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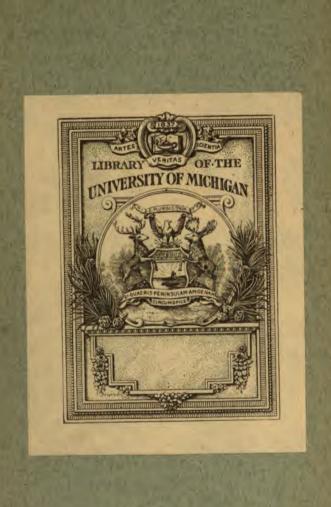
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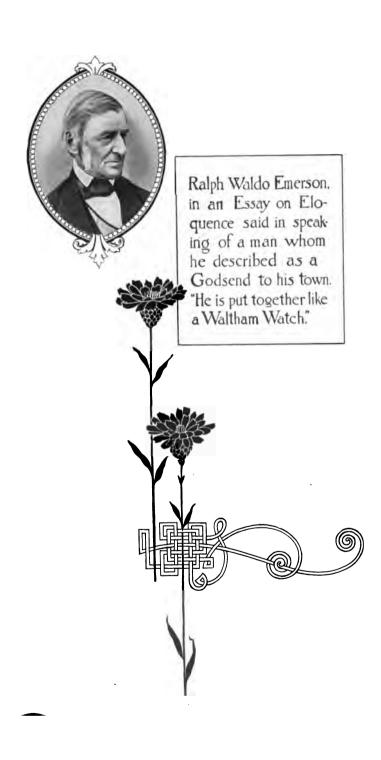
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Astronomical Observatory TS 549 W24 .

j. J





Waltham walch communing

The Perfected American Watch.

9





American Waltham Watch Company, Waltham, Mass.





inspection was first adopted during recent years. Introduced by a wise foresight, it has been gradually extended to almost every railroad in the United States and Canada. This safeguard for the traveling public was made possible by the construction of Waltham railroad watches, from which indeed, it was the logical result. The American Waltham Watch Company was the first to manufacture an 18 size full

plate movement. For a quarter of a century this Company has made watch movements expressly designed for railroad use, and more than twenty years ago

Waltham watches were selected by the British Government as the official timekeepers on the state railways in India.

Successive improvements

in manufac-WALTHAM ways ena-AMERICAN WATCH to produce pocket time-



turing at have albled the WALTHAM COMPANY the best pieces.

The Waltham watch not only was the first, but was, and is, the finest railroad

watch.

The Vanguard is the highest quality Vanguard 18 size Waltham movement. It was introduced in 1804 and immediately became the foremost watch for railroad It is the best 18 size movement one can buy. Descriptions of the Van-GUARD, CRESCENT STREET, APPLETON, TRACY & Co. and RIVERSIDE 18 size will be found on succeeding pages. All of these movements are made in Van-GUARD model. This model has many points of superiority. Important among them are the following:

FIRST. Its solidity and strength. Solidity While the frame of the ordinary moveof this Model. ment is composed of seven parts, the

Vanguard model frame has but four parts. In this model separate pillars are dispensed with, the top plate and





its support being in one piece.

SECOND. The location and protected condition of the balance wheel, which is placed farther from the mainspring than in ordinary full plate movement and accordingly is less liable to polarization that might accrue from a slight degree of magnetism in the mainspring. The value of this improvement will be apparent when it is considered that should the balance wheel, which in a quick train watch normally vibrates 18,000 times per hour, make but ten vibrations more or ten vibrations less, per hour, the watch will have gained or lost forty-eight seconds per day.

Double Roller Escapement.

Location of Balance Wheel.

THIRD. The use of the double roller, whereby escapement friction is reduced.

Manner of Securing Jewel Pin. FOURTH. The manner of securing the jewel pin in the impulse roller.

Tempered Steel Safety Barrel. FIFTH. The improved tempered steel safety barrel, which secures the train of the watch against dangers otherwise likely to result from breakage of the mainspring, and also allows the use of

an extra wide and long mainspring, which gives the watch more than.

forty hours' run. This barrel may be taken out without removing the bal ance.

All Waltham railroad movements are fitted with the WALTHAM patent Breguet hairspring. This spring Patent Breguet is hardened and tempered in form—not a flat spring merely bent into shape. It is not to be found on any other make of watches in the world.

The finish of the steel parts, damaskeening of the plates, and other features of ornamentation are consistent with the excellent timekeeping qualities of these movements. Hunting are lever- Hunting Movements

setting; open face are either pendant-setting or leversetting, as may be desired. Watch manufacturers in both America and Europe recog-

are Lever Setting.

nize the advantages of the pendant- Open Face either setting watch over the lever-setting, in Pendant Setting or open-face. Every high class foreign watch is pendant-setting. The convenience of a device that enables one to set the hands without opening the case, is evident. Especially is this true of watches with screw front cases. point of utility, the pendant-setting open-face watch is to the leversetting as the low, pneumatic tire bicycle, of recent manufacture, is to the high wheel machine of former years, or

Lever Setting.

as the stem-winding watch is to the key-winding. It should be borne in mind, however, that this Company supplies lever-setting open-face watch movements for those who prefer them.

American Waltham Watch Company
Waltham, Mass.

Fac-simile.

INSPECTING ENGINEER'S FORM

Epjty to be addressed to,—
The Director-General of Stores,
India Office,
Westminister,
S. W.

India Office,
Westminster, S. W.
3 *- January 1880

I am directed by the Secretary of State for India in Council to acquaint you that your Tender of the date and for the articles mentioned below has been this day accepted, subject to the Conditions and Specification on which you tendered.

Your claim must be preferred in duplicate on the forms provided by this office, and you are requested to quote on them the date of this letter and the following reference, 2/4.3%.

I request that you will acknowledge the receipt of this letter, and that you will not commence the work until you have received full instructions from the Inspecting Engineer

I am

Your obedient Servant.

The American Watch 6:

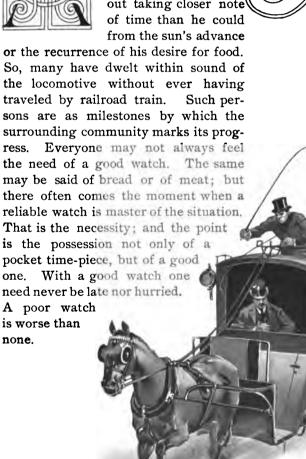
Director-General of Stores.

Date of Tender	Nature of Articles	For what Service	Rate Fach	Gross Amount
2 2 Dec. 6 , morrhis by letters of 4 4 822 adec. 187.	372 Guards' Vatches with Spar part	Indian State Railways	3.3.6.	1/81.2.0.





GOOD watch is a necessity of civilization. Many a man has lived to a ripe old age without taking closer note of time than he could from the sun's advance



The order of our daily doings is regulated by the little monitor that tells

the moments. It may be accurate when we are

not, but it is seldom wrong without misleading. A poor watch is dear at any price; a good one is worth its A reliable watch is a cost splendid investment. It gives better return and depreciates less in proportion than any other article of personal wear or use. Like the human heart, it works unremittingly. If treated with common care and cleaned as occasion requires. it will, excepting accidents, outlive its wearer. Though the case be thinner at the end of twenty years than it was when new, the movement, if originally good, will be as vigorous and exact as the day it left the factory. Moreover. it never goes out of vogue. How much is an overcoat that cost you \$40 worth after five years' wear, compared with a watch that cost the same?

We are speaking now about the Waltham watch, and to the person who is not carrying one. Eight million people have them. To such the watches have told their own story. Fifty years ago all watches were made in Europe, chiefly in Switzerland.







Then a watch was a costly possession. In 1854 the business of the AMERICAN WATCH COMPANY OF WALTHAM, MASS., was organized, the corporate name being subsequently changed to AMERICAN WALTHAM WATCH COMPANY. Company has ever since enjoyed uninterrupted progress in the application of sound horological principles, in the use of the best devised automatic machinery. and in the services of the highest skilled artisans This combination of advantages has produced the finest pocket timepieces in the world. The manufacture of watches at Waltham was begun and has continued upon lines wholly different from those of the Swiss, departing radically from the latter in practice as well as in theory. the principle that the simplest means of producing a given result are best, the designers of the first Waltham watch discarded all parts not essential to correct timekeeping, and thus they not only simplified methods of manufacturing, but reduced the liability to breakage and consequent cost of repairs when the watches had gone into use.

Quite as important, if not so fundamental, has been the systematic watchmaking first practiced

at WALTHAM

and



amplified to its present extent by successive improvements. Before the AMERICAN WATCH COMPANY was founded there was no factory in the world in which an entire watch movement was By the old way the plates made. were fashioned in one place, the wheels in another, the dials elsewhere. These and other parts-all made by scattered and disconnected labor - were finally fitted and assembled. It was soon shown that machinery, by its precise and uniform operations, provided better watches at less cost. Furthermore, most of the machine-made parts-plates, wheels, pinions, etc.-by their uniformity were interchangeable. Dealers were thus enabled to carry materials in stock, so as to supply them readily when required. A record of the size and grade of each Waltham watch movement is kept by the Company, whereby jewelers may at any time obtain duplicate parts by simply quoting the movement number, whatever the date of its manufacture. Therefore, the first grand results at Waltham were simplicity and economy of construction: exactness and durability of the watches produced; convenience and minimum expense of repairs.

Waltham watches earned for Americans the title of watchmakers to the

world. They have always triumphed at the great international expositions wherever exhibited—London. Melbourne, Sydney, Philadelphia, Chicago, -because they have always been After nearly half a centhe best. tury of progressive achievements, the AMERICAN WALTHAM WATCH COMPANY stands further ahead of all competitors in the quality and volume of its product than ever before. You do not wander in the field of doubt when you buy a WALTHAM watch. The dealer who sells it may go out of business, but the AMERICAN WALTHAM WATCH COMPANY stands sponsor, guaranteeing the movement to be made of the best materials and upon the most approved principles. For any defect in material or performance under fair usage, the Company holds itself responsible, not for a year nor for a decade, but always. How many other articles of merchandise are protected by such a guarantee?

To fill the widely ranging demands in all countries, the AMERICAN WALTHAM WATCH COMPANY makes six sizes and more than fifty grades of watch movements. The choice of size is largely a matter of individual taste, but some grades are particle ularly adaptive.

cations.

ted to certain vo-

Modern Automatic Screw-making Machine.



The First Railroad
Watch.

conducted under the management of experienced watchmakers with the same degree of system that prevails in any other department of these corporations. Their trainmen are required to carry watches of determined jeweling and adjustments, which must be regularly submitted to an authorized inspector for examination. It is well so. On lines employing the inspection service, the percentage of accidents arising from the use of faulty timepieces has been minimized. Doubtless such a safeguard will be adopted on all railroads within a few years.

The manufacture of "railroad watches," to speak colloquially, began with the CRESCENT STREET. This was for years the highest grade of 18 size Waltham watch. Later came the Appleton, Tracy & Co.; Riverside;



cover a good timekeeper? Occasionally a person buys a watch as an investment, upon which he might at some time wish to realize, and argues that as gold is always salable, the case should bear the burden of the cost. That is a fallacy. Gold wears in inverse ratio, a watch movement

Grestent St.

Hanguard, MalthamMass

Marthan MAR

ATPLETON, Tracy & Co

in direct ratio to its fineness. Although it is best that the case should be of a quality suitable to the movement, the purpose of a watch is to tell the time. If you intended to build a house, you would first choose the site. When selecting a watch begin with a movement that is constructed to run with lasting regu-And do not suppose that the number of jewels in a watch movement is the sole indication of its value. movement manufacturers use rubies and sapphires to overcome friction of The American Waltham the pivots. WATCH COMPANY uses rubies, sapphires and diamonds for this purpose.

But jewels alone do not make a firstclass watch. It is the successful cooperation of about 150 precisely made Simply the law of cause and There is no mystery about a watch, and as public recognition of this fact grew, the sale of high-priced Swiss watches declined. To engrave plainly each watch movement with an established trade mark, which the dealer may indicate and the customer observe; to back up that trade mark with a responsible guarantee against any defect in material or construction, is a policy not common among European watch manufacturers. It is an American idea -an original Waltham idea. That is





one of the many reasons why Waltham watches are preferred.

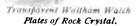
The AMERICAN WALTHAM WATCH COMPANY manufactures what are technically called "Named" and "Name-The "Named" less" movements. movements bear one of the Company's trade marks such VANGUARD. as RIVERSIDE MAXIMUS, ROYAL, etc., and may be so recognized. The "Nameless" are marked simply with the name and address of the Company. Although the grades in these are distinguished by the jeweling and finish,

they are not so readily identified as the "Named," except by watchmakers. Your jeweler will give you full inforabout them. mation is said here will concern the "Named"

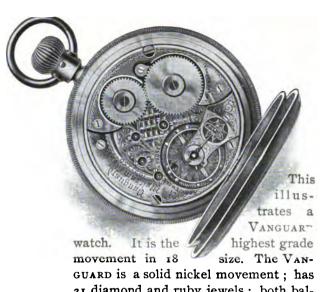








watches only.

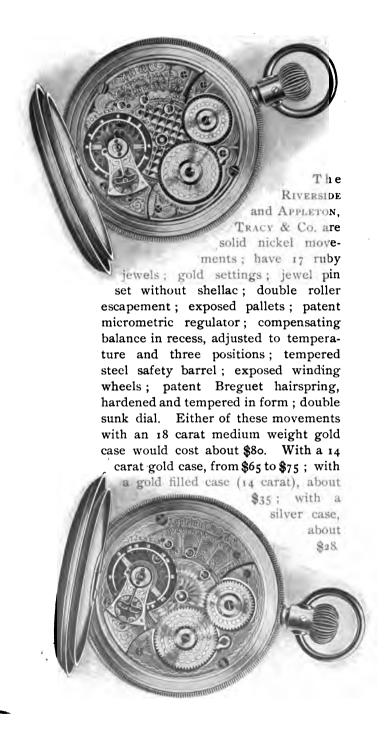


21 diamond and ruby jewels; both balance pivots running on diamonds; raised gold settings: jewel pin set without shellac; double roller escapement; exposed pallets; embossed gold patent micrometric regulator; compensating balance in recess, adjusted to temperature, isochronism and five positions; tempered steel safety barrel; exposed winding wheels; patent Breguet hairspring, hardened and tempered in form; elaborately finished nickel plates with gold lettering; plate and jewel screws gilded; steel parts chamfered; double sunk dial. The VAN-GUARD is the foremost among railroad watches. With an 18 carat medium weight gold case, it should cost about \$100. With a 14 carat gold case, from \$85 to \$95. With a gold filled case,

(14 carat) about \$50. With a silver case, about \$45.

The CRESCENT STREET is a solid nickel movement; has 21 fine ruby jewels; gold settings; jewel pin set without shellac: double roller escapement: exposed pallets; patent micrometric regulator; compensating balance in recess, adjusted to temperature, isochronism and five positions; tempered steel safety barrel; exposed winding wheels: patent Breguet hairspring. hardened and tempered in form; double sunk dial. The price of this movement with these respective cases is approximately: 18 carat medium weight gold case, about \$95; 14 carat gold case, from \$80 to \$90; gold filled case,





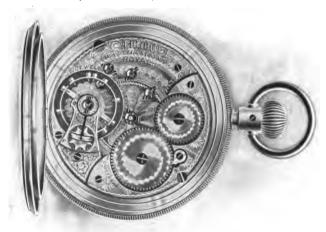
The foregoing are essentially railroad watches. Their construction fits them particularly for the use of all whose vocations require very strong, durable and close running timepieces.



Recently the owner of an APPLETON, TRACY & Co. watch which was made in 1865, sent it to the Company, saying that he had bought it in that year and had always found it a faithful friend. He was proud of its thirty-three years of meritorious service, and thought the Company that made it would be glad to see so valuable a specimen of its earlier product. He said he felt himself growing old, but that this watch was insensible to age. It still had the spirit and vigor of youth.

ROYAL movements are well and favorably known wherever watches are carried. "Sentinels of Time" they have been aptly termed.

ROYAL, 18 size, is gilded and nickeled damaskeened; has 17 jewels; settings; exposed pallets; patent micrometric regulator; compensating balance in recess, adjusted to temperature; tempered steel safety barrel; exposed winding wheels; patent Breguet hairspring, hardened and tempered in form; double sunk dial.



This movement, with an 18 carat medium weight gold case, costs about \$75; with a 14 carat gold case, from \$60 to \$70; with a gold filled case (14 carat), about \$32; with a silver case, about \$24.

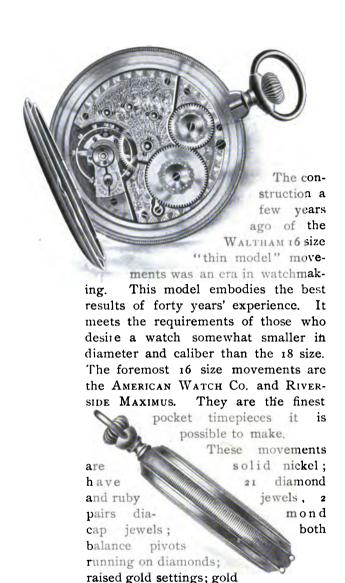
P. S. BARTLETT is a famous old Waltham trade-mark. It is a synonym for a reliable watch. At least five hundred thousand of these watches are in use, all giving satisfaction. It is the best 18 size movement one can buy if he wishes to invest about \$50 in a 14 carat gold watch.

P. S. Bartlett is solid nickel; has 17 jewels; settings; compensating balance, adjusted to temperature; patent micrometric regulator; patent Breguet hairspring, hardened and tempered in form.

The price of this movement, with an 18 carat medium weight gold case, is about \$65; with a 14 carat gold case, from \$50







train; jewel pin set without shellac; double roller escapement; exposed pallets; patent micrometric regulator; compensating balance, accurately adjusted to temperature, isochronism and five positions and carefully timed; tempered steel safety barrel; patent Breguet hairspring, hardened and tempered in form; fine glass hand-painted dial of most modern and artistic design.

Approximate prices are as follows:
With an 18 carat gold medium weight
case, from \$125 to \$135; with a 14 carat
gold case, from \$115 to \$125.





RIVERSIDE 16 size, is made in two qualities, viz.: solid nickel, and gilded and nickeled damaskeened. The solid nickel has 17 fine ruby jewels; gold settings; double roller escapement; exposed pallets; patent micrometric regulator; compensating balance, adjusted to temperature and three positions; tempered steel safety barrel; patent Breguet hairspring, hardened and tempered in form.

With an 18 carat medium weight gold case, the RIVERSIDE nickel would

cost about \$85; with a 14 carat gold case, from \$70 to \$80; with a gold filled case, (14 carat) about \$40; with a silver case, about \$32.

Gilded and nickeled damaskeened RIVERSIDE has 17 ruby jewels; gold settings; exposed pallets; patent micrometric regulator; compensating balance, adjusted to temperature and three positions; tempered steel safety barrel; patent Breguet hairspring, hardened and tempered in form.

The price of this movement with similar case is about \$4.00 less than RIVERSIDE nickel.



Taken from the Enemy

M. Favre Perret, the Chief Commissioner in the Swiss Department and Member of the International Jury on Watches at the Centennial Exhibition at Philadelphia, speaking of the RIVERSIDE movement, said:

Gentlemen, here is what I have seen. I asked from the manager of the Waltham Company a watch of a certain quality. He opened before me a big chest. I picked out a watch at random and fixed it to my chain. The manager asked me to leave the watch with them for three or four days that they might regulate it. 'On the contrary,' I said to him, 'I want to keep it just as it is to get an exact idea of your workmanship.

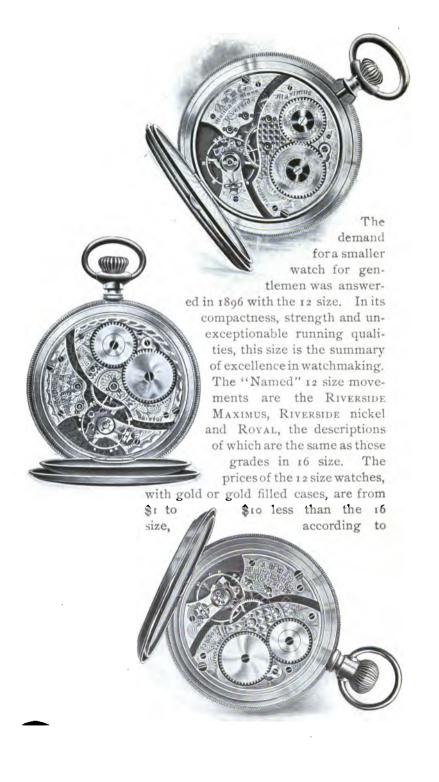
On arriving at bocle I showed this watch to one of our first adjusters who took it apart. At the end of several days he came to me and said, titerally, I am astonished, the result is incredible. You do not find a watch to compare with that in 50,000 of our make. This watch, I repeat to you, gentlemen, I myself took offhand from a large number, as I have said. One can understand by this example how it is that an American watch should be preferred to a Swiss watch."



The 16 Size ROYAL is solid nickel; has 17 jewels; settings; exposed pallets; patent micrometric regulator; compensating balance, adjusted to temperature; tempered steel safety barrel; patent Breguet hairspring, hardened and tempered in form.

This movement, with an 18 carat medium weight gold case, costs about \$75; with a 14 carat gold case, from \$60 to \$70; with a gold filled case (14 carat), about \$32; with a silver case, about \$23.





the quality, weight and style of case.

Ladies' watches are made in sizes 6 and o. RIVERSIDE MAXIMUS, RIVERSIDE, ROYAL and LADY WALTHAM may be had in both sizes, the construction in each size being the same.

Ladies' RIVERSIDE MAXIMUS is made of solid nickel; has 19 diamond and ruby jewels; 2 pairs diamond cap jewels; both balance pivots running on diamonds; raised gold settings; gold train, jewel pin set without shellac; double roller escapement; exposed pallets; patent micrometric regulator; compensating balance, accurately adjusted

to temperature, isochronism and position and carefully timed; tempered steel safety barrel; patent Breguet hairspring.
hardened and tempered in form; fine glass hand-painted dial

of
most
modern and artistic design.
An 18 carat gold 6 size or
o size RIVERSIDE MAXIMUS



cost from \$65 to \$75.

14 carat gold, from \$60 to \$70.

Ladies' RIVERSIDE is solid nickel; has 17 ruby jewels; raised gold settings; exposed pallets; patent micrometric regulator; compensating balance, adjusted to temperature and position; tempered steel safety barrel; patent Breguet hairspring, hardened and tempered in form.





Ladies' ROYAL is solid nickel; has 16 ruby jewels; settings; exposed pallets; patent micrometric regulator; compensating balance, adjusted to temperature; tempered steel safety barrel; patent Breguet hairspring, hardened and tempered in form.

An 18 carat gold 6 size or o size ROYAL watch would cost from \$45 to \$55; 14 carat gold, from \$40 to \$45; gold filled (14 carat) about \$25.

LADY WALTHAM is solid nickel; has 16 ruby jewels; settings; exposed pallets; patent micrometric regulator; compensating balance, adjusted to temper-





An 18 carat gold LADY WALTHAM would cost from \$40 to \$45; 14 carat gold, from \$35 to \$40; gold filled (14 carat) about \$24.

The American Waltham Watch COMPANY does not make nor deal in The manufacture of these watch cases is a separate industry. It should therefore be noted that the prices quoted herein are only approximate, being given as a general guide for intending purchasers. Numerous case factories throughout the United States have a large and varied product, in gold, gold filled, silver and nickel cases. watch dealers will fit WALTHAM movements into any quality, shape and design of case on the market. If the particular grade of movement or style of case required is not in the dealer's stock, he can usually obtain the same promptly. Fur-



while the watch is being carried, but ought not to be attempted by any one who is not a watchmaker.

The business of this Company is conducted strictly with the wholesale watch trade. No goods are sold at retail under any circumstances. Nor is the Company equipped to undertake general repairing. That is the province of the retail watch dealer. An important one. A watch is ruined, not by time, but by bad handling. To run well it should be wound regularly, cleaned yearly, and, if injured, taken to a competent, practical man.

A Waltham watch properly cared for will last a lifetime.

American Waltham Watch Company
Waltham, Mass.



The City of Watches, Showing the Factory of the American Waltham Watch Company.



First Prize Gold Medal



First Prize, Gold Medal.



Seven Medals and Diploma



Five First Prize Medals



Two First Prize Medals



American Institute 1851 First Prize Gold Mcdel



WALTHAM have received awards wher-





First Prize. Gold Medal



First Prize Gold Mcdal.



Philadelphia 1816 Four First Prize Medals



WATCHES
the highest
ever exhibited





Melbourne · 1880. Mrsi Prize · Gold Medal



The City of Boston, on October 14, 1899,
PRESENTED TO

ADMIRAL DEWEY,

IN GRATEFUL RECOGNITION OF HIS DISTINGUISHED SERVICES TO THE COUNTRY,

A WALTHAM WATCH.

"This form of gift has at least the merit of enabling us to utilize a distinctive product of the mechanical skill which lies at the foundation of New England's prosperity. * * *

"May the time which this watch shall mark deal gently with you, and may you be long spared to serve your country in whatever station she may most need you."

-From the address of the Mayor of Boston to Admiral Dewey.

How a Waltham Watch set Englands Time.



The Reply from the Astronomer Royal.

Royal Observatory Greenwich, London, S.E. 1894, March 10.

DearSir

In answer to your letter of yesterday the Astronomer Royal requests me to inform you that on Thursday last the time-ball was through an accident dropped about eighteen seconds before one oclock.

T. Wheate Esq.

26 Oriniston Road, Westcombe Park, London, S. E., England,

10-2-'97

American Waltham Watch Co., Waltham, Mass., U. S. A.

GENTLEMEN: About three years since, acting on the advice of a friend who had had one of your watches for about eighteen years, I purchased a Lever Waltham Watch. I am happy to say it has turned out a marvel of accuracy, and under the circumstances I feel I am only doing my duty in bringing this fact to your notice. . . . But perhaps its most unique performance, and the one of which I am especially proud, is the fact that by its aid I was able to detect an error in the fall of the time-ball at the Royal Observatory, Greenwich, which gives the standard time to the civilized world. It happened as follows: I make a practice of watching the fall of the time-ball each day at one o'clock p. m., whenever the air is clear enough, and one day, to my surprise, I found the ball had dropped some few seconds before I had expected it to. had such confidence in my watch that I did not believe it was at fault, and felt sure that some mistake had been made at the Observatory. On telling some of my friends of my convictions, I was simply laughed at for my impudence in daring to pit my Waltham watch against the accuracy of the Royal Observatory. However, to set the matter at rest, I wrote to the Astronomer Royal, telling him of my conviction, and asking him if he would let me know whether I was right or wrong. In return I received a courteous reply from the Astronomer Royal, stating that I was quite right, and that on the day named, owing to an accident, the ball was dropped about eighteen seconds too soon. This seems to me such a remarkable proof of the reliability of your watches that I feel justified in bringing it to your notice. If you would care to have the Astronomer Royal's letter as a memento, I should be pleased to hear from you to that effect. Wishing every success and prosperity to your deservedly world famed Company,

