality of materials used, in the capability of resisting drilling instruments, gunpowder, steel wedges, crowbars, steel screws, or any other kind of burglars' appliances.

5thly.—That the said Samuel Chatwood having already deposited the sum of 15,000 (fifteen thousands) francs in the hands of Henry Chapman, Esq., the Paris Secretary of the Institution of Mechanical Engineers, to be by him handed over to Monsieur le Play, immediately on the execution of this Agreement, the said Silas Herring shall also deposit the sum of 15,000 (fifteen thousands) francs in the hands of Monsieur le Play, the President of the Imperial Commission of the Exposition, Paris, to be held by him until the decision of the Committee shall be published, when he shall pay the sum of 15,000 (fifteen thousands) francs to the person whose Safe is declared by the Committee to be the best in its capability of resisting burglars' appliances of any kind ; and after paying the expenses incurred in the trial, the balance shall be paid in equal proportions to the Charities of London, Paris, and Washington, which Charities shall be nominated by the winner.

And it is hereby further agreed, that in the event of Monsieur le Play not being willing to accept the office of Treasurer, the said 30,000 (thirty thousands) francs shall be deposited in such Bank in France as shall be nominated by the Committee, until the decision of the Committee shall be published, when it shall be paid out on a resolution of the Committee in the proportions above-mentioned.

representatives, to be partisans, if seeing that an opponent did not obtain unfair advantages be partisanship; hence we had to weigh, with thought and foresight, every proposal emanating from those who represented Mr. Chatwood' opponent.

But besides this, our duty as two members of a Committee of five, charged under the sanction of a solemn declaration,² with the responsibility of recording our judgment of which was the "Best Safe," was, as respects results, very different. In that respect we were to be *impartial judges*, and moved by facts alone, as interpreted by our professional knowledge and experience. We deemed ourselves bound to weigh facts once they had been obtained, with rigid impartiality, and whether they might make for or against one or the other of the contesting parties, to abide candidly and implicitly by the result so obtained, whatever that might be. In this, however, it was necessary that we should be alive to whether intentionally or accidentally anything should have been introduced or have occurred during the contest, or subsequent deliberations of the Committee, capable (even after the best arrangements that forecast could devise to the contrary) of disturbing the fairness of the trials, of modifying the weight justly attaching to any of the facts, or of warping or distorting the conclusions to be drawn from these or from the events seen in the lights of the professional knowledge and observations of the several members of the Committee.

We affirm for ourselves, that throughout the transactions following, we acted unwaveringly upon these principles, and guided by honour and good faith—how far others concerned have done so, the facts we are about to state must decide.

The Articles of Agreement were signed on the 9th July, 1867, which named the English and American members of the Committee on behalf of Chatwood and Herring respectively, and empowered these four to choose a fifth, who, it was specifically stated, "should be a French engineer." It had been proposed by the principals, that the labours of the Committee and the trials should commence as soon after the 1st August as the convenience of all parties might admit.

On the 24th July, 1867, Mr. Mallet received the following letter from Mr. Holmes (one of the American members of the Committee), to which he replied on the 2nd August, having been previously unable to do so by being at a distance on business:—

(Copy literatim.)

"Paris, July 23rd, 1867.

"ROBERT MALLET, Esq.,

"SIR,

"Having been selected with yourself and others to act as a Committee or Jury on the qualities of certain bank safes, exhibited in the Paris Exhibition by Silas C. Herring and Samuel Chatwood, I have proposed as the fifth, or associate 'French

In accordance with the first of the above conditions, the said Samuel Chatwood hereby appoints Robert Mallet, Esq., Civil Engineer of London, and Robert F. Fairlie, Esq., Civil Engineer, also of London, to be the English members of the Committee; and the said Silas C. Herring hereby appoints Joseph E. Holmes of New York, and Thomas R. Pickering of New York, to be the American members of the Committee; and the four members hereby appointed shall as early as possible appoint a fifth, who shall be a French engineer. The five members thus appointed, constituting the Committee, shall each sign a solemn declaration to deliver a true and honest judgment according to the conditions hereinbefore stipulated. And the said Silas C. Herring and Samuel Chatwood hereby agree to abide by the decision of the Committee when given in writing under the hands and seals of at least three members of the said Committee.

Executed in two originals at Paris this ninth day of July, 1867.

I approve of the above document and acknowledge it as my engagement.

SILAS C. HERRING.

I approve of the above document and acknowledge it as my engagement.

SAMUEL CHATWOOD.

² DECLARATION.

I hereby declare, as a member of the Committee named in the foregoing agreement, that I will to the best of my ability deliver a true and honest judgment according to the conditions stipulated.

(Signed)

P. DOULIOT.

Witness to all the Signatures,
W. J. HOYLE.
August 12th, 1867.

ROBERT MALLET,
ROBT. F. FAIRLIE,
JOSEPH E. HOLMES,
THOS. R. PICKERING

engineer, Monsieur Tresca, Hon. Secretary of the Conservatory of Arts and Meters; and, as I understand that his appointment will be satisfactory, I propose that we hold our first or preliminary meeting for organisation at the Conservatory, on Tuesday, the 6th of August, at half-past four, p.m., of that day, and that each member of the Committee then submit a written programme of what seems to him the best method of performing the task or duties we have taken in hand.

"Disappointed that the trial does not begin on the 1st August, as first named to me, I must return to North Wales, and cannot well be ready to meet with the Committee till the 6th, as above named. The *place* of meeting is not important; and if a change is desirable, by writing to me at Laburnum Cottage, Ruabon, North Wales, I shall be ready to accept any other place of meeting. I am pleased that we are likely to have the very valuable assistance of Mr. Tresca, who, on all accounts, is eminently qualified for the place. Hoping for a pleasant and interesting trial,

"I am, Sir, yours truly,

JOSEPH E. HOLMES.

"Will you kindly communicate to our colleague, Mr. Fairlie, the substance of the above, and I shall be glad to hear from you at Ruabon early next week, with any suggestions that are likely to facilitate our business. J. E. H."

We received this communication, certainly with some surprise; it seemed strange that one member, of a Committee as yet incomplete and which had never met, should take upon himself the powers proper to the entire Committee, and not only should propose the person for the fifth member, but, as it appears, have entered into communication with him, directly or indirectly, and ascertained that his assistance was likely to be had. Still more, that his proposal of "the fifth or associate French engineer" referred to a gentleman who is not a practising engineer at all, but an eminent Professor of experimental physics and a man of science.

No one could have been fitter for the office than M. Tresca, whose abilities and scientific reputation are well known—had a gentleman of scientific attainments alone been required. But the articles of agreement were precise, that he should be "a French engineer"—which, of course, means an engineer in, or having been in, practice—and on this ground alone, and without reference to his having been communicated with previously, and, as we deem it, in an unsuitable manner as above, we felt that M. Tresca (whose honourable name we regret to have to introduce here at all) was disqualified.

(Copy Reply.)

"7, Westminster Chambers, 2nd August, 1867.

"DEAR SIR,

"Yours of the 23rd ulto. from Paris, only reached me here to-day, on my return from Belfast. As far as I am myself concerned, I should greatly prefer the 8th or 9th instant, for our first meeting in Paris on the subject of "the Battle of the Safes," to the 4th or 6th inst., as proposed.

"I am overburdened with work in the interval, and would be glad if you could postpone the first meeting until either the 8th or 9th. I know little or nothing but what you mention as to the appointment of the fifth person. Were the questions to be decided those of physics, there could be no question but that M. Tresca would be a most suitable person; but it seems to me, a practical engineer rather, is what is here called for.

"Truly yours,

(Signed)

"ROBT. MALLETT.

"Joseph E. Holmes, Esq."

Upon Friday, the 9th August, the two American members met us by arrangement, at the Exhibition Building, and urged their wish that M. Tresca should be the fifth member. We objected on the ground that he must be a "French engineer," and that what was wanted was a man *practically conversant with the qualities and methods of construction in ironwork*. M. Flachat, Pres. Inst. C. E. of France, was proposed by us, but it was found he could not act. We were then asked to propose some one, and we submitted the following list of five eminent French civil or mechanical engineers in

practice, with any one name in which we should be satisfied, viz. :—MM. Farcot, Nordling, Armengaud (Jeune), Mazzaline, Nillus.

It was agreed that a deputation of the Committee of both American and English members should wait at once on M. Nordling, Engineer-in-Chief of the Orleans Railway, and request him to join the Committee.

On the interview had the same day, at 16, Place Vendome, M. Nordling declared his inability to act, through pressure of business, and on being requested by the deputation to suggest some other engineer, he promised most obligingly to seek some suitable person at the meeting of the Institution of French Engineers, to be held that evening. Mr. Pickering and Mr. Fairlie were selected to attend the meeting for the purpose of arranging with some one of its members, as suggested by M. Nordling, and M. Meyer, Engineer of the Western Railway, was spoken to and provisionally agreed to accept the appointment. The following day however he attended the meeting of the Committee, and reluctantly declined to act, on the ground that he was entirely unacquainted with the manufacture of safes. Several other names were then suggested, amongst these that of M. Douliot, a mechanical engineer in practice as *Chef d'atelier* of the boiler making and bridge department of the firm of Cail and Co., Paris.

It was ascertained without delay by an interview of American and English members with him, in which the nature of the contest and duties, etc., were explained, that he would act if deemed fit, but M. Douliot himself stated that he neither spoke nor understood English, and that he feared this might embarrass his proving an advantageous member of the Committee. The difficulties of getting any French engineer in practice to consent to act had already proved so great, and had consumed in vain so much time, and the American members urging their anxiety to commence, and stating that Mr. Herring's workmen were waiting already several days in Paris at heavy expense to him, and that one of the members (Mr. Holmes) would be obliged to leave Paris within a very short time, and finally that a secretary must be appointed who should speak both French and English, he could act as interpreter for M. Douliot; so we consented to waive this objection, which we already felt had much force in it as urged by M. Douliot himself, and we joined the American members in begging him to accept the office. He did so conditionally upon his own principals not making any objection to his acting.

A formal meeting was held of the four members of the Committee at the Exhibition Building on the same day at half-past two p.m., which sat until six p.m., the first business being to appoint a paid secretary.

Mr. W. J. Hoyle, the representative at the Exhibition of the Whitworth Arms Company was proposed to us for the office by the two American members, who had already been in communication with him. We knew nothing whatever of Mr. Hoyle, but, it being represented to us that he was a mechanical engineer, that he occupied the position of secretary to the Whitworth Company (Limited), that he was of necessity daily on the spot, and that he was well acquainted with French and spoke it fluently, so we made no objection whatever to his appointment, which was at once made. Mr. Hoyle, being in attendance, was introduced, informed that his duties as Secretary would be to attend all meetings of the Committee, to act as interpreter between the other members of the Committee and M. Douliot, and to record and take charge of the minutes of proceedings. His appointment was then confirmed, and he was requested to be present at the next and all subsequent meetings. M. Douliot also came to the meeting and informed the members that on Monday, the 12th August, he expected to be able to devote himself to the duties he had before provisionally undertaken.³

³ MINUTES OF THE PROCEEDINGS OF THE COMMITTEE

Appointed to conduct the competitive trials of two Fire and Burglar-proof Safes made by Mr. Silas C. Herring, of New York, and Mr. Samuel Chatwood, of Bolton, respectively, at the Universal Exposition at Paris, 1867.

The members of the Committee appointed by Mr. Herring were—

Mr. JOSEPH E. HOLMES, of New York, Engineer.

„ THOMAS E. PICKERING, also of New York, Engineer

The members of the Committee appointed by Mr. Chatwood were—

Mr. ROBERT MALLET, of London, Civil Engineer.

„ ROBERT F. FAIRLIE, also of London, Civil Engineer.

The meeting was then formally adjourned to Monday, the 12th instant; but as much preliminary matter required to be considered and discussed, it was suggested that the four (American and English) members, without M. Douliot, but with Mr. Hoyle present, and acting as Secretary, should at once proceed to such matters, so as to have them in as much order as possible prior to the next meeting, at which whatever might be thus provisionally arranged should be again discussed in committee, M. Douliot being present, with a view to modification or final adoption. It was distinctly agreed at this first meeting of the Committee, although not by a formal resolution, that in the event of the absence of either one of the American or English members of the Committee, no business of any kind could be transacted, nor even in the absence of Mons. Douliot, unless all the English and American members were unanimous.

The four members accordingly had a lengthened conversation, necessarily of a diffuse and irregular character, as to how they ought to proceed as a Committee, etc., etc.; and at times, much to our surprise, Mr. Hoyle, uninvitedly, joined in the conversation and discussion, and offered spontaneously several suggestions, and even made and argued objections, as to points under discussion. The tendency and colour of these remarks of Mr. Hoyle struck both Mr. Mallet and Mr. Fairlie separately, as being rather and constantly in favour of the American interests. So much so, indeed, that Mr. Fairlie called Mr. Mallet aside, and said to him that this unauthorised interference on the part of Mr. Hoyle ought to be stopped; that in fact he was constituting himself a member of the Committee, and that all his remarks seemed to have a bias to one side only.

Mr. Mallet, agreeing to all this, yet replied that this was an informal meeting; that no doubt the remarks were officious and unauthorised, and had a very one-sided appearance; that we had best avoid introducing any element of difference if possible, but await and observe Mr. Hoyle's conduct at the next (formal) meeting, to be held on the 12th inst., when, if his remarks should be continued, he could easily be stopped; and that for the present we had best content ourselves by observing to Mr. Hoyle that his duties as Secretary did not involve his offering any suggestions or remarks, or admit of his joining in the discussions of the Committee. Returning to the table, Mr. Fairlie, on the next occasion of remark made by Mr. Hoyle, interposed. To his objection, Mr. Hoyle replied

The four gentlemen thus nominated agreed to appoint Mons. P. DOULIOT, of Paris, Engineer, as the fifth member of the Committee.

MINUTES of the first meeting of the Committee, held at the Exposition Universelle, on Saturday, August 10th, 1867, at 3 30 p.m. Present: Mr. Mallet, Mr. Fairlie, Mr. Holmes, Mr. Pickering, and M. Douliot. Mr. Herring and Mr. Chatwood were also present.

Resolved—That M. DOULIOT be and is hereby appointed President of the Committee.

M. DOULIOT having expressed a doubt as to his ability to give a sufficient amount of time for the purposes of the experiments, it was arranged that he should see the Directors of his Company, and that in case of his obtaining their sanction, he should be present at the Exposition on Monday, August 12th, at 8 a.m., so that the trials might be then commenced; but that in the event of his non-ability to attend, the trials should be postponed until such time as should be named by M. Douliot.

It was then arranged that M. Douliot should vacate the chair and that the other four members of the Committee should proceed with the discussion of the details of the programme of the trials in his absence, as M. Douliot's vote was needful only in case of their failing to come to an agreement upon any portion of the programme to be arranged.

Resolved—That Mr. W. J. HOYLE be appointed Secretary to the Committee.

The agreement entered into by Messrs. Herring and Chatwood and duly signed by those two gentlemen was then handed to the Secretary. †

In accordance with the terms of the agreement, Mr. CHATWOOD handed in two drawings of his Safe which he declared to be the Working Drawings from which the Safe to be tested had been made, and he also added an illustrative tracing.

Mr. HERRING submitted a drawing; but as in the opinion of the Committee it was not sufficiently complete, it was

Resolved—To proceed with the trials without the drawings, Mr. HERRING undertaking to produce complete drawings of his Safe by Tuesday morning, August 13th, at the latest.

The Committee then proceeded with the discussion of the programme of the trials, but separated at 6 30 p.m. without having come to any resolution on the subject.

The second meeting was fixed for Monday, August 12th, at 8 o'clock a.m., at the Exposition.

(Signed)

THOS. R. PICKERING,
ROBT. MALLET,
ROBT. F. FAIRLIE,
JOSEPH E. HOLMES.

P. DOULIOT.

† Mr. Chatwood lending his Copies to Mr. Hoyle personally.—R. M., R. F. F.

that he merely wished to facilitate the business, or something to that effect, and the matter then dropped.

At this meeting of the Committee the "full working drawings, showing all the details and sections" required by the Articles of Agreement, were called for. Mr. Chatwood produced drawings and tracings to a large scale, which, though not fulfilling to the letter the condition of "showing *all* the details," did actually, honestly, and in as complete a manner as any mechanic could desire, fulfil the spirit of the agreement, by conveying the amplest information as to the construction of his safe. Mr. Herring, or his representative (Mr. Holmes), then produced a drawing on his part, which was rejected by the Committee, as conveying, in fact, no information at all as to the construction of his safe. Even his own representative, and, as we gathered, the maker of the drawing (Mr. Holmes), did not venture to assert that it fulfilled the conditions required; nor was any tangible explanation offered to us as to why such a production had been presented to us.

Had we been disposed to act with any other than the very best feelings towards Mr. Herring, or to press matters to extremes, it will be seen that it was competent for us to have acted upon the fact that Mr. Herring had thus early committed an infraction of the Articles of Agreement, and had already managed to acquire an advantage over his opponent, with the internal construction of whose safe he and his representatives were now in full possession, while still withholding any information as to the construction of his own.

We acted in a different spirit, however, and consented that Mr. Herring should be allowed an extension of time until the next Tuesday morning, the 13th, for the production of his drawings. In the meantime, Mr. Chatwood's drawings remained, or were supposed to remain, in the Secretary's hands, but we have reason to believe these were immediately handed over to Mr. Herring's representatives, for minute examination by them and others in his interests. Mr. Herring's drawings were produced on the 12th of August, and, though several objectionable omissions in them were pointed out, though not pressed, by us, were accepted by the Committee. Those drawings, we believe, were made in the interval by Mr. Holmes and a Mr. Taylor, Mr. Holmes's son-in-law; and we may here at once state that upon comparing them with the actual "inside coffer" of Mr. Herring's safe, after the latter had been broken open, we found that in the most vitally important portions,—viz., the construction of the front door of this coffer,—the drawings materially disagreed with the structure they professed to represent, that parts actually attacked and broken by Mr. Chatwood's experts were omitted, and reduced dimensions substituted for the actual ones in parts so essential as the great rivets passing through and through the front door, and which constitute its main strength.

It would require a very great amount of charity to assume that these diversities from truth were accidental. But whether so or not, here are the facts; Mr. Herring's representatives, and others in his interest, including no doubt his experts, had full knowledge of Chatwood's construction by drawings in their possession from the 10th to the 12th August inclusive—say two days and a half; * Mr. Chatwood *never* was put in possession of *true* information by drawings of the construction of his antagonist's safe and coffer, and the incorrect drawings, having been so long kept back, were only handed to Mr. Chatwood for his examination during a few minutes on the afternoon of the 12th August the trial for breaking open being already decided to be commenced on the next morning, the 13th August. It is for the public to judge of these facts in connection with what follows.

After the adjournment of this meeting (of the 10th), but while all the members of the Committee were still together, Mr. Fairlie addressed Mr. Hoyle, and in very distinct terms told him that, during the proceedings so far, he had exceeded his proper powers, and lost sight of his position as Secretary, that the tendency of his interference was, throughout, distinctly that of a decided partisan of Mr. Herring, that instead of being

* Chatwood's drawings and full-size sections had been on view at the Exhibition and open to Herring's engineers and experts from the first of April, so that instead of being in possession two-and-a-half days, they had actually had the most specific information for upwards of five months.—ED

perfectly neutral, as he ought to be, his aim seemed to be to prevent justice being done to Mr. Chatwood, and that such conduct must be discontinued in future. This led to a very animated reply on the part of Mr. Hoyle, who, to our amazement, now asserted *his right to meddle* in the proceedings of the Committee, on the ground, as he alleged, that his own character was concerned in what they did. As a precedent to sanction his course, he affirmed that as Secretary to the Whitworth Company, Limited, he was accustomed at the meetings of his Directors to give opinions or even to dictate to them on any such matters of business as he himself alone was competent to judge of;—and after some further words he (Mr. Hoyle) threatened to resign as Secretary, and handed over his portfolio to one of the American members who was standing by.

Mr. Mallet now joined in the discussion, and insisted upon this, that whatever might be [Mr. Hoyle's practice elsewhere, and under the entirely different circumstances of Secretary to a mercantile company, here, and in this case, Mr. Hoyle must consider himself simply as the recording and interpreting agent of the Committee; that his proper duties were those of a mere mental machine, and that if these were only truly and honestly performed, he must be clear of any further responsibility, and that his own character was in no way mixed up with the proceedings of the Committee, no matter what those might be, provided he so confined himself to this his proper line of duty as Secretary.

These arguments admitted of no reply, at least Mr. Hoyle did not attempt any, and Mr. Mallet, taking the portfolio from the holder, handed it back to Mr. Hoyle, with an expressed hope that there should be no further ground for differences of opinion. Mr. Hoyle re-took his papers, but gave no expression as to his future intentions.

The two American representatives were present at all this, but gave no expression to their opinions, or, if any, in a sense rather favourable to Mr. Hoyle's extraordinary pretensions; in fact, their silence was tantamount to approving of his conduct.

It is necessary here that we should state that of the American members of the Committee, one neither spoke nor understood French, and the other but very imperfectly. During the first meeting, one of us occasionally addressed Mons. Douliot directly in French, and received his replies, and interpreted them, and occasionally Mr. Hoyle did so; this led once or twice, however, to short conversations, of the sense of which the American representatives were afterwards informed in a brief form. This proving unsatisfactory to all parties, it was proposed by one of us, and unanimously agreed, that *all* verbal communications to or from Mons. Douliot should thenceforth pass through Mr. Hoyle alone as interpreter.

We do not wish to affirm any charge against Mr. Hoyle of wilful misinterpretation. Even where this is the case it is difficult to be sure of the fact, because no interpreter can render from one tongue into another, more or less than *the ideas that he himself has formed* from the original words—nor render these, in other than such language as he is master of.

From whatever cause however arising, we have no option now but to state, that the judgment we were compelled to form as to Mr. Hoyle's interpretation was, that the words of the American members were forcibly and fully rendered into French, and repeated to M. Douliot, but that what was expressed by us or urged by us in reply to them, became on many important occasions so diluted in energy, if not actually modified in meaning, in their French transit to Mons. Douliot, as to greatly lose their weight or import with him. On more than one occasion Mr. Mallet distinctly, and at the instant, called Mr. Hoyle's attention to the fact, that a sentence he had just uttered to M. Douliot was not a rendering at all, of what had been spoken by one or other of us, and the fact was admitted by the sentence being then reconstructed and repeated correctly to that gentleman. At our second meeting too, as well as at our final one, we failed wholly to cause Mr. Hoyle to repeat in our own form of words what we desired to be impressed upon M. Douliot; he alleging that he had already given the material part or substance, and that time need not be wasted in returning to translation at length. Of that, we consider that *we*, and not Mr. Hoyle, were the proper judges.

On one occasion of this sort Mr. Hoyle very rudely replied to a reiterated request, to repeat our own words, "Well, I have already said it twice, and I will not say it over again," and what we desired to convey remained in reality unsaid. On one or two of these difficult occasions one of us (Mr. Mallet) attempted at last to address M. Douliot directly, but was immediately stopped by the American members, and the agreement held up to us that Mr. Hoyle alone should address the chairman (M. Douliot), and interpret his words.

Thus the result of the unhappy circumstance of Mons. Douliot's unacquaintance with English—coupled with these conditions of communication with him was, that that gentleman remained, to the very end, in almost total ignorance of a great deal that passed in his presence, and of very much that we deemed it most material he should comprehend in full force. This general fact, indeed, Mons. Douliot has himself confirmed in writing (*see foot note, page 51*).

At the Committee meeting of the 10th August, at part of which Mr. Chatwood and Mr. Herring were present (until requested both to withdraw) the latter expressed his intention to leave the outer doors of his safe open (at the "breaking-in" trial), alleging that they were merely fire-proof, not burglar-proof, and that they would oppose almost no resistance.

To this very clever bit of policy we opposed a decisive negative, first on the ground that shutting and fastening those doors was implied in the challenge posted on the outside of them; secondly, because we could not thus tacitly admit that we recognised the validity of the distinction made by Mr. Herring and dishonestly insisted upon in relation to this trial between his so-called "Fire-proof safe" and his "Burglar-proof safe."

Both his safes, *i.e.*, his outer one, with its fire-resisting filling, and his inner one, or coffer, are *pro tanto* Burglar-proof safes, two safes, the one within the other. He himself actually calls them so, *totidem verbis*, in his own printed pamphlet, called "Fighting with Fire." It is a mere slippery abuse of language to ignore the fact that his outer or fire proof safe, with double cased doors of plate-iron nearly half-an-inch thick, and with ponderous bolts shooting in all directions, and heavy bars and locks, is not, so far as its strength goes, as much a burglar-proof safe as any safe can be, or as his inner coffer.

If any proof were needed of this we have it in the fact that the breaking open of those very doors by Chatwood's experts occupied them nearly *thirty* minutes, while they were fresh at their work; and had they not stood between these men and the inner safe, or coffer, there can be little doubt that, under all the circumstances as afterwards occurring, those men would have had the block of wood out of the inner coffer before Herring's men could have had the other block out of Chatwood's safe.

Some reticence, if not deception, seems to have been employed from the outset as to this safe-within-safe construction. Mr. Chatwood affirms that he was, up to a late period of the preliminaries between him and Mr. Herring, kept ignorant of the existence of any inner safe, and accepted Herring's challenge under the notion that the safe he had alone to deal with was that which *he saw*, and upon which the challenge was posted.

There is even some doubt upon the face of the Articles of Agreement, whether or not Chatwood was bound by them to deal with more than one safe, and that the outer one. We felt, however, that we were bound to construe those Articles rigidly as regarded both parties, and we therefore informed Mr. Chatwood that while we thought he had good grounds, if he so elected, to withdraw from the contest now that the facts as to this inner coffer were clear, still, if he was resolved to go on, we were of opinion that he must avoid the probability of future cavil, and open—both the outer safe and inner one, or coffer. He declared himself prepared to accept the attack upon *both*, though reserving his own view unchanged that he had expected to have had to deal with the outer safe alone.

It was obvious, as it appeared to us, that this existence of safe-within-safe could not have been known to Mr. Chatwood at the period when he drew up (himself, as we learnt) the Articles of Agreement, and, indeed, we have extraneous evidence, which it is not necessary to go into here, that he did not know this until he received the draft agreement (*from Mr. Herring which he refused to execute*).

But upon another ground, we saw ourselves called upon to reject Mr. Herring's offer to leave his outer doors open. The object of this piece of characteristic generosity was clear to us. If, on the challenge trial, Herring's coffer should prove first vanquished, it could be alleged it was so only because he had incautiously and gratuitously left his outer safe doors open; but if Chatwood's safe should prove the first vanquished, the *a fortiori* triumph would have been duly prepared. In fact, to use plain terms, while it appeared to us very probable that Chatwood had been more or less kept ignorant of the formidable "inner work"—the coffer, we regarded this offer to leave the outer doors open—if it were seriously meant—as a trap.

Upon our next occasion of meeting, however, Mr. Herring announced his intention to close both his outer doors and those of his coffer.

Both safes had been examined by the Committee on the 10th August, in the presence of their respective makers, and they were then for the first time seen by us, and we for the first time became aware of the fact that Mr. Herring's safe was in fact two safes, one within the other, and that the interior one or coffer was obviously of great strength from the mere mass of metal in it, in relation to its very small capacity.

After this inspection, the Committee deemed it fair that permission should be given to Mr. Chatwood to re-arrange the levers of his safe-lock, and to Mr. Herring to change the figures or letters of the permutation lock of his coffer. This was done prior to the day of contest by both parties. In doing this, Mr. Chatwood's men spoiled the "spindle lock" of his safe, so that only one of his two locks would have had to be opened in the event of the attempts made upon his locks by Herring's men having proved other than they did—perfectly futile.

On the morning of that day, it was alleged, in our presence, by one of the American members, that in the interval Mr. Chatwood had made other alterations on his safe, and in particular, had put in some new or stronger plate to the interior side of the door. We at the moment sent for Mr. Chatwood, and, in presence of the whole Committee, demanded of him to state whether this was the fact, or whether he had altered anything of his safe except the locks as permitted. His reply was an indignant denial; and after the trial we satisfied ourselves that (as we never doubted) Mr. Chatwood had spoken the truth. This calumny, though based merely on the hearsay of Herring's men, was, however, afterwards, repeated in our presence on the same day, and met at the moment with the rebuff it deserved from us; yet it has been reiterated, as we understand, since the trial, in print, in Mr. Herring's interest, though well known to be devoid of any foundation in truth.

The Committee meeting of the 12th August was a prolonged and difficult one, resulting at last in such arrangements as to the programme, for trials of the breaking into the safes, and for the final judgment of the Committee as to which was the better safe, as, on the whole appeared to us and to the whole Committee just and fair to both antagonists, and offering as few chances for accidental or contingent circumstances occurring to favour unfairly either one or the other, as the conditions, and our foresight and judgment, admitted of.⁵

⁵ SECOND MEETING of the Committee, held at the Exposition, Monday, August 12th, 1867, at 8 a.m.

Present, M. Doullot, Mr. Mallet, Mr. Fairlie, Mr. Holmes, Mr. Pickering.

The Minutes of the last meeting were read, confirmed, and signed by all the members of the Committee.

Mr. Herring handed in three drawings of his Safe, which were accepted by the Committee. *

The Committee then proceeded with the discussion of the programme of the experiments, and Resolved—That a marked block of wood, about 6" x 3" x 2" shall be handed to each of the competitors to be placed by them in their Safes, and that after the Safes have been closed by them, the production of either of these blocks shall be deemed conclusive evidence that the Safe from which it has been taken has been opened.

Resolved—That the trials be public, the admission to the testing house to be subject to the control of the Committee and to be by ticket, of which not more than 50 be issued, including those supplied to the Committee and workmen.

Resolved—That the expenses of the trials be audited by the Committee, and paid out of the challenge fund.

Resolved—That neither of the competitors shall be entitled to any compensation for damage done to his Safe during the trial.

* These drawings afterwards proved to be utterly false.—ED.

We rejected the proposition urged by the American members, that these trials should be made in private, and witnessed by the Committee and antagonists and their respective experts only. The challenge and its acceptance were public, and so should be the ordeal; the Press, as best representing the public, being admitted. We have some reason to congratulate ourselves now upon having adhered to this.

The conditions of the programme, as fixed, will be found in the minutes of the meeting of the 12th and part of those of the 13th August.⁶ These are now before the world; and all can judge of whether they are in any way specially in favour of one party more than the other, or whether they justify the audacious statement made in the joint report dated 15th August, 1867 (*see foot note, page 53*), signed by Messrs. Holmes and Pickering, though written in the first person only (and we presume by Mr. Holmes) that they looked "at the matter as a race under rules fixed on purpose to win for Mr. Chatwood." If this were a fact, why did they on Herring's part agree without dissent to those rules. Having agreed to them, with what face, either as guardians of Herring's interest, or, as professing to be gentlemen, do they afterwards hazard such a misstatement?

It will be distinctly seen, on carefully reading these conditions of the programme, that, on all sides, it was fully recognised that the mere fact of which safe might be first broken into, or from which the block of wood should be first taken, was *not alone to decide the final question of which was the better safe*, to settle which the Committee were to "employ such means as they should think best to enable them to form a correct judgment," namely, as to *which was the best on the whole*. That judgment manifestly it was, which should carry with it the challenge stakes to one or the other party. Besides this, and in addition to it, the Committee were called upon to express—not as their categorical judgment admitting of no modification or calling into question, also their collective "opinion" as to which of the two safes might be the best in certain special particulars (*see Article 4 of Agreement, page 34*). This must be something entirely different from their judgment carrying the stakes—though these opinions might be viewed as so far justificatory of that judgment.

None were clearer upon these views, before the "breaking-in" trials, than the American representatives; but from the moment those trials ended, and in the way they did, their ideas were entirely altered, as will be seen in the sequel.

We may now pass on to the day of this "breaking-in" trial, upon the morning of which the Committee met for the third time, and at the British testing-house in the Parc, where the trials took place. We shall have to recur here to some particulars until now

Resolved—1st: That the trials shall be made by the experts of each competitor operating upon his antagonist's Safe, and that not more than three operators be allowed to each competitor. 2ndly: That the competitors shall not personally interfere with their operators. 3rdly: That the challenge trials as to opening, shall commence simultaneously on both Safes, and shall be declared ended as soon as either Safe has been opened. 4thly: That no member of the Committee, nor any one else, shall direct, instruct, suggest to, or in any way interfere with the operators on either side, until one or other of the Safes has been opened, or both sets of operators have declared that they can effect nothing more.

Resolved—That after the trials as to opening above referred to, the Committee shall proceed to such further experiments or operations as they shall decide shall be necessary to enable them to form their opinions as to the several points embraced in the 4th clause of the Articles of Agreement, with a view to forming their final judgment as to the better Safe to resist burglars.

(Signed) P. DOULLIOT.

⁶ THIRD MEETING of the Committee, held at the English Testing-house, Exposition, Paris, Tuesday, August 13th, 1867, at 11 30 a.m.

Present: M. Douliot, Mr. Fairlie, Mr. Mallet, Mr. Holmes, and Mr. Pickering.

The Minutes of the last Meeting were read and confirmed.

Resolved—That an equal weight of tools be allowed to each competitor.

Upon an inspection of the tools produced by each set of operators, there appeared to be a difference in the relation between the weight of material and the purpose in some of the implements of Mr. Herring as compared with those of Mr. Chatwood, in consequence of which it was

Resolved—That Mr. Chatwood's men should be allowed to use all the tools they had produced, and that Mr. Herring's men should be allowed to use all their tools, except some of extraordinary strength and dimensions, which were rejected by the Committee as not coming under the denomination of burglars' implements.

The trials having commenced, and being in progress at 3 55 p.m., at the request of Mr. Chatwood it was

Resolved—That a sledge-hammer, which Mr. Chatwood's men had been permitted to bring in, but which they had not brought in through a mistake, be now permitted to be brought in to them by Mr. Chatwood.

Resolved—At 40 minutes past 7, to recommence on Mr. Herring's Safe to-morrow morning.

(Signed) P. DOULLIOT.

not publicly known ; the minutes of the Committee's proceedings on this day as on others, merely record resolutions, etc., but give little or no insight into other things done.

Upon arriving at the testing-house on the morning of this day, 13th August, 1867, we found that, owing to unforeseen difficulties, the competitors had not yet got their safes into position, as arranged for the trial ; and it was past one o'clock before the needful arrangements approached completion, and the actual trial did not and could not commence before 2.45 p.m.

The room occupied in the testing-house is lighted by windows, chiefly at one side only, and high above the floor ; that side was occupied by Chatwood's safe. A canvas screen was interposed between that and Herring's safe, and thus intercepted a portion of the light from those windows. Early in the day, when the safes were placed, there was ample light on both ; but as evening advanced, the light upon Herring's safe became very feeble, and insufficient to enable Chatwood's men to operate upon it to their full advantage. Had the trials commenced long before noon, as the Committee had expected, this difference of illumination would have amounted to nothing. The unexpected delays which occurred, however, and the unexpectedly prolonged resistance of both safes, threw the concluding operations, the very *crisis* of the work, into approaching twilight.

It would have been far better had the beginning of the trials been postponed entirely to the early morning of the next day, as one of us suggested. But all the spectators now already assembled were impatient, and so were the American representatives, more especially Mr. Holmes, who declared he must leave Paris within a day or two, and so postponement was overruled. The effect of this difference in illumination between the two safes between 6.30 and 7.40 (when work was stopped), was such as almost to paralyse the efforts of Chatwood's experts on Herring's safe. While the light was not only better for Herring's men engaged on Chatwood's safe, the *nature* of their work (mere wedging and sledge blows on the *outside* of the safe) admitted of its being skilfully conducted with far less light than even they had. But the construction and size of Herring's safe, with the small coffer buried inside it, was such as to render even more obscure the bad light which reached its exterior, and the work of the men upon it was wholly upon the *inside* of the outer safe ; and, in a word, in circumstances such that for the last hour the men could only direct their operations partly by imperfectly *seeing*, and partly by feeling.

Where minutes are to be weighed against each competitor, it is impossible, in anything like fairness, to neglect accidental conditions like these, which are elements, as much as the skill of the men, or the goodness of their tools, or the relative goodness of the safes themselves, in determining the totality of the time.

It remains to explain what chiefly led to this delay in commencing earlier. The two safes were in position by about 11 30, if not before, and the three experts on either side were at hand. Upon the Committee requiring to see the tools of the respective parties, it appeared that, whilst all the tools except a sledge hammer, brought by Chatwood's men, and carried in one hand of each, were contained in a portmanteau of 22 inches long, 14 inches wide, and 8 inches deep, a very small gun case, and a leather courier's bag, of a few inches in width and length, Mr. Herring's men had brought upon a *truck* two tolerably large and ponderous wood packing-cases filled with tools. The tools to be allowed to each set of experts had been the subject previously of conversation in the Committee, and it had been settled that each should be at liberty to bring any kind or sort of tools they thought proper, provided they could be viewed as burglars' appliances,—and this of course precluded any limitation as to the *number* of tools to either,—and necessarily left some small margin for latitude as to *weight* of each tool, perhaps to the range of a few pounds, the limit being obviously what a burglar could carry with any chance of avoiding detection.

The Committee, however, was wholly unprepared—or at least we were so—for so tremendous a discrepancy as to size and weight, as was here obvious, even before any of the covering cases were taken off the tools, or any knowledge was possessed by us of their contents.

Before going further, therefore, the Committee met formally, and passed the resolution, that an equal total weight of tools should be allowed to each competitor. (*See foot note, page 43.*) This was communicated to both competitors, who were then requested to bring, each their respective adepts and their tools, into two separate rooms of the testing-house. The men's names, &c., were then taken down, and they were required to produce their tools. The tools of Chatwood's men were light, small, handy, and strictly of a sort to be viewed (as required by the articles of agreement) as burglars' appliances. When the array of tools brought by Herring's men were turned out of their cases—they proved to consist in great part of ponderous boiler-makers' implements, amongst these a heavy cramp and screw, weighing probably 100 lbs., wedges of nearly a foot long and 20 or 30 lbs. weight, a steel bar of about 6 ft. long by 1½ in. square if not more, and various large and small tools; only a very minor portion of which could, by any possibility, be viewed as burglars' appliances at all. When whatever seemed at all like burglars' tools amongst these latter were selected out from the mass, under the direction of the Committee, it was urged that those alone would prove inadequate to enable the men to effect anything. On the other hand, we objected wholly to the admission of any of the ponderous boiler-makers' implements—or to anything which, although heavy, could not be construed as belonging at least to the *class* of burglars' appliances, and we were willing to overlook the difficulties to transport about the person, that such might present.

Mr. Chatwood's men's tools, the whole of which were admitted unanimously, having been weighed, Herring's men were directed now of themselves to make such a selection as they thought proper from any of those they had brought, except the great boiler-makers' cramps, screws, etc., which had been already set aside by the Committee, limiting themselves to an equal total weight with that of Chatwood's men, the amount of which was stated to them. After this selection was made, the men still declared that they required others; and it was obvious that if they must, as they affirmed, have certain very heavy flat bars prepared to form a square drilling frame to embrace the whole of Chatwood's safe, and some other ponderous apparatus they deemed equally important, that they must either remain in want of various other smaller tools they declared indispensable, or be allowed a much greater weight of tools than Chatwood's men possessed.

The American members of the Committee now interposed in their favour, and represented that as the general character or *make* of all the tools brought by Herring's men was coarser, stronger, and heavier than those of the light handy tools of Chatwood's men, it would be but fair to rescind in part the resolution come to as to equality of weight, and to allow Herring's men some additional weight, as much as, along with their selection already made, would include all the tools they deemed indispensable.

We felt that this was a point of serious difficulty with us, viewed how it might be; we were to concede not only a formal but a real mechanical advantage to Herring's men. We must either do this, however, or the trial could not then at the eleventh hour proceed, and we consented to such an addition being made to the selection already made of equal weight with Chatwood's, sufficient to enable Herring's men to include all they deemed essential, and amongst this their heavy sledge hammer and their tremendous six feet crowbar of square steel, without which, as it turned out in the sequel, they could have effected nothing.

Now one of our motives for making this concession should be explained, as it affords no bad indication of the falsehood of the assertion that we were partizans against Herring.

Had we stood by the formal resolution first come to by the Committee, without any dissentient voice, as to absolute equality in weight of tools, and that Herring's men had persevered in declining to go on without a preponderance in weight—it is obvious that by all known rules of wagering, Chatwood must then, and without more to do, have become entitled to the stakes, as having fulfilled all the conditions for trial, while his opponent failed in doing so; and that, without any further enquiry as to which of the

safer was the better or the worse. We were not prepared, however, to apply here the rules of the Turf, but to have as fair a trial and scrutiny as we could for both parties, and a just judgment; and so we consented to this which, whatever Mr. Herring's advocates may assert to the contrary, *did, in the issue, give to his men a formidable and unforeseen advantage.*

But furthermore, our concession was *abused.* The means for weighing the tools at all had to be sought for at the moment that the decision to weigh them had been made, nothing in the way of scale-beam or weighbridge existed in the testing-house, or could be readily got at in the Exhibition, except a miserable little horizontal weighing-machine, such as is used on shop counters, and not sufficient weights even for that. With this wretched instrument, all the tools had to be weighed in small draughts. It was clearly understood between us and the American members, and Mr. Hoyle who was present, that the extra weight to be allowed to Herring's men should not exceed that of three of those draughts, (two as first conceded, a third begged for afterwards and got). This ought not to have made a total addition to the previous weight of more than about 40 to 60 pounds, and such we at the time believed was the addition made.

How it was managed we do not know, but with astonishment we found, after the trial was over, that Herring's men had actually brought into the room and employed nearly *double* the weight of tools that Chatwood's men had brought in, a considerable portion of which the latter did not employ.

On consulting the list of tools on both sides, it will be seen what were the kinds, numbers, and weights of those of both sets, and which were, and which were not, actually employed by the men in their respective "breaking-in operations."⁷

These were the chief causes of the great loss of time in the forenoon of the 13th August, 1867. The delay itself was, as we have shown, disadvantageous to Chatwood, by causing want of light in the evening, and so, in the upshot, was also the main cause of this delay, viz., the disparity in tools.

7 GENERAL DIMENSIONS AND PARTICULARS OF MR. HERRING'S SAFE AND INSIDE CHEST AND TOOLS USED IN TRIAL.

Gross weight, 4110 lbs.
 Outside dimensions, height 4ft. 8½in., width 3ft., depth 2ft. 5½in.
 Clear available space inside—above coffer, height 2ft. 3in., width 2ft., depth 1ft. 4½in.
 Total inside space of coffer, height 11½in., width 1ft. 8½in., depth 8½in. (197'44 cubic in. = 1.145 cubic ft.)
 Thickness of fireproof filling, 5in.
 Cubical volume of filling, 31,785 cubic in. 18.36 cubic ft.
 Weight of fireproof filling, (1836 lbs. weight, estimated at 100lbs. per cubic foot.)

TOOLS (ACTUALLY) USED BY MR. HERRING'S MEN.

	Number.	Lbs. Weight.
Drill bars	8	90
Ditto	8	9
Chisels	57	46½
Wedges	10	8
Hammers 3, sets 2	5	14
Tongs and wrenches	13	23
Ratchet brace and crowbar	3	24
Wedges and punches	11	9
Sledge-hammer	1	18½
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	116	242*

OTHER TOOLS BROUGHT TO THE TEST-HOUSE BY MR. HERRING'S MEN, BUT REJECTED BY THE COMMITTEE.

	Number	Lbs. weight.
Wedges	2	38½
Hooks	2	6
Bar, brace, and loop	3	22
Wrench	1	22
Iron straps	2	8½
Screw jack	1	60
Screws, small tools, &c.	32	19
Wooden packingcases, &c.	2	50
	<hr/>	<hr/>
	45	226
	<hr/>	<hr/>
Total of Herring's Tools	160	468

This does not include the tools taken away on the night of the trials by Herring's men.—Ed.

The other events of the trials of this day (13th Aug.) we may here pass over. It is necessary, however, to state the truth as to one or two circumstances which have been since then publicly misrepresented. Amongst the tools brought by Chatwood's men, the only one not contained in their portmanteau or gun-case, was a sledge hammer as already stated. Mr. Chatwood himself spontaneously offered to leave this out, on the ground that it might be objected that sledge hammers were not burglars' tools, and it was at one moment intended to have been excluded.* But when Herring's men had been permitted to bring in their own far more powerful sledge hammer, which *they deemed indispensable*, justice compelled that Chatwood's sledge hammer should be admitted also, and by the unanimous permission of the Committee it was so admitted. Chatwood's men, however, either had not been clearly informed of this, or mistook what had been conceded, and entered the room without the sledge and commenced operations. They had already broken wide open the doors of Herring's first safe, cleared away all inside bare to the coffer, and were commencing to work at that, using a block tin hammer of about six pounds weight, when Mr. Chatwood remarked to us, "Herring's men are not employing burglars' tools; that's boiler breaking, and if it be allowed, why should not I be allowed to use my sledge hammer," or words to that effect. We replied "Where is the sledge? Permission was given you to bring it in." Mr. Chatwood replied "I thought otherwise." We instantly appealed to the American members as to whether this were not so, and on the moment the resolution was passed, which *records* that permission had been given and mistaken by the men, and which again gave them permission then to introduce that tool. This resolution was passed at 3 55 p.m., and the sledge at once obtained. As the operations had commenced at 2 45, Chatwood's men had been thus at the disadvantage of being deprived of this important tool for one hour and ten minutes, during nearly the last thirty minutes of which period their opponents were making good use of the sledge they possessed from the beginning.

In our judgment, had Chatwood's men possessed this sledge hammer from the commencement, it would have enabled them to have opened Herring's outer safe doors in about one-half the time they occupied in that operation, and saved some eight or ten

The above are certified as correct,

For SAMUEL CHATWOOD by E. CRIGHTON,
For SILAS C. HERRING by F. B. TAYLOR

GENERAL DIMENSIONS AND PARTICULARS OF MR. CHATWOOD'S AND TOOLS USED IN TRIAL

Gross weight, 2,913 lbs.
Outside dimensions, height 2ft 11½in., width 2ft 1½in., depth 1ft 11½in.
Clear available space inside, including drawers, height 2ft. 4½in., width 1ft. 6½in., depth 1ft. 1½in. = 4.0875 cubic feet.
Total inside space in drawers, height 4½in., width 1ft. 6½in., depth 1ft. 1½in.
Thickness of fireproof lining, 3½ inches.
Cubical volume of filling, 9341 inches.
Weight of fire-proof composition, 353 lbs.

TOOLS BROUGHT IN BY MR. CHATWOOD'S MEN

	Number.	Lbs. weight.
Drills	16	9
Punches 4, chisels 11, screws 1	16	15
Ratchet brace, hammer, and set.. ..	3	15
Screws and taps	20	5
Wedges and washers.. .. .	30	8
Files and saws	11	5½
Bars and 3 hammers.. .. .	4	22
Wrench, brace, and 2 caps.. .. .	4	7½
Steel bars in pieces	6	19
Chisels and punches.. .. .	12	6
Wedges and small tools	13	8
Hammer, lantern, and cord	3	9½
Sledge-hammer	1	15½
	148	145½†
Cases	2	12
	150	157½

The above are certified as correct by

F. B. TAYLOR, for S. C. Herring.
E. CRIGHTON, for S. Chatwood.

*The sledge hammer was not brought by Chatwood's men, but was offered to them on the morning of the trials at the Exhibition.—ED.

† About 40lbs. of the above tools of Chatwood's men were not used at all.—E. M., R. F. F.

minutes partially wasted at the moment of the above resolution, and in obtaining the sledge. It would, in fact, to the best of our belief, have been equivalent to a gain of time for Chatwood's men of about half-an-hour on the whole.

What shall be said of the truth or fair play of those who knowing well that the facts are as above, have yet, without a word in correction or contradiction, permitted the American or other papers in Herring's interest, to propagate the falsehood that the permission to Chatwood's men to introduce the sledge hammer was an afterthought and an act of favouritism towards them, and that without such act they would have been unable to open Herring's coffer at all?

Again, it has been publicly alleged that the advantage in point of men was on Chatwood's side. That the man (George Plant) who handled this sledge was a giant, and so forth. We have both spent much of our lives in workshops and in the immediate contact with and direction of men, and acquired some experience in judging nearly at a glance of their physical powers and mental characteristics. George Plant is a finely-built muscular man, a little above the middle height and weight. He had not worked for about two years, he stated to us, and he was very far from being in hard condition. He proved a good and sure striker, nothing more; we have seen hundreds of strikers as sure, and many far more powerful.

The "brain" of Chatwood's set of men was in Robert Crighton, and in him only. He lost his self-possession and his "head" somewhat and at some moments during the excitement of the trial. In respect of intelligence, the respective gangs of men were by nature, we believe, pretty equally matched.

Herman Winkler was the leading brain of Herring's gang—a fine, handsome, bright-eyed, well-set German, quicker in "insight" than Crighton, though perhaps not a better mechanic. If we are correctly informed, and, after due enquiry, we believe ourselves to be so, Winkler *did* possess one immense advantage over Crighton—namely, that while the latter knew almost nothing of the construction of Herring's safe and coffer, until first placed before him for attack, the former had been for months previously in a position to acquaint himself thoroughly with the details of internal construction of Chatwood's safe. That this was so, was in our minds most amply evident in every step of the operations of Herring's men. The very moment these came before Chatwood's safe, without hesitation, one of the men (Eric Dillon we believe, a locksmith, as we were informed) kneeled down in front of it, and pulling out of his right-hand trousers pocket a complete key, thrust it into the lock, which it fitted perfectly, but in which it would not turn. This key could not have been made, without prior and exact knowledge as to dimensions, and it is not too much to infer that by some means or other still more precise information as to Chatwood's key had been obtained. Our impression at the moment was, that this attempt to open directly by unlocking, was probably only defeated by Chatwood's having been permitted to change the lever of his lock the day before. Again, the abortive attempts, which immediately succeeded this, to wrench round the centre plug of Chatwood's door lock, and then to punch it inwards bodily by a steel "sett" and the sledge hammer; as well as the place selected for the attempts to drill, and that selected for the attempt to cut into the top rabbate of the door, so as to try to make a wedge enter there, all proved *intimate* previous knowledge of the details of construction of the safe.

This was, however, to our observation and judgment, decisively shown to be the fact at the moment when, having exhausted, and in vain, every contrivance they could think of, drilling and the attempt to tap included, upon the front door, they abandoned that altogether, and commenced their attack upon the top and left hand flank of the safe. The instant this was resolved upon by Winkler, he held a "cold sett" upright upon the top of the safe, at a particular spot, which he selected quickly but with evident care and precision, and told his helper to "strike;" the blow followed, and the cold sett at once "held" between two of the dovetails of the top corner plating. The whole of the exterior of the safe was thickly painted and varnished over; these dovetails were absolutely invisible

as to position before the trial commenced. How was it, then, that Winkler knew so exactly and instantly where to find this "joint in the harness," unless by having acquired anteriorly very precise knowledge of the structure of Chatwood's safe? And how is his doing so reconcilable with the statement circulated at the time and since by Mr. Herring's friends, that Winkler was a volunteer who offered himself to Mr. Herring on the day or so before the trial, and of whom, or of his antecedents, he knew nothing; is it credible that Mr. Herring should have risked his credit with such an unknown man? But if it be a fact that Winkler had been employed by Wertheim of Vienna, for a time in connection with his safes at the Exhibition, and that Mr. Chatwood had explained the whole of his mode of construction to Chevalier Wertheim, Winkler acting as interpreter during these interviews, and that thus Winkler had acquired the intimate knowledge he undoubtedly had of Chatwood's safe, and was on that ground accepted by Mr. Herring, then was Winkler not only a volunteer, but also morally a traitor.

As regards stature, physical strength, and endurance, the other two Germans, Dillon and Ruder, were superior in the first, and quite equal in the second and third, to George Plant. And as both those Germans could and did handle their sledge hammer as well as Winkler himself, whilst of Chatwood's gang, Plant alone was able to do so with any effect, and therefore had his physical powers unremittingly tasked, while the Germans were able to relieve each other, so we are of opinion that, physically, the advantages were really on the side of Herring's men.

In another important particular, the advantage was obviously, to every accurate observer, on the side of Herring's men, viz., in moral courage and perfect *sang froid*, and uniform self-possession. For some minutes, for example, from the moment when Crighton first saw patent before him the formidable mass of material in the front of Herring's coffer, and the inadequacy in size of the light wedges he possessed to deal with it rapidly and effectually, it was plain to any sharp observer that he became flurried, and for a few minutes lost some of his intellectual composure and power of directive thought. But no succession of failure in the slightest degree disturbed or ruffled the imperturbable Germans; not an instant was lost, nor a thought disturbed by a previous disconcerted effort—they worked on, losing not a moment from the commencement, alike unmoved by failure or success—without a change of countenance—almost without speaking to each other, until they got out the block of wood from inside Chatwood's safe, when their *sang froid* gave way in a loud hurrah. This shout was not unnaturally joined in by the Americans present, and by many others. The instant effect of these hurrahs, and of the tumult and confusion that at once irrepressibly followed, was for a time totally to disconcert and paralyse Chatwood's men. They all three instinctively dropped their work and tools; and knowing something important and adverse must have happened, ran beyond the canvas screen to see what it was. There they saw their opponents, as they supposed, triumphant and victorious, and they at once lost heart and courage, and in great part all directive thought.

They were rallied by us as quickly as possible, and told to proceed, that the extraction first of the wood block did not alone prove which safe was best, and that their task must be completed by opening Herring's coffer, and the time in doing so ascertained. But from this moment, viz., from 7 25 p.m. to 7 40 p.m., when the Committee ordered work to stop for that day, Chatwood's men did little, and really effected nothing. Between the general confusion, and crowding of persons upon them, who had in fact burst into the testing-house, their own disconcert and lost heart, and the twilight, their labour was that "of men beating the air;" and thus, in reality, this last quarter of an hour of the time (though reckoned against them) on the 13th instant was spent, but not employed.

Another point we could wish to be able to pass over in silence, but we cannot in justice to Mr. Chatwood. At 5 47 p.m. the two sets of men were stopped for rest and food until 6 33 p.m., when they resumed work. Beef sandwiches, beer, and brandy and iced water, were provided for them, and though the supply of drink was not excessive, they

were permitted to take what they pleased. The Germans returned to their work as phlegmatic and sober as before ; it was not quite so, however, with the men of Chatwood's gang. The drink they had taken, perhaps not so much from its quantity as from their state of excitement when it was taken, and along with food hastily swallowed and not undergoing digestion, produced very evident ill effects, and within a very few minutes after their return to work, Crighton's directive mind seemed very much "abroad," while George Plant's blows fell very wildly indeed to what they had done previously.

It is the inherent and inevitable vice of a contest of this kind, that the final issue depends upon two entirely different sorts of forces acting together, and only capable of separation, more or less completely, by the honest judgment and acumen of those who must judge of the whole. Which is the better of two safes thus broken into, is a product which depends upon at least two factors : the skill displayed in the safes themselves, in material and structure, and the skill and power displayed by the experts who operate upon them ; to which we must add the circumstances and conditions respectively under which these experts may act.

Are we to ignore the whole of these, and take the time alone, irrespective of anything else, as settling such a question ? Yet that is just what the two American members of the late Committee have done in discussing Chatwood's side of the question, though taking an entirely opposite line while pleading for Herring's, and which they have endeavoured to induce the other members of the Committee likewise to do.

It was inevitable, therefore, that we should, though at the expense of prolixity, state pretty fully some of the main grounds which shall enable the public to judge more correctly than they otherwise could be in a position to do, what modifications ought to be attached to the bare fact of the relative times in which the safe of Chatwood and the outer and inner safes of Herring were respectively broken into.

Work having been terminated at 7 40 on the 13th of August, the Committee met, and decided that the destruction of Herring's coffer, or inner safe, should be completed by Chatwood's men the next morning, in their presence.

We had some difficulty in getting this agreed to by the American members, who, as it appeared to us, were rather desirous of leaving incomplete, and in a state of convenient uncertainty, this final *coup de grace*. We insisted, however, that without it no comparison was possible. On arriving at the Exhibition building early the next morning, it was with surprise that one of us saw a bill appended upon the front of one of Mr. Herring's safes, in the machinery zone there, with the heading in large pencilled capital letters, "America again victorious," and publicly thus announcing to the world the falsehood that Mr. Herring was already the winner, in a contest as yet undecided, and in which even his own representatives had as yet uttered no opinion. One of us pointed this out to Mr. Pickering, and he thought proper to express his disapproval of it, but we are not aware that Mr. Herring's representatives took any active step to have this offensive placard taken down.

This was the first clear indication of the course which was thenceforth pursued by the American representatives, and has been pursued to the present hour, by all persons and by the press in the interest of Mr. Herring, namely, to ignore everything the least in favour of Chatwood—to weigh no collateral circumstances—to try to shut out from consideration everything but the bare fact that out of his safe was the block of wood got first, and upon that, and that alone, to settle that the other was the best safe.

Mr. Herring himself, it appears, was also extremely desirous that the destruction of his inner safe should remain incomplete. For it has been complained on his part publicly, that on the morning of the 14th August, when the Committee had re-assembled in the testing-house for this purpose, a card of his was handed in at the door by Mr. Herring, and having on it written a protest against anything further being done to his safe, and demanding back immediate possession of it ; that such card, having been directed to or intended for one of his own representatives, was not given to them, and it is insinuated was intercepted by us, or by our means. It so happens, however, that it was Mr. Fairlie who received this very card at the door from the British Sapper posted at it, and Mr.

Fairlie has the most distinct recollection of having himself handed the card immediately to Mr. Pickering, at the same time apologising for having looked at it at all, as it having been given Mr. Fairlie without instruction at the door, he was otherwise unable to tell for whom it was intended. This is a singular sample of veracity and exactness wherever originated.

But suppose the card had never been given his representative, what was Mr. Herring's protest worth? The safes had been, in accordance with the articles of agreement, "delivered into the custody of the Committee," for *all such* experiments as they thought necessary to make upon them. Mr. Herring had no power to control these experiments, or to demand back his safe, until the Committee declared they had done with it. His grievance is, in any case, *nil*; and the unhandsome attempt to establish it, if emanating from himself, only shows how unwilling he was that we should put to the proof, as was done on the 14th August, that *four minutes more* was enough to complete the destruction of the whole front of his coffer.

In reality, the time taken to complete this destruction by Chatwood's three men on that morning was only three minutes and a half from striking the first blow. This time was accurately observed by both of us separately, by our watches marking seconds, and so reported at once to Mr. Pickering, who noted time on his side, but who affirmed that by his observation it was five minutes. We are quite certain our time was exact and true; but the remark of one of us in reply to Mr. Pickering at the moment was, "It is a matter of no practical importance whether the time was three and a half or five minutes—you see a few blows have done the work." The American representatives then proposed that we should all agree to call the time four minutes, and we at once consented.

* * * * *

At the end of these experiments, on the 14th August, Mr. Hoyle, who had not been present, arrived as Secretary.

Mons. Douliot then handed to him his Memorandum, addressed to the other members of the Committee, which was read, translated to the Committee by Mr. Hoyle, discussed briefly, and approved of, as stated in one of the several resolutions then passed by the Committee.⁸

It was at that same time proposed by us that Mons. Douliot should himself favour the Committee with his own personal opinion in writing, after he should have received those of the American and British members.

It was distinctly understood and agreed to, that there was to be one statement of

⁸ FOURTH MEETING of the Committee, Wednesday, Aug. 14th, 1867, at the Exposition, 12 noon. Present: M. Douliot, Mr. Fairlie, Mr. Mallet, Mr. Holmes, and Mr. Pickering.

(Copy of Memorandum addressed to the Committee by M. Douliot, and handed by him to the Secretary, Aug. 14th, 1867):—

Messieurs—Jusqu'à présent vous n'avez eu à vous mettre d'accord que sur des questions de loyauté ou de coutumes nationales. J'étais certain d'avance de n'avoir chaque fois qu'à ajouter mon vote à l'unanimité des vôtres. Il me suffisait de connaître chacune de vos décisions par la traduction qui m'en était faite si obligeamment par Mons. Hoyle.

Maintenant la discussion devient tout à fait technique; j'ai besoin pour me former une opinion consciencieuse de contrôler mes propres impressions par la connaissance complète de l'avis de chacun des membres de la Commission.

Je désirerais donc, Messieurs, que chacun de vous, après avoir développé son opinion, voulût bien la résumer en quelques mots qui pourraient m'être traduits.

Cela, il est vrai, ralentira un peu la discussion, mais me permettra de remplir d'une manière sérieuse le mandat dont vous m'avez honoré.

Les prévenances dont vous m'avez entouré jusqu'à présent m'assurent que vous voudrez bien prendre ma demande en considération: et l'obligeance à laquelle Monsieur Hoyle m'a habitué me fait espérer qu'il voudra bien encore se charger du travail pénible que je me vois forcé de lui demander.

TRANSLATION.

Gentlemen,

Up to this time you have only had to agree upon questions of good faith or national usages. I was certain beforehand that I needed only each time to add my vote to the unanimity of yours. It was enough for me to know each one of your decisions by the translation which was so obligingly made to me by Mr. Hoyle.

Now the discussion becomes altogether technical, I need, in order to form a conscientious

view, or "Report" as it has been called, from each of the two American representatives, and another Report from each of the two British representatives,—four in all, each to be translated into French for Mons. Douliot. It was also clearly expressed and agreed upon that neither of these *resumés* of opinion, nor yet Mons. Douliot's own Report of his opinion to follow these, was to be viewed as anything more than a mere *proces verbal*; so many simple condensations of respective views, for the purpose of facilitating an actual report or decision of the Committee; but under no circumstances nor in any one instance to be viewed as final, binding, or as capable of being viewed or substituted for that final decision and Report of the Committee at large.

It was also as clearly and unmistakably understood that these four reports, or memoranda, to be prepared for Mons. Douliot's information were to be *technical*, confined to the *safes themselves*, and to the *examinations that had been made* of them and the *experiments conducted* with them. They were to be *confined to facts* before us respectively, and to the *deductions from these* fairly warranted. They were *not* to go into extraneous matters, *nor* to be arguments in violent language, and based upon distortions and wilful misstatements of circumstances that had been before us, addressed *not* to the *discussion of subjects* before us, but to *INFLUENCING Mons. Douliot personally*. They were *not* to seek to warp his views by vilifying, as unfair from the outset, the proceedings to which all of us had been equally consenting parties, and by ill concealed and vulgarly conceived and expressed insinuations, that unfair "dodgery" had been practised by the British representatives throughout. They were *not* to be documents trying to prejudice the feelings of the chairman against the British representatives and to cast suspicion on their actions, rather than to convince his mind as an Engineer by a calm and logical consideration of the facts.

We had no expectation, then, that what was well intended by Mons. Douliot, and

opinion, to control my own impressions by a complete knowledge of the opinion of each member of the Commission.

I should wish, therefore, Gentlemen, that each one of you, after having developed his opinion, would be good enough to express it in a few words, which could be translated to me. That, it is true, will retard somewhat the discussion, but will permit me to fulfil in a serious manner the duty with which you have honoured me.

The courtesies with which you have treated me, up to this time, assure me that you will be good enough to take my request into consideration; and the kindness to which Mr. Hoyle has accustomed me, makes me hope that he will still be good enough to undertake this duty, which I find myself obliged to ask from him.

The foregoing letter from M. Douliot, expressing his desire to have all the opinions of the other members of the Committee translated to him, that he might thereby, if necessary, modify his own opinion, was read, and the Committee expressed to M. Douliot their entire concurrence in his wish, adding that it was a course which they should have wished to pursue even without such an intimation on M. Douliot's part.

Resolved—That the following facts be ascertained, and a copy of them handed to each member of the Committee:—

- 1st. The gross weight and outside dimensions of each Safe.
- 2nd. Clear available space for valuables inside each Safe when intact.
- 3rd. Clear available fireproof space inside each Safe when intact.
- 4th. Cubic content of fireproofing material in each Safe.
- 5th. Weight of Mr. Herring's burglar-proof coffer.*
- 6th. Total weight of tools brought by each set of operators.
- 7th. Weight and description of tools allowed to each set of operators.

Resolved—That the completion of the opening of Mr. Herring's Safe be proceeded with by Mr. Chatwood's men, in the presence of the Committee only, and that the time necessary to do so be carefully noted by the Committee.

Resolved—That the time occupied in completing the opening of Mr. Herring's Safe be taken as four minutes.

Resolved—That no further experiments as to drilling are necessary, as the hard drilling-resisting materials of both Safes are not capable of being drilled with any ordinary drilling tools.

The Committee being desirous to know what further time would have been necessary to take the block out of either of the drawers in Chatwood's Safe, it was

Resolved—That they should be opened by Mr. Herring's men; but as the men could not be found,† after a delay of ten minutes, Mr. Pickering undertook to open the drawers, which he did in one minute.

(Signed) P. DOULIOT.

* We could not succeed in obtaining this weight.—E. M., E. F. F.

† Mr. Chatwood actually did find Mr. Herring's men, and communicated to them the desires of the Committee, but they refused to operate further on Chatwood's Safe.—E. M., E. F. F.

honestly carried out by ourselves, would be so grossly perverted and abused as it soon proved to be by the two American members. Knowing the state of almost utter ignorance that Mons. Douliot was in, as to almost everything that had passed, except in so far as his eyes had aided him, arising from his ignorance of English and from the circumstances of interpretation in which he was placed as already described, we hailed this proposal of his, given in the very best spirit, as the means whereby these disadvantages might in part be remedied ; by which all of us could make him acquainted with our views, and by which could best be initiated the discussion which, in Mons. Douliot's own words, was now to become wholly technical. (*Maintenant la discussion devient tout a fait technique.*) We had no idea that in the hands of the Americans it was to be made all that we have above said it ought not to be, and a good deal worse besides. Such proved to be the facts, however as the sequel will show.

On the 16th August we learned by mere chance that a *joint* report by Messrs. Holmes and Pickering had been prepared, translated by Mr. Hoyle, and transmitted at once to Mons. Douliot. We were a little surprised at this departure from what had been formally agreed to, the rather as the American members had opposed us, when we had suggested two joint reports, as saving time, in place of four separate ones, and, as Mr. Hoyle was then present, it seemed strange that he should as Secretary have himself translated, and without any prior or subsequent intimation to us, have forwarded a document in departure from what he knew had been the arrangement made ; also, that having forwarded it a day previous to Mons. Douliot, we had had no notice given us of the fact. However, not wishing to stick at minor points, we ourselves then resolved to prepare a *joint* report in place of two separate ones. We prepared this, had it translated by another party, as after what we had seen we did not choose to entrust it to Mr. Hoyle's translation, and we forwarded it to Mons. Douliot, who, on the same 16th August, arranged that the Committee should meet at his house on the evening of the 19th,⁹ for the purpose of reading and considering these two joint reports.

We met, Mons. Douliot in the chair, Mr. Hoyle present, when the joint report, or that singular document which professes to be such,¹⁰ and is signed Holmes and Pickering though written in the first person, and, we presume, by Mr. Holmes only, was read and placed on the minutes ; Mons. Douliot having the French translation by Mr. Hoyle before him, as also a large envelope with open seal on the table.

⁹ FIFTH MEETING of the Committee, held at M. Douliot's house, 2, Rue Chabrol, Grenelle, Par's, at 8 p.m., August 19th, 1867.

Present—M. Douliot, Mr. Mallet, Mr. Fairlie, Mr. Holmes, and Mr. Pickering.

The minutes of the last Meeting were read and confirmed.

The following joint report from Messrs. HOLMES and PICKERING, in the shape of a letter and proposed resolutions addressed to M. DOULIOT, and dated August 16th, 1867, was read in English, and ordered to be placed on the Minutes :—

¹⁰ MONSIEUR,

I am exceedingly pleased that you desire the candid written opinion of each member of the Committee, and with the expression of your desire to arrive at a fair honest verdict in this matter, without reference to the competitors or to nationalities, and I proceed to give you my views based on the facts developed in the trial, which from circumstances with which you are fully familiar, I have thus far been prevented from discussing with you. We have had long wordy meetings where I have had little opportunity to express to you my own views. I yet feel that I am quite as capable, from a life-experience in mechanical matters, as any of my colleagues, to lay down rules for such experiments, the strength and combination of materials, and I insist that we have not adopted the best methods for ascertaining truly the whole bearings of the question as to the relative security of the safes, and that we have by force of words and not argument, been drawn into a kind of sportman horse-race trial, where the skill and force of men were the standards rather than great engineering facts, and because such rules were adopted I shall first allude to the trial of the men and tools. I think you saw a decided and constant mental and physical superiority in the men introduced by Mr. Chatwood, and now that we have the statistics of the weight and number of the tools actually used by the men to any effect, we see that Chatwood's men had a large excess as follows:—leaving out the drills and drilling apparatus of both parties, which were not used by Chatwood's men at all, and the trial of which by Herring's men occasioned a dead loss of 57 minutes of their time, we shall have 98*pieces of tools to Herring's men, weighing in gross 119*lbs. and for Chatwood's men 118 pieces of tools and 160*lbs., a difference of 20*pieces and 41*lbs. in favour of Chatwood's men, and if the partisan feeling is to be kept up, I must insist upon these facts being placed broadly before the public, and that it is our duty to counteract the wrong impression that Herring's men have had any possible advantage, but

* These figures were corrected in the French translation given to M. Douliot.

Our joint report¹¹ was now called for (the translation being also before Mons. Douliot), and was read by one of us in English to those present, and directed to be placed on the minutes likewise.

During the conversation which ensued after the reading of these, *it eaked out*, we really cannot express it otherwise, that some other communication of some sort had been

that on the contrary, from misjudging the vulnerable points, they left themselves decidedly in need of tools, the use of which would have greatly facilitated their operations.*

Of this I believe, you, from your close, careful, and constant observation of the men, are ready to concede and assert, that from the moment of attack until the close, Mr. Chatwood's men pursued one straightforward system with constant and terrible force, as far as their tools would admit, and that without their heavy sledge, which they deliberately rejected and refused to have weighed and brought in at first, they could not by any probability have succeeded in twice the time they did. I have no manner of doubt in the matter, and I cannot conceive that any of our Committee can doubt it, but I see some are not willing to concede it.

On the other hand, Herring's men entirely mistook in their attack the weak points in the Safe they attacked, and lost full 57 minutes in drilling, which in this horse-race, we must charge to them; but in making up our minds as to the invulnerability of the Safes, we are bound to consider it as a very important element of the trial; and I am now prepared from the experience I have had thus far, to say, as an engineer, that with 60 lbs. of selected tools each allowed to two good strong skilled engineers, such Safes as Mr. Chatwood offered, can be opened any time, day or night, in two hours.

Thus, looking at the matter as a race under rules fixed on purpose to win for Chatwood, I am sure Herring has won it fairly; and there should be, in my opinion, no hesitation or delay in making a plain simple report that shall not be damaging to the general interests of either party, but that should decide the wager, and carry the money to the expenses and the Charities; for while I am willing to concede that the quality of the materials used, and the power of resisting drilling instruments are equal, I am firm and positive that the modes of construction are such, that as against wedges and crowbars, Herring's Safe is as two to one the stronger; and as against ordinary burglars' tools and time, positively invincible. The quantity of tools brought to that building by Mr. Herring's men, in the heavy cases in which they were brought, has no more to do with the matter than the relative weight of the whole tools used by the manufacturers themselves. It is a form of special pleading that does better for pettyfogging third-class lawyers, than for engineers seeking facts.

I exceedingly regret that the whole matter has been treated so much like a gambling affair, instead of being placed on the laws of mechanics; and if overruled by majorities, I can only insist that the trial be renewed by men employed by a Committee of the greatest men in the land, and that facts, and nothing but facts, be permitted to enter into the decision.

As it is, I have no disposition to urge a report that shall destroy confidence in Mr. Chatwood's Safes, or induce burglars to try them; but if little technical quibbles are to come in to try and lower the character of Mr. Herring's Safes, I must insist on a report that shall cover all the facts.

(Signed) JOSEPH E. HOLMES.
THOS. R. PICKERING.

20th August, 1867.

DRAFT of proposed Resolutions handed to M. Douliot with Holmes and Pickering's report:—

Resolved—That in the opinion of the Committee, the quality, the material and power of resisting drilling instruments are equal in the two Safes, and that under all probable circumstances they are invulnerable to the drills. Also, from the construction of the doors and locks, both Safes seem protected from attacks by gunpowder.

Resolved—That in attacks by steel wedges and crowbars, the Herring Safe offers much the greater resistance, and on this point mainly the Committee coincide and award to Mr. Silas C. Herring the merit of having produced, in their opinion, the best Safe for resisting burglars' appliances.

Resolved—That the money deposited by the parties be now distributed to meet the expenses of the trial, and to the charities to be named by Mr. Herring in Paris, in London, and in Washington, according to the terms of the contract.

(Signed) JOSEPH E. HOLMES.
THOS. R. PICKERING.

20th August, 1867.

* *It is only necessary to compare this with the list of tools duly certified for both sides: foot note page 46, 47.—R. M., R. F. F.*

¹¹ The joint Report of Messrs. Mallet and Fairlie was read, and ordered to be placed on the Minutes and the consideration of it postponed to the next meeting.

MEMORANDUM, AUGUST 17TH, 1867, BEING THE JOINT REPORT OF MESSRS. MALLET AND FAIRLIE.

In this case the Articles of Agreement require their Committee to base their final judgment as to which of the two Safes is the best, upon the widest possible consideration of their relative merits or demerits, and hence to award the Challenge Stakes, not merely or solely to that Safe which resisted the efforts of the experts to open it longest, but upon that main fact, viewed in connection with all others. Those other facts which appear most material are:—

1st. The mode in which each Safe respectively was attacked, and at what part it was broken open,—viewed in reference to the ordinary circumstances of Safes when in use.

2nd. The fact of any advantages possessed by one set of experts over the other as to tools, &c., in affecting the rate of operation of opening.

3rd. The relative goodness of the two Safes in reference to—

A. Interior space in reference to weight or mass of material.

B. The goodness of the material employed in each.

C. The skill displayed in combining and uniting these.

D. The relative goodness of workmanship.

As regards the relative time employed by the experts respectively in opening the Safes, it does

made by the American members, one or both, to Mons. Douliot. Mr. Hoyle was then asked by one of us, had he transmitted any other document from those members to Mons. Douliot, when he produced another sheet of paper which had not been seen before, nor anything heard of it, and it was then stated that, in addition to their joint report, Messrs.

not admit of dispute, that had there been found a very great disparity in the time, such disparity ought to occupy a paramount position in deciding the relative goodness, inasmuch as no other merits could counterbalance the fatal defect of any Safe that should be easily broken into. But whereas, in this case, the period of resistance of both Safes was very prolonged, and their equality in time almost complete, the small fraction of time in favour of one party cannot be viewed as properly deciding the question.

The actual times of opening were as follows. The experts began to operate on both Safes at 2 45 p.m., and, deducting 45 minutes allowed for rests for both parties, the times were as follows. The wood-block was taken out of Chatwood's Safe at 7 25; the time, therefore, was 3 hours and 55 minutes, or 235 minutes. At 7 15, the thick front plate was broken off Herring's coffer, and as the events of next morning proved, his Safe, which was at 7 20 open 2 1/2 inches along the top of the plate, enough to take out gold coin or jewellery, was even then practically entered, though the wood-block could not be withdrawn, so that thus in 230 minutes this Safe was really *hors de combat*.

However, the entire time employed upon Herring's Safe was as follows. Time up to period when front coffer was broken off, 3 hours 45 minutes or 225 minutes. The experts continued to work at the removal of the remainder of the front of coffer on the 13th August, 25 minutes. The experts resumed work at it on the morning of the 14th, and removed entirely the front of the coffer in 4 minutes. The total time from the commencement to the final destruction of Herring's Safe was, therefore, 254 minutes.

It is to be remarked, that the last 15 minutes on the 13th of August, the men worked to great disadvantage, being disheartened, impeded by the crowding which could not be prevented, and almost in the dark, so that probably quite one half of the 15 minutes was wasted: allowing, however, the entire time, without any rebate whatever, the relative times of being broken into of the two safes was as follows:—

Chatwood	235 minutes
Herring	254

so the difference in favour of Herring is only 1 12 3, or eight per cent. of the total time employed upon Chatwood's; and if Chatwood's wood block had been in his left hand drawer, or in either drawer, this small difference would have been reduced by at least one minute. While both Safes thus proved themselves really proof against burglars' appliances for several hours, and therefore both very good, the above result in difference in time alone is not sufficient to decide which of the two is the best, and were this alone to form the basis of judgment, strict justice, weighing all the facts, would at least declare it a drawn battle.

Upon the second head it is to be remarked that,

1. While Herring's Safe was fairly attacked in front, and opened in front, Chatwood's Safe proved impossible to be broken into by the front, which was abandoned, and was eventually penetrated at one flank and on the top, these being portions of Safes in use seldom or ever exposed to the operations of burglars, and in the most usual case, viz., of Safes built into masonry, quite impossible to have been reached. Had the Safe been so embedded in masonry, the drilling appliances of Herring's men could not have been employed by them.

2. The weight of tools actually brought into operation by the respective sets of experts was largely in favour of Herring, being in the proportion of

Herring's men	242lbs.
Chatwood's	157lbs.

and the entire weight nearly of Herring's tools were employed, whereas at least 40lbs. of Chatwood's were never used at all.

3. The actual work done upon both Safes was performed wholly by wedges and sledges. Through a mistake, Chatwood's men had not possession of their sledge until 3 55 p.m., or for one hour and ten minutes of the four hours thirty minutes they were at work. There was also a serious disparity in the weight of the sledges employed, viz:—

Chatwood's	15'75.
Herring's	18'80.

or in the rates of 1 1 1/6.

Assuming, which was apparently the fact, that the strikers gave equal velocities to the sledges, and that these were at impact, about 80 feet per second in both cases, then the energy of the two sledges would be proportionate to

$$80^2 \times 1 = 6400 \quad ; \quad 80^2 \times 1 \cdot 16 = 7424 \text{ or an advantage to Herring's men of about one-sixth against}$$

Chatwood's.

A further and serious disparity existed in the fact that Herring's leading workman having been for some time in Wertheim's employ, to show his safes at Paris, had become intimately acquainted with Chatwood's Safe, and knew instantly where to find every joint.

It should also be remarked that serious errors in dimensions and omissions of parts, on the working drawings handed in by Mr. Herring of his own Safe, were discovered by the Committee after the destruction of the Coffers, and that these errors were of a character calculated directly to mislead Mr. Chatwood and his men as to the resistance of the same. Mr. Chatwood's drawings on the contrary, proved to be honest and correct representations of his Safe.

Arriving now at the relative goodness of the two Safes in relation to

A. Interior space accommodation for valuables afforded in relation to the weight of material employed for their protection.

Deducting from both Safes the weight of all fireproof composition, etc., we have the nett available interior spaces made burglar proof as follows:—

In Chatwood's Safe	2,559 lbs.
Available space (the whole)	40,875 cubic feet.

Herring's Safe, assuming the 1 3/8 cubic feet of fireproof composition to weigh 1836 lbs. nett weight, equals 2,274 lbs.; available space (coffer only) 1'145 cubic feet. The ratio therefore of weight (which is also a measure of costliness) to useful result, viz., available space, is

$$\text{Chatwood } \frac{2559}{409} = 625 \cdot 6$$

$$\text{Herring } \frac{2274}{1145} = 1985 \cdot 5$$

Holmes and Pickering had transmitted to Mr. Hoyle, a draft of certain *resolutions* (see foot note 10, page 54) to be proposed by Mons. Douliot for the acceptance of the Committee, and that Mr. Hoyle had translated these also, and enclosed his translation with the joint report to Mons. Douliot.

We observed that the transmission of such resolutions, or of anything but the report, was unauthorised, and that we viewed the resolutions themselves as an unwarrantable attempt to prejudge and guide the decision of the Chairman and the Committee, as well as in their substance objectionable; and we demanded of Mr. Hoyle to explain how it was that he came to deem himself justified with his knowledge of all the circumstances, in translating and forwarding them; and how it was that, having done so, he had now kept silence as to their very existence, while reading the report along with which they had been sent to Mons. Douliot.

To these questions we received highly unsatisfactory replies, amounting to nothing. Our suspicions were now aroused, we noticed before Mons. Douliot other documents in the handwriting of Mr. Hoyle. Mr. Fairlie pointed to these and asked what they were, but was informed they had no relation with the Safe question,—they were private. He persisted, however, in inquiring whether Mr. Hoyle had other business with Mons. Douliot, to necessitate his writing to him, as the writing he saw before Mons. Douliot was evidently Mr. Hoyle's. We had an evasive reply. We then demanded to be informed distinctly whether any other documents besides the report and these resolutions which we had just discovered had been forwarded to Mons. Douliot? With hesitation, it was then admitted that a letter from Mr. Holmes individually had been addressed to Mons. Douliot,¹² dated the same day (19 Aug.), and had been also translated by Mr. Hoyle, and transmitted in French. We demanded that this letter should be produced and read to us, when Mr. Hoyle produced the original in English, and read it.

We now felt that the positions of ourselves and of the American members of the Committee had altered very much. We insisted upon having several statements made or questions put through Mr. Hoyle to the chairman, who from his having no knowledge of the English language, sat in total ignorance probably of all that had been going on before him. Mr. Hoyle, who had a good deal lost temper, finally refused to put what we de-

Chatwood's Safe gives a figure of value as compared with Herring's of 1985 025, or in round numbers, as 3 to 1. Or in point of accommodation as compared with weight, bulk, and cost, Chatwood's Safe is three times as good as Herring's.

On the head B, the material of Chatwood's Safe, taken as a whole, is much superior to Herring's; the former has no cast iron in its inner or outer casings, much more and better applied steel enters into its fabric.

Under the heads C. & D. it is only necessary for us as practical engineers to express our opinion, that whilst some faults may be found with certain details of construction in both Safes, there is one decisive defect in design in Mr. Herring's Safe, which ought not to be passed without notice, viz, the construction of his outer doors in two leaves, with a meeting joint in the centre, in place of in one leaf as in Chatwood's. Such two-leaved doors are extremely weak, and now admitted as bad by nearly all Safe makers.

There is less room for unfavourable criticism in the case of Chatwood than in that of Herring. Mr. Herring's coffer, which in fact is really the only strong part of his Safe, presents several points in our judgment highly unmechanical and objectionable. Of these we will only notice here the facility for wedging due to the artificial construction of the door of the case and that of the coffer.

Into the construction relatively of the locks of either, we do not enter further than to state that numerical commutation locks are liable to one serious objection. Mr. Chatwood's safes are not thus constructed.

It is to be remarked, that the front doors of Herring's Safe required before being broken open, 29 minutes from commencement. Mr. Herring proposed himself at first to have left these doors open, and trusted only to his coffer as being the burglar-proof part of his safe, but he afterwards rescinded this intention. Had these doors been left open, the events show that Herring's Coffers would have been penetrated before Chatwood's Safe.

Upon a review, then, of all the facts of the case, we are of opinion, that *Mr. Chatwood's is the best Safe*, and that Mr. Chatwood is justly entitled to the Challenge Stakes.

(Signed)

ROBERT F. FAIRLIE,
ROBERT MALLET.

Paris,
19th August, 1867.

¹² Resolved—That a certified English translation of the letter of M. Douliot to the Committee, received on August 14th, 1867, and referred to in the Minutes of that day's meeting, be entered on the Minutes of this meeting.

Resolved—That a letter from Mr. Holmes to M. Douliot, dated August 19th, 1867, and a proposition attached thereto, which have been read in English, be placed upon the Minutes of this meeting as follows:—

sired, and we then announced our intention to address the chairman direct, and that if the American members chose, they could have Mr. Hoyle to interpret for them. Mr. Mallet then explained to Mons. Douliot that we viewed as highly improper those unauthorised documents addressed to him, and requested him to state whether he had received any other document beyond the *three* we had already got possession of, from either or both of the American members.

Mons. Douliot at once said,—Yes, that he had received a *fourth* document, the translation of which (also by Mr. Hoyle)¹³ he produced from the large envelope before him. This turned out to be from Mr. Holmes (Mr. Pickering acknowledging his privity to it), and to consist of his propositions to the chairman as to how he (Mr. Holmes) would like to cut up and divide the money of the stakes!

A proposition, figuring out in monies numbered, for the consideration of the chairman, how the amount of the stakes were to be divided—while, as yet, the winner was undecided—while, as yet, even the discussion, much less the final vote as to who ought to be the winner, had not occurred, nor the chairman's own views been uttered—a proposition which, with a vulgarity worthy of the entire conception, holds before the chairman's eyes, at the head of the list of projected personal payments, his own "honorarium," and which characteristically ends with the excellently "smart" and *well-devised hint to the chairman as to who he ought to view as the winner*, by awarding 400 francs only to Herring's three experts, but 500 francs to Chatwood's three men—the difference being a considerable *consolatum* to the latter as being of the losing party. It was not worth our while to ask Mr. Hoyle, did he deem *this* precious document as also sanctioned by the arrange-

Paris, Aug. 19th, 1867.

MONSIEUR DOULIOT,

My Dear Sir,—I am extremely anxious that our decision in relation to the quality of the two Safes shall be just to the two competitors, and such that we ourselves shall, as engineers, and not as partisans, be proud to make and sustain before the world; and if there is any doubt or scruples as to the relative capacity of the two Safes to resist steel wedges and crowbars, or, in combination with them, steel screws, we should certainly go on with the trial till we have no doubt. For if we publish to the world that Mr. Chatwood's Safe was opened by such appliances in 2 hours and 57 minutes, while it took the same number of men, with a greater number of and an equal weight of tools, 4 hours and 14 minutes to open Mr. Herring's Safe, it will take a large amount of special pleading on very false issues to make the public believe that Mr. Herring has not offered the best Safe to resist such appliances, since they were named and adopted as rules for the trial. And I propose and insist, and I appeal to your good judgment and fairness, that if Mr. Chatwood and his representatives have any doubt as to the right of Mr. Herring to a verdict in his favour that shall carry the distribution of the money deposited by Mr. Chatwood to the expenses of the trial and to the charities, that we proceed within three weeks to open opposite sides of the same Safes, by two workmen from your shop, to work first for 25 minutes on Herring's Safe with 120lbs. of tools, to be prepared and arranged under Messrs. Mallet and Fairlie, and the work prosecuted under their direction and supervision. The workmen then, after resting five minutes, to work on Chatwood's Safe with the same weight of tools, to be furnished and the labour done under the direction of myself and Mr. Pickering, you of course witnessing all, and directing the men to work with the same energy and force in either case, and the work to be thus alternated for 25 minutes, with five minutes' rest, till both Safes have been so opened that a block 10 inches square can be readily passed through each Safe from outside to outside.

Such a trial as I now propose cannot fail to settle the matter by undisputed facts, and the tools used can be made strictly burglars' tools. A 4-pound steel hammer and a 12-pound hammer will be sufficient in either case for the blows, and the noise very much restricted. I hope, Monsieur, you will favour this further test, if you have any doubt as to the sufficiency of the late trial. Mr. Herring lost much in the former trial by taking the castors from under his Safe, which would have been a great trouble to burglars.

Please accept my high regards,

20th August, 1867.

JOSEPH E. HOLMES.

¹³ Proposition accompanying the foregoing letter.

	Francs.
Then I propose paying 100l. to each of the Charities.. ..	7,500
To the President for his services	1,000
To the Secretary	600
To Mr. Mallet	1,250
To Mr. Fairlie	1,250
To Mr. Pickering	1,250
To Mr. Holmes	1,250
To the Men employed on Mr. Herring's side	400
To the Men employed on Mr. Chatwood's side.. .. .	500
	<hr/>
	F.15,000

I am equally willing, if the Committee think it fair or just, to order the whole to charities, leaving each competitor to settle any bills they have made, or feel called upon to pay.

(Signed)

J. E. HOLMES.

20th August, 1867.

ments he had heard made on the 14th August, for reports of a nature "*tout a fait technique*!"

Mr. Mallet did, however, after this last astounding revelation, request of Mons. Douliot categorically to state whether these four documents were the whole, or whether he had received besides these any other communications in writing since the 14th inst., to which Mons. Douliot replied, that these four were the whole he had received.

We freely expressed in English our opinion as to these documents, and we at once penned a resolution in English condemnatory of them, which we requested Mr. Hoyle to translate and propose to Mons. Douliot, or if not that one of us would translate it to him.

We only do Mons. Douliot justice by recording that he seemed fully alive to the impropriety of these documents which had been sent him, and painfully sensible of the unpleasant and anomalous position in which, without his having the power to avoid it, he had been placed by these unwarrantable acts of the American members and of the Secretary.

He distinctly agreed with the opinion we expressed, that the letter and propositions of the 19th of August by Mr. Holmes ought not to have been written; but with the good nature which generally characterises Frenchmen, he wished the resolution of condemnation which we had penned, softened as much as possible, and if so softened, he avowed his own intention to vote for it if put. Seeing that a record of the impropriety and evil aim of these documents, by any resolution, in fact depended upon Mons. Douliot's own casting voice, we gave way, altered the draft resolution, omitting in it any notice of Messrs. Holmes and Pickering's "resolutions," the "secret article" forwarded with their joint report, and confined ourselves to the form in which the resolution was then passed by the votes of Mons. Douliot and ourselves. It records that Mr. Holmes' communications of the 19th August *ought not to have been sent to Mons. Douliot*.¹⁴

Mr. Fairlie, before this was passed, openly expressed to the Committee his feeling that we, as the British representatives, could no longer act, and ought to retire; and he actually proposed on the instant to Mr. Mallet that we should withdraw, as it was quite impossible, after what had transpired, for us to know what *verbal* communications might have been made to the chairman; and that, in any case, honour had been violated, good faith broken, and that confidence was gone; and with these, our personal respect for the American members.

Mr. Mallet, however, urged that we had better take a night to consider so serious a step, and one that must involve grave consequences to others concerned. We accordingly remained, while it was proposed and arranged that an adjourned meeting of the Committee should be held on the next evening at 7 30, also at Mons. Douliot's house, for the purpose of hearing his own report, which we understood him to say he had already in preparation.

A useless and unnecessary letter, addressed by Mr. Chatwood to the Committee, dated 17th August, was also read, and ordered to be placed on the minutes.¹⁵ We had

¹⁴ Resolved—That the letter and propositions of Mr. Holmes, dated the 19th of August, ought not to have been sent to M. Douliot.

¹⁵ A letter from Mr. Chatwood to M. Douliot (*the Committee*), dated 17th of August, was handed in by the Chairman, read and ordered to be placed on the Minutes.

[COPY.]

Stand, Grande Porte,
Exposition, Paris, 17 Août, 1867.

Messieurs,

J'ai l'honneur par la présente de protester contre l'injustice des essais de coffres-forts, pour les raisons suivantes: 1° Qu'étant tenu par les conditions de mon engagement de n'employer que des "appareils à l'usage des voleurs," je ne me suis procuré que strictement les outils employés par les voleurs, et que mes ouvriers ont emportés dans la chambre de manière à n'être pas remarqués, et même sans qu'on puisse se douter de rien; tandis qu'on permit aux ouvriers de mon rival d'apporter des outils qu'aucun voleur ne pourrait transporter ou employer sans être observé.

2° Qu'étant informé par le Comité que les ouvriers de mon rival ne devraient employer que le même poids d'outillage que les miens j'ai laissé de côté le marteau de forgeron, tandis qu'en violation directe de cette résolution les ouvriers de mon rival apportèrent un poids d'outils beaucoup plus considérable que le mien, y comprenant un marteau de forgeron, burins de chaudronnier, et de forts coins.

3° Que les dessins fournis par mon rival étaient complètement faux, et calculées de manière à cacher la véritable force de résistance de la petite caisse contenue dans le grand coffre de mon rival.

4° Qu'un des ouvriers employé par mon rival à été pendant les 4 mois qui ont précédé les essais instruit sur les principes de construction de mon coffre-fort, ayant en qualité de représentant du

had no previous knowledge of it. It will be understood how much the American members felt pressed for a defence of their conduct, when it is stated that they endeavoured to make out that this letter from Chatwood to the Committee was as bad as their communications to the Chairman. We had only to point out that, however needless in substance, Mr. Chatwood had the proper capacity to address any number of letters he chose to the Committee at large, that there was nothing liable to the charge of impropriety in his letter, and that it bore no resemblance to the sort of communications the American members had addressed to the chairman privily and in violation of agreements.

On the ensuing morning we held a conference, and found that in the interval we had both come to the same conclusion, namely, that it was our duty to retire from the Committee; on the grounds that the chairman's inability to speak or comprehend English, coupled with the biassed way in which statements had been laid before him, had all along operated unfairly and in favour of one side—that, nevertheless, while honour or good faith appeared to remain, it was our duty to abide by the result, whatever that might be, and by care and patience in our final discussions, to endeavour to set what we believed to be true forward, and controvert what we deemed otherwise; but that as soon as it was evident that the line adopted by Mr. Herring's representatives was entirely different, that, losing sight wholly of their proper character as unimpassioned and upright judges, they had condescended, like hired advocates, and by inexcusable methods, to act upon the personal feelings, and to mislead if possible the judgment of the chairman, upon whose casting vote they calculated the decision would finally depend, that then forbearance on our parts must end, and that our duty, both to Mr. Chatwood and to our own characters, imperatively required that we should retire, and wash our hands of further participation in proceedings which throughout had been tainted by unfair dealing, but from which that quality now seemed to have entirely departed.

We could not avoid the conviction that whilst before the trials of the 13th August, none were so loud as the American members in affirming the principle (in which we fully con-

Chevalier Wertheim de Vienne obtenu par des procédés inqualifiables la permission d'examiner plusieurs fois mes dessins, coupes, serrures, et verrous, tandis qu'on ne permit pas à mes ouvriers d'examiner le coffre de mon rival ni de voir ses dessins.

5° Que les ouvriers de mon rival n'ayant pu réussir avec aucun outillage de voleur à ouvrir la porte de mon coffre-fort, on leur permit de déchirer le côté d'une manière tout à fait impraticable par des voleurs.

Je réclame la décision du Jury, me basant sur le principe que mon coffre-fort est le meilleur dans ses moyens pour résister à l'outillage des voleurs, ce qui était la question adressée pour la décision.

Veillez agréer, Messieurs, l'assurance de ma considération très distinguée.

(Signed)

SAMUEL CHATWOOD,

Safe and Lock Engineer.

August 30th, 1867.

(Mr. Chatwood's Copy.)

Stand, Grand Porte,
Exposition, Paris, 17th August, 1867.

Gentlemen,

I beg, hereby, to protest against the unfairness of the Safe Trials, for the following reasons:—

1st.—Being bound by the terms of the agreement only to employ "Burglars' appliances," I only procured "such tools strictly as burglars could use," and which my workmen openly carried into the Testing House in such a manner as not to be remarked, or even suspected, whilst my opponent's men were allowed to bring tools which could neither be carried nor used without immediate detection.

2ndly.—Having been informed by the committee that my opponent's workmen would not be allowed to use a greater weight of tools than my own, I left out a small sledge hammer; whilst, in direct violation of this resolution, and without my knowledge or consent, my opponent's workmen actually did bring in a much greater weight of tools, and with them a massive sledge hammer, cold steel sets, and powerful wedges.

3rdly.—That the drawings furnished by my opponent were entirely false, and arranged so as to conceal the real resisting strength of the small box contained in his large challenge Safe.

4thly.—That one of his workmen, as representative of Chevalier Wertheim, of Vienna, was thoroughly instructed in the principles of the construction of my Safe; the permission to examine which on several occasions as well as my drawings, sections, locks, and bolts, having been obtained by unqualifiable means, whilst my workmen were neither permitted to examine his Safe or drawings.

5thly.—That his workmen, being unable to open the door of my safe with burglars' appliances, were allowed to wrench off its side in a manner totally impracticable to burglars.

I claim the verdict of the Jury, on the principle that my Safe is, by its construction, the best calculated to resist burglars' appliances, this being the question left for the decision of the Committee.

Kindly accept, Gentlemen, the assurance of my very distinguished consideration.

(Signed)

SAMUEL CHATWOOD,

Safe and Lock Engineer.

M. Douliot was requested to hand in his written opinion for the consideration of the Committee at their next meeting.

(Signed)

P. DOULIOT

curred) that the mere getting out first the wood block from one or other safe, was not alone to decide which was best; from the moment that the block was got out first from Chatwood's, they uniformly acted upon the opposite principle and spoke in the directly contrary sense, and made as though this, and this alone, was decisive; and so far as we could observe, endeavoured to impress the same view on Mons. Douliot.

We, therefore, sent for Mr. Chatwood, informed him generally of the state of circumstances, and announced to him that we intended to retire from the Committee at the meeting to be held that evening (20th August). We then drew up in writing our formal resignation. At 7 30 same evening, we again met the Committee at Mons. Douliot's house. Mons. Douliot in the chair, and Mr. Hoyle present.

As we had resolved to retire, it was necessary before our doing so, that we should secure access thereafter for both Herring and Chatwood, to all minutes and documents relating to the Committee's proceedings; and for the protection of our own characters and as evidence of the sufficient ground for our retirement, it was requisite that we should identify and initial the several originals of the documents the subjects of the preceding night's debate. We, therefore, after the last meeting's minutes had been read and confirmed, got these documents produced, and initialed them, and had a formal resolution passed, that all documents, etc., should be accessible, etc.¹⁶

We then, prior to the Committee commencing any other business, announced our intention to retire, and read aloud our formal resignation.

[COPY OF MEMORANDUM OF RESIGNATION OF THE ENGLISH MEMBERS READ AND HANDED
IN AT THIS MEETING.]

The English Members of the Committee have now the disagreeable duty of making a communication which gives them much pain, but which every consideration of justice and honour renders imperative upon them.

They have joined the other members of the Committee to-day, for the purpose alone of seeing that the report of their last meeting shall have been correctly and fully entered in the Minute-book, and of having such arrangements made as shall secure to both Mr. Herring and Mr. Chatwood full and free access to the Minutes and to all other documents brought before the Committee. They have further now to formally state that, in their opinion, several circumstances have occurred during the progress of the proceedings of the Committee, and especially upon the occasion of their last meeting, which are inconsistent with fair dealing. That they therefore decline to act further as members of the Committee, along with others who have vitiated its proceedings: that they regard any further action of members of the Committee, if taken, as null and void; and that they protest against any arbitrament, if proposed on the part of the chairman, after the communications which have been addressed to him by members of the Committee.

The foregoing is initialed by Messrs. Mallet and Fairlie, and dated 20th Aug., 1867.

Mons. Douliot then demanded to know what was proceeding, and our resignation was verbally translated for him by Mr. Hoyle. We then requested Mr. Hoyle to repeat in French in equivalent terms our expression of undiminished respect for Mons. Douliot personally and as our chairman, that our retirement was not influenced by any want of confidence in his own honour, but by the conduct adopted towards him by Mr. Herring's representatives and the Secretary, which we believed had deprived him of much necessary to his being able to form a full, exact, and just opinion. This Mr. Hoyle refused to do; but he did translate a sentence or two, which he requested should be first written for him, to somewhat the like effect, but omitting any allusion to Mr. Herring's representatives and to himself; that is to say, omitting the very point which we were the most desirous of communicating to Mons. Douliot.

¹⁶SIXTH AND LAST MEETING OF THE COMMITTEE held at the house of M. Douliot, Paris, 7 30 p.m. August 20th, 1867.

Present: M. Douliot, Messrs. Mallet, Fairlie, Holmes, and Pickering.

The Minutes of the last meeting were read and confirmed.

Resolved—That the Minutes of the Committee, and all the documents relating to its past proceedings in the Secretary's hands, be accessible to both Mr. Herring and Mr. Chatwood henceforth, and also to all members of the Committee. These documents are—

1st: The signed articles of agreement.

2nd: Letter from M. Douliot to the Committee, received August 14th, 1867.

3rd: Messrs. Holmes and Pickering's letter and resolutions attached, dated August 15th, 1867.

4th: Mr. Holmes's letter and proposition of the 19th August, 1867.

5th: Mr. Chatwood's letter to the Chairman.*

6th: Messrs. Mallet and Fairlie's joint Report.

* Mr. Chatwood's letter was addressed to the Committee, not to the Chairman, though so entered by Mr. Hoyle.—R. M., R. F. F.

Directly after the reading of our resignation, several remarks of a character more or less offensive were uttered; amongst others the American members charged us with "springing a trap upon them, as soon as we knew that the chairman's vote would be against us." We replied, "If there be any 'trap' in question, you have spread it beneath your own feet, and by your own conduct. We have not heard M. Douliot's report, we know nothing of its nature, and we have no certain preconception of what opinion he has formed. Had you not diverged into your unwarrantable line of conduct, it would alike have been our duty and our necessity to have bowed to his opinion when once finally formed whatever it might be, as it appears that his must be the casting vote, and until the events of yesterday we had been prepared to do so; but now we refuse to act further with you in any way, and therefore we must decline to hear the chairman's report."*

While this was going on, M. Douliot wrote out, and handed to the Secretary as for the Committee, the protest, by which, in his own words, he declares how imperfectly he had comprehended what had gone on around him.

Copy of Memorandum of Resignation, handed to the Committee by M. Douliot, Aug. 20th, 1867:—
 J's demande qu'il soit constaté qu'à la séance d'hier voyant une discussion animée à laquelle mon ignorance de la langue anglaise me laissait complètement étranger, j'ai demandé inutilement que la nature de cette discussion me fût communiquée, et j'ai en même temps demandé qu'on acceptât ma démission de membre du Comité par la considération de mon impuissance à suivre des discussions où je me trouvais mêlé à mon insu.

(Signed)

P. DOULIOT.

TRANSLATION.

I request that it may be stated that at the meeting of yesterday, seeing an animated discussion was going on to which my ignorance of the English language made me a complete stranger, I requested in vain that the nature of the discussion might be communicated to me, and at the said time I requested that my resignation as a member of the committee should be accepted because of my incapability of following the discussions, with which I was nevertheless mixed up.

(Signed)

P. DOULIOT.

Je refuse de signer le procès-verbal ci-dessus. [I refuse to sign the above minutes.]—P. DOULIOT. †

Having read this, he formally declared that he now resigned his position as chairman, and as a member of the Committee.

Mr. Hoyle almost directly said, "then the Committee no longer exists, it is dissolved and at an end, by the resignation of three of its members, and I tender my resignation as Secretary also." He added some words of doubtful but offensive meaning, having reference to us, insinuating that his respect for his own character, &c., precluded his continuing to act where a line of conduct such as had been adopted there were pursued, or to that effect.

This led to a warm reply from us, and gave occasion to our directly taxing Mr. Hoyle to his face with his own unfair and biassed conduct throughout his Secretaryship.

One of us added that it was not our wish that one word of what we deliberately then uttered with respect to Mr. Hoyle should ever be heard out of that room; that nothing short of necessity should compel us to repeat to others what we had now said directly to himself.

The vindication of our own proceedings in this affair is alone a sufficient warrant for our doing so, but Mr. Hoyle has only himself to blame for the necessity having arisen of our giving one more proof of his biassed conduct, and one conclusive example of the degree of credence due to his statements in this affair.

In the *Cosmopolitan*, a paper published in London, in American interests, an article was shown to us headed "The great international safe controversy," written in the direct interests of Mr. Herring, if not actually by himself, professing to record and to comment on the circumstances of the "Safes' Challenge."

* We have here sufficiently corrected a single, but serious mistake made by the "Daily Telegraph" in its otherwise good account of the Trial of the 18th August, viz., that the English members retired because they knew the casting vote of the Chairman would be against them. As stated, we neither knew nor were by any means clear until after its appearance which way the Chairman's opinion would go, and whichever way it might tend was no ground for our retirement, the motives for which were simply what we have recorded. This mistake of an excellent English Journal has been converted into a calumny since by the American prints in Herring's interest.—R. M., R. F. F.

† Mons. Douliot having resigned could do no other.

End of Proceedings of the Committee.

What follows refers to occurrences after the dissolution of the Committee, Aug. 20th, 1867.

Of this article it is enough for us to affirm, that it would be scarcely possible more audaciously to substitute falsehood for truth, than is done in it throughout, by the omission and perversion of facts and otherwise. The writer of the article finally backs up his misstatements by quoting from a letter, which he alleged to be from "one of the official witnesses, an English engineer connected with one of the most celebrated foundries in England."

This letter, dated 31st August, 1867, is, if not a fabrication, manifestly, of Mr. Hoyle's writing. In it he declares he has read the draft article of the writer's account as above referred to, and certifies that *it is a true statement of the facts as they came under his notice*. Let anyone compare this *Cosmopolitan* statement of facts with this our own account, and then decide what Mr. Hoyle's testimonial of veracity is worth here. But he proceeds further; the exact words are curious, for they seem to indicate that this letter was really addressed in reply to Mr. Herring, and by *him* sent to the *Cosmopolitan*, along with the draft of the pretended editorial article, *prepared by Mr. Herring himself*, and returned to him by Mr. Hoyle with his endorsement, all ready cut and dry for printing.

"When I undertook the office of Secretary, I knew nothing of your safe or yourself . . . and could have no bias any way; but I was disgusted at the partisan spirit shown by Mr. Chatwood and his representatives, and I am ashamed for my country's credit [virtuous individual] to say, that I felt they were not seeking a trial of the merits of the safe, but to gain a victory for Chatwood at any risks; and I therefore, as I think honestly, tried to see fair play done as much as I could.

"To S. C. Herring, Esq."

No Signature.

We adopt this letter unhesitatingly as Mr. Hoyle's writing,* because, having written to him twice,¹⁷ giving him the opportunity of disavowing it, and received no reply; and having, on the second occasion, informed him, that we should treat the letter as his, in case we had no reply, we are now entitled to do so.

"*Qui s'excuse s'accuse*," says the French proverb. How is it Mr. Hoyle feels called upon to plead for his own conduct before Mr. Herring, and before it had been impeached? Towns that dread a siege sometimes try to avert danger by an anticipatory sally. But Mr. Hoyle's prudently intended attack upon us comes somewhat late; let us remind Mr.

* *The article here alluded to was freely distributed in the Exhibition with Mr. Herring's signature appended as his own production, having the letter signed by W. J. Hoyle.—Ed.*

¹⁷ *Copy.*

W. J. HOYLE, ESQ.,
44, Chorlton Street, Portland Road,
Manchester,
Secretary, late Safes Committee.

London, September, 1867.

SIR,—Our attention having been directed to a letter printed in the "*Cosmopolitan*," London paper, of the 7th September instant, page 451, dated Manchester, 31st August, 1867, in an article on the late "*Safes Contest*," Paris, which, though printed without signature, contains internal evidence of professing to have been addressed by you to Mr. Silas C. Herring, we have to request the favour of your informing us whether you acknowledge this letter to be in your writing, whether the whole of it be printed as above, and if not, whether the suppressed parts in any way modify the sense to be taken from the portion that has been printed. Your early reply will oblige,

Your obedient Servants, •
(Signed) ROBERT MALLETT.
ROBERT F. FAIRLIE.

Copy.

W. J. HOYLE, ESQ.,
Whitworth Gun Annexe,
Champ de Mars, Paris,
Secretary, late Safes Committee of Paris Exhibition.

4th October, 1867.

SIR,—We have again to draw your attention to our letter addressed to you on the 19th ulto., requesting to be informed as to the correctness and authorship of a letter attributed to you and printed in the "*Cosmopolitan*" paper of the 7th September last. We are as yet without a reply or even acknowledgment of our communication to you. Should we not receive in course of post an explicit reply to ours of the 19th ulto., we beg to apprise you that we shall view your silence as an admission of your authorship and authentication of the letter as above attributed to you.

We are, Sir,
Truly yours,
(Signed) ROBERT MALLETT.
ROBERT F. FAIRLIE.

Hoyle of Mr. Fairlie's indignant charge of officious unfairness made against him on the very second day that this Committee met, when his American friends, standing by, had not one word to say in his behalf or defence; neither had they at the closing scene of the 20th August last. Mr. Hoyle knew nothing, he says, of Mr. Herring, or his safes, when he undertook the office of Secretary. Possibly, but will he undertake to prove he knew nothing previously of either of the American representatives, and had no commercial relations or expectations, direct or indirect, connected with either of them? If so, how came they to propose him, and urge him upon us as Secretary?

M. Douliot then rose and left the chair, and Mr. Mallet having once more and in his own words, assured M. Douliot that no want of personal respect for him, was mixed with the motives of our retirement, we took our departure, leaving all the others assembled. What took place afterwards we have no means of knowing. If any confirmation however were needed of the reality and of the completed fact of M. Douliot's resignation, it may be found in the words bearing his signature, at the end of the minutes of proceedings of the meeting of the 20th of August, written, we presume, by him on that evening after our departure.

"I refuse to sign the above minutes.—P. DOULIOT."

It is not our intention in this statement to say one word in further justification of our opinion as recorded in our joint report to M. Douliot, that Chatwood's was, and is, the best safe; and that entitled to the challenge stakes. Nor do we wish to say one word in disparagement of Herring's safe, although we could point out many things in that safe of a very condemnatory character, both absolute and comparative. We are content to sustain our opinion simply upon our joint report as above. All the reports are now before the public, both ours, those of Mr. Herring's representatives, and that which professes to have been made by M. Douliot since his resignation, and to which we are now about to refer. It is nothing to us, pecuniarily or otherwise, which is the better or worse safe; for ourselves, we only regret we have had the loss of precious time and the labour imposed upon us, of vindicating our own proceedings, by this statement once for all, from the interested misrepresentations of Mr. Herring's interest, as a consequence of ever having had anything to do with this safes' contest. But we ask all honest, unprejudiced, fair-judging men, to simply compare our joint report, which all will admit is temperate, logical, and deals fairly with and in several respects even understates the facts, and sticks to these, with that of Messrs. Holmes and Pickering, and with Mons. Douliot's *posthumous* and gratuitous production, and form their own opinions, as to *who ought to have had* the challenge stakes, which we apprehend the overreaching and unscrupulous eagerness of Mr. Herring's representatives, and of their nominated Secretary, have now prevented belonging to either of the competitors.

We must now revert to Mons. Douliot and proceedings subsequent to our and to his and Mr. Hoyle's resignation on the 20th August.

We were surprised by receiving a letter from Mr. Hoyle, dated 9th September, 1867, enclosing copy of one to himself from Mons. Douliot,¹⁸ in which he, at the suggestion, as it would seem, of Mr. Pickering, declares his desire to rejoin the English and American engi-

¹⁸ 44, Chorlton Street, Portland Street,
Manchester, September 9th, 1867.

ROBERT MALLET, Esq.

Dear Sir,—Enclosed I send you a copy of a letter received by me this morning from M. Douliot; I am sending a similar copy to each Member of the Committee, and shall be glad to have your instructions as to what reply you wish to make to it.

Yours obediently,

W. J. HOYLE,

Secretary.

Paris, le 6 Septembre, 1867.

MONSIEUR HOYLE,

J'ai vu hier Monsieur Pickering, qui m'a prévenu que vous aviez quitté Paris ainsi que tous les autres membres du Comité.

Il m'a demandé ce que je comptais faire. Je lui ai répondu que nommé arbitre par les deux parties je ne puis donner mon avis que sur leur demande collective. Je suis prêt à me joindre aux ingénieurs Anglais et Américains si cette réunion est possible.

neers, "si cette réunion est possible," and wishes to know from us, "how we propose to terminate this delicate affair, and if a reunion of the Committee, more or less near, be possible." In case the English engineers decline such reunion, then Mons. Douliot "will not think himself competent to produce his report, except upon demand in writing, signed by Chatwood and Herring," &c.

We replied briefly to Mr. Hoyle that we declined to depart from the course of action given in our memorandum of 20th August, read on our resignation to the Committee, or to alter the protest therein contained.¹⁹

Upon the 19th September, 1867, we received a further communication direct from Mons. Douliot, in which, renouncing his previous resignation as above, he informs us that having had many applications from Mr. Herring to declare his opinion, &c., he summons us to meet him at his house at seven o'clock on the evening of the approaching 25th September, for the purpose of receiving his report, and that, should we decline, or not be present, he will then and there produce and read it to those members of the Committee who shall then be present.²⁰ To this letter Mr. Mallet replied for us

Dans ce cas je désire ne formuler mon opinion qu'après que ces messieurs se seront mis d'accord sur les frais de l'expertise, afin de trancher d'une manière complète l'incident qui a été cause de la rupture et mettre ma loyauté dans cette affaire à l'abri de toute atteinte. Dans le cas où le concours des ingénieurs Anglais ne serait pas possible, je ne crois pouvoir déposer mon rapport que sur une demande écrite signée par Mons. Chatwood et par Mons. Herring, dans laquelle ces messieurs fixeront collectivement ma part d'honoraires.

Par esprit de conciliation j'ai promis à Mons. Pickering de vous exposer mes idées et de vous prier de demander en mon nom à MM. Mallet et Fairlie de quelle manière ils comptent terminer cette délicate affaire et si une réunion plus ou moins prochaine du Comité est possible. Je désire en effet dégager complètement ma responsabilité des difficultés qui entravent la solution de ce fâcheux débat.

Veuillez donc je vous prie me pardonner le dérangement que je vous cause et agréer avec mes remerciements l'assurance de ma considération la plus distinguée.

(Signed)

P. DOULIOT.
2, Rue de Chabrol, Grenelle, Paris.

[TRANSLATION.]

Paris, 6th September, 1867.

MR. HOYLE,

I saw Mr. Pickering yesterday, and learnt from him that you, as also the other members of the Committee, had left Paris.

He asked what I had determined on doing. I replied that, having been named umpire by the two parties, I could only give my opinion at their collective request.

I am willing to join the English and American engineers, if it is possible to have a meeting.

In this case I do not wish to give my opinion until these gentlemen have come to an agreement about the expenses of the report, so as to determine positively what was the cause of the rupture, and put my fair dealing in this affair beyond all question. If the English engineers will not agree to this, I do not see how I can give in my report otherwise than at a written request made to me, and signed collectively by Mr. Chatwood and by Mr. Herring, fixing, at the same time, the amount of my fees.

In a spirit of conciliation I promised Mr. Pickering to give you my views, and to beg you, in my name, to ask Messieurs Mallet and Fairlie how they proposed to terminate this delicate affair, and if a meeting of the Committee at an early or later date could be possibly arranged. I desire, in fact, to divest myself of the responsibility for the difficulties brought about in the solution of this unfortunate dispute.

I trust, therefore, you will pardon the trouble I am giving you, and accept, with my thanks, the assurance of my most distinguished consideration.

(Signed)

P. DOULIOT,
(2, Rue de Chabrol, Grenelle, Paris.)

Copy.

¹⁹ W. J. HOYLE, ESQ.,
44, Choriton Street, Portland Street,
Manchester,
Secretary, late Safes Committee.

London, September 19th, 1867.

SIR,—In reply to yours of the 9th inst., enclosing copy of a communication to you from Mons. Douliot, dated Paris, 6th inst.

We decline to depart from the course of action given in our memorandum read, and dated 20th August last, upon resigning further connexion with the Committee of the Safes Challenge, or to alter the protest therein contained.

We are, Sir,

Your obedient Servants,
(Signed) ROBERT MALLET,
ROBERT F. FAIRLIE.

²⁰ Paris, 19 Septembre, 1867.

Monsieur ROBERT MALLET,
Ingénieur Civil de Londres.

J'ai reçu de M. Herring, à plusieurs reprises, l'invitation de déclarer mon opinion sur le résultat des épreuves faites sur les Coffres-fortes de M. Chatwood et de M. Herring, et de remplir ainsi la mission dont j'ai été chargé.

both.²¹ Referring Mons. Douliot to our reply sent through Mr. Hoyle to his former letter, we pointed out clearly, that for Mons. Douliot thus to re-assume, without any authority, his functions which had wholly ceased, in place of freeing him from his imaginary responsibility which could have no real existence since his resignation, must as it appeared to us, engage him in new and compromising responsibilities of a grave character personal to himself.

Notwithstanding Mons. Douliot's declaration in his first letter that he believes himself justified in producing his report "only on a joint demand of both Chatwood and Herring," and notwithstanding our clear reminder as above that his functions had ceased, and that it was not competent for him to reconstitute himself chairman and convoke again a Committee which had ceased to exist, and for the purpose of producing a report, the original intention of which was merely, that it was to be an aid to a discussion which now could never take place, but was necessary before any part of it could be accepted a decisive. In the face of all this, and of the obvious fact that, assuming it for the instant to have any validity at all, the circumstances of its production now necessarily altered the character of any report of opinion (*proces verbal*) Mons. Douliot could write, and converted it into the factitious semblance of a final report of the Committee; it nevertheless appears that Mons. Douliot did, on the night of the 25th September last, 1867 meet the two American representatives, and in their presence only (for if we are rightly

J'ai déjà eu l'honneur de vous faire demander par M. Hoyle si vous étiez disposé à vous joindre de nouveau à la commission et comment vous compliez terminer cette affaire. Depuis le 6 de ce mois je n'ai reçu aucune réponse, j'ai donc l'honneur de vous convoquer directement pour le 29 Septembre prochain, chez moi, rue de Chabrol 2 à Grenelle-Paris, à sept heures du soir, afin d'entendre la lecture de mon avis motivé. Dans le cas où cette date ne vous conviendrait pas, veuillez m'en donner avis par lettre, car si la réunion n'était pas complète à la date ci-dessus, à huit heures du soir je suis décidé à passer outre et à remettre mon rapport aux membres présents. J'ai hâte en effet de terminer cette affaire et de dégager ma responsabilité qu'un plus long retard pourrait compromettre.

Veillez agréer, Monsieur,
L'assurance de ma considération la plus distinguée.
P. DOULIOT.

[TRANSLATION.]

Paris, 19 September, 1867.

Monsieur ROBERT MALLETT,
Civil Engineer of London.

I have several times been requested by Mr. Herring to declare my opinion of the result of the trials made on Mr. Chatwood's and Mr. Herring's Safes, and thus carry out the mission confided to me.

I have already begged Mr. Hoyle to inquire of you if you were willing to rejoin the commission and how you reckoned to finish this affair. Not having received any reply since the 6th of this month, I beg to give you a positive appointment for 25th September next, at my residence, 2 Rue Chabrol Grenelle, Paris, at seven o'clock p.m., to hear my studied opinion read over. If this date does not suit you, be kind enough to let me know in writing; for if the meeting be not complete in its members, I have come to the determination to pass over the absent parties and present my report to the members who may be present. In fact, I am anxious to finish this business and get rid of a responsibility which a longer delay may compromise.

Accept, Sir, the assurance of my most distinguished consideration.

(Signed)

P. DOULIOT.

²¹ Reply.

Hotel du Louvre, Paris,
22nd September, 1867

Monsieur DOULIOT,
Engineer, Rue de Chabrol, 2, Grenelle, Paris.

Dear Sir,—Your favour of the 19th inst., directed to London, has only just reached me. I perceive by it that you have not yet received (through Mr. Hoyle) the reply of Mr. Fairlie and myself to your previous communication of the 6th instant.

To that reply I beg to refer you, and venture to suggest that, before adopting the course you now indicate, you should peruse it. All responsibility on your part was ended by your resignation as Chairman of the "Safes Committee."

To reassume, without any authority, your functions which then ceased, must, as it appears to me, engage you in new and compromising responsibilities, of a grave character, personal to yourself.

I write without being able to communicate with my colleague, Mr. Fairlie, but I feel certain these are also his views, and on both our parts I beg to refer you again to our reply to yours of the 6th, sent through Mr. Hoyle. I have only to add, that I am informed Mr. Chatwood has already arranged for your being forthwith paid your claim against him for your services in relation to the late Safes Challenge Committee.

I am, dear Sir,

Faithfully yours,
ROBT. MALLETT.

informed even Mr. Hoyle was not present), then and there presented his so-called report. The minutes of proceedings of this conclave have been obtained by Mr. Chatwood from Mr. Hoyle, as well as those of the subsequent one, held on the 4th October instant (1867), in which will also be found a copy and translations of this so-called report of Mons. Douliot.

We do not wish to make any remarks upon these retractions and proceedings; we are unwilling to presume anything unworthy upon Mons. Douliot's part, or calculated to diminish the respect we continued to entertain for him in every way up to the 20th August last. His subsequent proceedings appear to us simply inexplicable, upon any sure information yet before us; their aspect is however very unsatisfactory.

His so-called report, that is to say, his own opinion according to the statements made to him, and the impressions of his own senses derived during the course of events as to the safes, is now before the public. Those who are competent, can separate the large amount of immaterial, and some irrelevant matter contained in that singular document, so late and out of due time come to the birth, and then if they possess adequate information as to the actual details of both safes, and in view of the *whole* of the facts, as here given, they can decide for themselves whether our conclusion or that of Mons. Douliot be *technically* the more correct. We must not omit, however, to draw the attention of those interested to the circumstances that Mons. Douliot avoids giving any consideration to the relative mass of material and capacity of the two safes, or to the weight of tools actually employed by the two sets of experts respectively. That in some instances his statements are gravely mistaken as to matters of fact, and in three or more very material instances overstate the truth as to matters of fact, and that generally the tendency of his remarks in comparing the two safes, does not appear to us free from an anxiety to press his arguments in favour of Mr. Herring, at whose desire, as it seems, they have been produced now or at all.

It is remarkable, too, that this report of Mons. Douliot's, which under no circumstances ought to have been other than a *resumé* of his own opinion, addressed to the Committee (had it still existed) and for their consideration, bears in its whole style and character the aspect of a final and authoritative report as if from the Committee at large.

This is a usurpation which seems to us neither impartial nor excusable. However, let others dissect these reports, it is neither wish nor part of ours to do so.

Upon the conclave meeting on 25 Sept., 1867, it was directed, it appears, that Mons. Douliot's report "*should be adapted in substance as the Report of the Committee,*" i.e., of the late chairman and the two American members then present.

A report, as we are credibly informed, was drawn up by Mr. Pickering, and Mr. Hoyle, professedly in accordance with this, and a copy in print of this, certified by Mr. Hoyle as correct, contained in the "*News of the Week for Americans,*" a paper printed in English at Paris, is before us. On comparing this so-called "official report," thus produced, it will be seen that it is not even in accordance with the *substance* of Mons. Douliot's own so-called report. That whatever it was possible to add force to statements or to introduce them, favourable to Herring's safe, this has been done, and wherever it was practicable to attenuate or omit those favourable to Chatwood's, such changes have been made. Mons. Douliot has probably not been made aware of this. This consistently carries out to the end the line of conduct which we have had painfully and with reluctance to trace, step by step, throughout this lengthened statement.

To give better stamp of currency we presume to this which we cannot call other than an *imitation of an official report* calculated to deceive, which, under the circumstances, could not be produced or have existence, the article in the "*News of the Week for Americans,*" of the 14th October, 1867, which professes to print this, ingeniously commences with a falsehood, by the employment of our names.

"At last this great contest has reached a termination by the decision of the jury, which we now produce. This jury, as is well known, IS composed of Messrs. Robert Mallet and Robert F. Fairlie," &c.

With this opening the signatures at the foot, of course, do not agree ; but *five names* were needed, to maintain the fictitious semblance of the Committee of five, and so besides those of Douliot, Holmes, and Pickering, *two other names in place of ours* are interpolated and thus the *five names* required to give the false appearance of the Report's being that of the Committee is kept up. This is news for Americans with a vengeance ; in England it will be discounted at its proper and its moral value.

What is equally remarkable, these names do not agree with those given at the foot of a professed copy of the same so-called official report, printed in *L'Exposition Populaire Illustrée*, 29th November, published at Paris, and distributed at the Exhibition, in which Mr. Hoyle's name figures also, before those of MM. Cheysson and Beckwith, who here are made in some unknown official character the two lay figures to represent ourselves in relation to this Safe Contest.

(Signed)

ROBERT MALLET, C.E.

ROBERT F. FAIRLIE, C.E.

Dated Paris, November, 1867.

MR. CHATWOOD AND THE SAFES CONTEST.

The *Daily Telegraph* of January 4, 1868, contains the following letter from Mr. S. Chatwood :

TO THE EDITOR OF THE DAILY TELEGRAPH.

Sir,—May I crave a portion of your valuable space to reply to a letter from Mr. Silas C. Herring, of New York, which appeared in your columns some time since. Respect for Messrs. Mallet and Fairlie, the English engineers who had gratuitously given their valuable time as the English members of the Safe-testing Committee, and who had not published their reasons for withdrawing from the Committee, prevented my earlier answering Mr. Herring. The joint report being now published, I consider myself free to state the facts connected with this trial of an important branch of British manufacture versus American. In the early part of June last a challenge appeared on Herring's safe in Paris, which challenge was to expire on June 15. None of our safemakers had then accepted it.

I felt the credit of Lancashire to be at stake. I therefore at once went over to Paris, and on June 5 accepted the challenge ; but I limited my acceptance to the safe on which the challenge appeared, " now exhibited in the Exhibition Building in the Champ de Mars," to which, on the 8th of June, Mr. Herring replied : " I am prepared to offer my burglar-proof safe, now on exhibition, for competition with yours." So much for Mr. Herring's statement that the safe he meant was not the one on exhibition at all, but one he had left at Havre. He did tell me that a safe had been damaged and left at the seaport mentioned, but that it was an inferior one ; and in his letter of the 15th June he very obligingly offers to supply it for the test instead of the one on exhibition, but assigns as his reason, " the Imperial Commissioners having positively forbidden that any article be taken from the Exposition prior to October 31," and makes no mention at all of what in his letter to you he declares to be a fact, that he had expected to test it against mine. I replied on the 18th June : " Having accepted your challenge, I must call upon you to abide the issue." In reply, Mr. Herring, on the 21st., writes, " So far as regards the test of the safes in the Exposition, I am perfectly willing so to do, but am advised by the United States Commissioner-General that such trial will not be permitted, and for that reason I proposed to furnish my safe now at Havre."

It will at once be apparent that the safe to be tested was the one on which the challenge appeared, and neither the one at Havre nor yet the small chest inside the safe on exhibition : " That whereas the said Silas C. Herring is an exhibitor of safes in the Exposition at Paris, and had, on the 5th day of June, on one of the safes exhibited by

him, a certain challenge, dated May 15, 1867, * * * setting forth that he, the said Silas C. Herring, was willing to submit the said safe to a test against any other safe then exhibited by any other person; and whereas the said S. Chatwood is also an exhibitor of safes, and did, on the 15th day of May aforementioned, exhibit in Class 65 a certain safe, which he, the said S. Chatwood, is willing to submit to a test against the aforementioned safe of Silas C. Herring." This is an extract from our original agreement. This chest inside the challenge safe, so far from itself being the challenge safe, as alleged by Mr. Herring, was never mentioned by him in the correspondence at all, and was only attempted to be smuggled into the agreement in a draft submitted to me by Mr. Herring, who then stated that he intended to leave the large safe open, and allow the chest to be operated upon as the test safe, alleging that the large safe was not fitted with Yale's Combination Lock, but that the small chest was. I at once told him that, however willing I might be to meet him afterwards with any other safe, for the present I had accepted the safe on which the challenge appeared and no other. I had no intimation from Mr. Herring that he intended to substitute this small chest for the challenge safe, at the bottom of which it was imbedded, until a few days before the meeting of the Committee, when Mr. Herring posted on the front of his challenge safe a notice that "the small inside chest was only to be operated upon during trials." I at once called the attention of Messrs. Holmes and Pickering, the American members of the Committee to this fact, stating to them that the agreement was plain enough as to which safe the challenge appeared on. It is quite clear that neither of the principals in this contest expected the other to open two safes. I insisted that the safe I had to open was the one on which the challenge appeared. Mr. Herring insisted that it was not that at all, but the chest inside; but neither intended that both should be opened, nor had the Committee the slightest authority to compel me to open both, except by deducting the time expended upon one from the total time occupied in opening both; so that, although somewhat less than 100lbs. of tools were employed in opening both Herring's safe and chest, the time occupied in the first was only 29 minutes, and in the second 210 (excluding 15 minutes lost by my men during the rush and excitement), and this without the slightest knowledge of the construction of Herring's safe or chest on my part or on the part of my men: whereas Herring's men, with 242lbs. of "boiler-makers' implements of full size" (which could never be used by burglars at all), and with the most intimate knowledge of my safe in all its details, obtained by working drawings, sections, and repeated detailed examination by the foreman of the gang, who, acting as an interpreter between myself and his employer, a Viennese safe manufacturer, had obtained the most minute information as early as April last,—occupied 235 minutes, and completely failed to open the door, only succeeding in battering a hole in its side, after literally taking the side to pieces by the use of massive "cold setts" and the heavy sledge hammer, together with the free use of an immense tempered steel crowbar over six feet long and one and a quarter square in thickness. Mr. Herring asserts that my safe was half an inch thicker than any on exhibition, and was, in fact, specially made for testing, &c., &c. In answer to this I beg to state that the Chatwood trial safe was, from before the 1st April, openly exhibited, and left unlocked day and night at my stand adjoining the American court, and was there fully explained repeatedly to "Winkler," the foreman of Mr. Herring's experts, who had at all times after the 1st April free access to it, as well as to my working drawings, sections, details, &c. The statement that my safe was made for testing is so far from the truth that it was not even made for exhibition at all, but was one of the first four safes made under my patent, and, as the consecutive number of the safe shows, was commenced in the early part of 1865, and was only sent to the Exhibition to fill up a gap, owing to my allotment of space having been increased at the last moment, time not allowing me to make one with my latest improvements: so that it was not even a fair sample of my ordinary third-class bankers' safe. As to Mr. Herring's statement respecting the extra half inch in thickness, I simply deny it, and the safe is extant to speak for itself. To his assertion that the question of the quality and character of tools actually employed was a matter of no moment, I must point out that I had in the corre-

spondence and in the agreement distinctly insisted that nothing but burglars' appliances should be admissible, and had carried this so far that I would not permit my own workmen to bring from home tools of any kind or number but such as they could carry through the streets of London at midnight unobserved, nor of a more formidable character than was actually used at the Cornhill robbery in 1865 ; and had Mr. Herring been compelled to use on my safe only the tools I had selected for operating on his, he could not have injured it in the slightest degree. I ought to state here that after examining my tools the Committee passed a resolution "That an equal weight of tools be allowed to each competitor," of which I was informed ; but, on Mr. Herring's men positively stating that, unless they might be allowed an advantage, they could not open my safe, the Committee, without consulting me, allowed Herring to take into the test house and use considerably more than double the weight of tools which had been allowed to me. My workmen opened the challenge safe proper in 29 minutes, and the whole of the drawers, shelves, and partitions were thrown out upon the floor of the testing house, and with tools which were not of the kind my men would have prepared had they known that they would be compelled to open a second safe, so small that it would scarcely hold a man's hat, and so placed at the bottom of the challenge safe that it could not well be got at. Yet this second safe or coffer was opened in 210 minutes, and would have been opened without the small sledge hammer, which my men used after they had opened the challenge safe, but in a little longer time, as, not considering a sledge hammer a burglar's tool, I had not allowed tools to be prepared suitable to be used with it.

I am, Sir, yours faithfully,

SAMUEL CHATWOOD,

Bankers' Safe and Lock Engineer.

Lancashire Safe and Lock Works, Bolton, Jan. 2, 1868.

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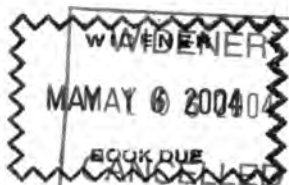


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